Using Interactive Research and Constructive Method in Adapting Business Model Thinking to Service Logic

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The purpose of this paper is to increase the knowledge of application of interactive research and constructive method in adapting business model thinking to service logic. This paper explains how these empirical research approaches were applied in the development of Service Logic Business Model Canvas. The process took 18 months and involved a large number of practitioners from various industries as well as academics. As the result, this paper evaluates the usability of the interactive research and constructive method in the context of service research. It finds both advantages and challenges in using these methods.

1 Introduction

Qualitative research includes a large number of research methods. The most well-known methods are in-depth interviews, case studies, focus groups, observation, ethnography, grounded theory, and action research (Denzin; Lincoln, 1994). Crowdsourcing, nethnography, sentiment analysis, hybrid textual analysis, and text mining are examples of new qualitative methods (Guercini, 2014). Two qualitative research methods have received little attention in the existing literature, namely interactive research (Gummesson, 2001, 38-41) and constructive method (Kasanen et al., 1993). These methods are potentially powerful when the purpose is to develop scientific theory and at the same time develop practically relevant constructions, models, or solutions. This paper relates to an empirical research in which these methods were used in adapting business model thinking to service logic. A new service design tool was developed in this project, called Service Logic Business Model Canvas (Ojasalo; Ojasalo, 2014). The literature includes very little knowledge of use and applicability of interactive research and constructive method. Thus, there is a clear need to increase the knowledge of this area. Our paper responds to this knowledge gap with the purpose to increasing the knowledge of application of interactive research and constructive method in adapting business model thinking to service logic.

The rest of this article is organized as follows. First, it discussed the nature of interactive research and constructive method. Then, it describes the empirical research process in which these methods were used. In this context, it also briefly explains the outcome of the empirical process. Then, based on the observations and experience during the research process, it evaluates advantages and challenges of using interactive research and constructive methodology in service research context.

2 Interactive and constructive methods

2.1 Qualitative research

The term "qualitative research" is an umbrella concept encompassing a wide range of different tools, techniques, and procedures (Punch, 2005; Creswell, 1998). Johnson et al. (2007) examined what academic disseminators, industry professionals, doctoral students, and experiences academic researchers understand with "qualitative research." They identified eight dimensions characterising qualitative research:

- verstehen
- verstehen but with reflexivity
- general bag of tools
- a specific bag of tools with a distinctive role and use in management research: accessing organizational back stages
- exploratory research with regard to little understood phenomena prior to other (i.e. quantitative) research
- disposal category
- research that is not quantitative
- specific data collection techniques

According to Mills (1959), a common characteristic for all qualitative research is that it does not dissociate the analysis from the researcher's experience. Qualitative research is based on subjective interpretation of data, and it has become a widely used approach particularly in social sciences and management research. Research in natural sciences tends to rely on quantitative methods and have its ideal in pursuing objectivity. Still, it is argued that no science, natural or social, can do without subjectivity (Gummesson, 2001). Creativity and lateral thinking, generating new theory and basis

for propositions, is subjective. Next, two qualitative methods are discussed in more detail. They are interactive research and constructive method. These methods are used in our empirical study.

2.2 Interactive research

Interactive research method was introduced by Gummesson (2001, 38-41). This research approach is based on interaction and communication with chosen relevant audiences. It ties together the process of knowing, the knower, and the known. The approach is based on various kinds of interactions, such as interaction between the researcher and the object of study and its actors; between one's consciousness and qualities of one's inner self; between substantive data and general concepts; between the parts and the whole; between words, numbers, body language and tacit language; and concurrent, non-linear and dynamic interaction between data collection, analysis, interpretation and conclusions.

In the interactive research, theory generation and theory testing are inseparable twins, not isolated consecutive stages. Through further theory generation in never-ending iterations the researcher gains a spiralling effect and builds a helix of continued development of knowledge. The researcher goes from pre-understanding to understanding, to a new level of understanding, and so on; and from substantive, specific data to concepts that serve as vehicles for reaching more general theory levels. This approach is governed by a humanist, hermeneutic and phenomenological paradigm, although elements from a quantitative and positivistic paradigm may be included.

Interactive research is an umbrella for well-known research methods, which are characterized by the earlier qualities. Examples of such highly interactive methods are case study, grounded theory, anthropology/ethnography, action research, and narrative research. Case study recognizes complexity and ambiguity, grounded theory lets reality tell its story on its own terms, anthropology and ethnography allow the researcher to be where it happens, action research makes it happen with reflecting, and narrative research makes the reality to come alive (Gummesson, 2001).

2.3 Constructive method

The constructive method is a research procedure for developing constructions, where constructions refer to entities that solve problems that emerge in running business organizations (Kasanen et al., 1993). An important characteristic of constructions is that their usability can be demonstrated through implementation of the solution. Sometimes constructions refer to principal solutions only, as the testing of their usability is not always possible because of resource and time restrictions. The constructive research means, in other words, managerial problem solving through the construction of models, diagrams, plans, organizations, etc. Still, it should be noted that not all problem solving and model building exercises are constructive research. According to Oyegoke (2001), analytic model building produces an elegantly proven problem solution which works in principle but whose actual practical adequacy usually remains unclear. Kasanen et al. (1993) argue that, a construction which works, is relevant and simple and easy to use. An essential part of the constructive approach is to tie the problem and its solution with accumulated theoretical knowledge. In addition, the novelty and the actual working of the solution have to be demonstrated. The construction should include new knowledge to both to the business and academic community. The characteristics of a construction of solution to a problem are practical relevance, theory connection, practical functioning, and theoretical contribution.

According to Oyegoke (2001), the constructive approach encourages co-production of knowledge between the industry practitioner and the researcher. The constructive approach is a method that can be used to develop social interaction among people, illuminating the flux of events and human action within the array of social agenda, practices and stakeholder relations. Constructive researchers rely on interpretative method by assuming that people construct and test solutions based on their interaction with the world around them. According to Kasanen et al. (1993), the research process of a constructive approach includes the following phases. Their order may vary from case to case:

(1) Finding a practically relevant problem which also has research potential

(2)   Obtaining a general and comprehensive understanding of the topic

(3) Innovating i.e. constructing a solution idea,

(4) Demonstrating that solution works,

(5) Showing theoretical connections and the research contribution of the solution concept, and

(6) Examining the scope and applicability of the solution.

3 Empirical research process

The research process of the present study is illustrated in Figure 1. The phases of the research process are shown in detail in Table 1. The study is based on interactive research approach (Gummesson, 2001) where the empirical data is generated in interaction with researchers and relevant actors in respect of the purpose of the study. The research is affected by the researchers' pre-understanding. The process is a continuous interplay between data from interaction, existing theories from the literature, and researchers' interpretation. A new theory is developed as a result of these interwoven elements.
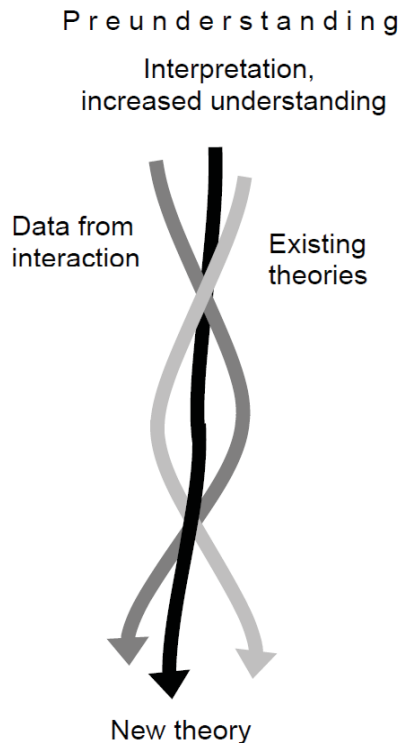
Preunderstanding

Interpretation,
increased understanding

Data from
interaction

Existing
theories

New theory

Figure 1. Interactive research process.

Pre-understanding refers to knowledge, insights, and experience of people before they engage in a research program or consulting assignment (Gummesson, 1991). It is also affected by the researcher's attitude and commitment. The preunderstanding of this study is based on the theories on service logic (e.g. Grönroos 2006 and 2008), service-dominant logic (e.g. Vargo; Lusch, 2004 and 2008), and customer-dominant logic (Heinonen et al. 2010; Voima et al., 2010). It is also based on work in developing business models in practice with companies, particularly with help of Osterwalder and Pigneur's (2010) business model canvas (BMC) as well as Johnson et al.'s (2008) business model framework. Based on the pre-understanding, the existing business model frameworks are too provider-centric and goods-dominant, and require further development and adaptation to service logic. The existing theories and literature used throughout the research process deal with service logic, SDL, CDL, business models, and service design.

The fundamental purpose of the current research is the same as the one of constructive research method (Kasanen et al., 1993). In other words, it aims to develop a construction that solves a problem that emerges in running a company. The construction in the current research is a revised version of Osterwalder and Pigneur's (2010) business model framework, Business Model Canvas. The modifications aim at increasing the service logic-orientation of the original BMC tool. The research process aimed at a relevant and simple and easy to use construction. The present study included all the six phases of constructive research process suggested by Kasanen et al. (1993). During the process the problem and its solution were tied with accumulated theoretical knowledge. In addition, the novelty and the actual working of the solution were demonstrated. The last phases of the process aimed at showing and testing that the developed construction included new to both to the business and academic communities.

Table 1. Phases of the research process.

Step	Interaction of the research process	Outcome	Actors	Phase of the constructive research method
1	Discovering the knowledge gap and need for research (11 Oct. 2012, 2 hours)	Appointed ideation workshop	12 researchers	(1) Finding a practically relevant problem which also has research potential.
2	Interactive ideation, brainstorming, and development workshop (16 Jan 2013, 4 hours)	Initial development ideas, Canvas version 0.1	15 researchers	(2) Obtaining a general and comprehensive understanding of the topic. (3) Innovating i.e. constructing a solution idea.
3	Interactive ideation, brainstorming, and development workshop (5 Mar 2013, 4 hours)	Canvas version 0.2	15 researchers	
4	Interactive ideation, brainstorming, and development workshop (29 Apr 2013, 3 hours)	Canvas version 0.3	13 researchers	

Step	Interaction of the research process	Outcome	Actors	Phase of the constructive research method
5	Interactive ideation, brainstorming, and development workshop (30 Aug 2013, 4 hours)	Canvas version 0.4	9 researchers and 1 practitioner	
6	Interactive ideation, brainstorming, and development workshop (15 Sep 2013, 3 hours)	Canvas version 0.5	6 researchers	
7	Rapid test ("lean launch") and further development of the SL-based business model canvas in 5 company cases (8 Nov 2013, 5 hours)	Canvas version 0.6	1 researcher and 22 practitioners B	(4) Demonstrating that solution works. (6) Examining the scope and applicability of the solution (3) Innovating i.e. constructing a solution idea.
8	Assignment given to 24 practitioners to test the SL- based business model canvas in their organizations (9 Nov 2013, 2 hours)		1 researcher and 24 practitioners B	(4) Demonstrating that solution works. (6) Examining the scope and applicability of the solution.
9	Interactive ideation, brainstorming, and development workshop (20 Nov, 2013, 3 hours)	Ideas for further development	6 researchers and 40 practitioners A	(3) Innovating i.e. constructing a solution idea. (6) Examining the scope and applicability of the solution.
10	Results and reflections from the 24 test cases of SL-based business model canvas (14 Dec 2013, 4 hours)	Ideas for further development	1 researcher and 24 practitioners B	(4) Demonstrating that solution works. (6) Examining the scope and applicability of the solution.
11	Further development of the canvas in interaction between 2 researchers, based on analysis of the data (generated in workshops and through testing) and understanding accumulated in the research process (incl. existing theories). Identification of the scientific contribution. Writing of research report (30 Sep 2013 – 28 Feb 2014)	Service Logic Business Model Canvas	2 researchers	(3) Innovating i.e. constructing a solution idea. (2) Obtaining a general and comprehensive understanding of the topic. (5) Showing theoretical connections and the research contribution of the solution concept.
12	Introduction of the finalized Service Logic Business Model Canvas for comments. Need to develop a light application version of the canvas. (7 May 2014, 2 hrs)	Ideas for finalizing the Canvas. Clear need to develop a light application version of the Canvas,	10 researchers, 7 practitioners A	(2) Obtaining a general and comprehensive understanding of the topic. (3) Innovating i.e. constructing a solution idea. (6) Examining the scope and applicability of the solution.
13	Development of light application version of Service Logic Business Model Canvas	First version of light application version	2 researchers	(3) Innovating i.e. constructing a solution idea. (5) Showing theoretical connections and the research contribution of the solution concept.
14	Testing the light application version of Service Logic Business Model Canvas (5 Jun 2014, 1 hr)	Ideas for further development of light application version	20 practitioners A, 1 researcher	(4) Demonstrating that solution works. (6) Examining the scope and applicability of the solution.
15	Finalization of the Canvas. Development of a light application version of the canvas.	Finalized light application version, finalized Service Logic Business Model Canvas and its application process	2 researchers	(3) Innovating i.e. constructing a solution idea. (2) Obtaining a general and comprehensive understanding of the topic. (5) Showing theoretical connections and the research contribution of the solution concept. (6) Examining the scope and applicability of the solution.

The initiation of the research process took place in an invitation based expert panel (Step 1) where 12 service researchers concluded that one of the most widely-spread business model frameworks, namely Osterwalder and Pigneur's (2010) Business Model Canvas, requires further development, particularly towards the principles of service logic. Most importantly, the researchers saw that the BMC is based on traditional provider-centered value-chain thinking where value is created inside a company through its activities and resources and then delivered to customers. For example, the terminology of BMC reflects the goods-dominant logic, for example the "Channels" block of the BMC describes how "value propositions are delivered to customers through communication, distribution, and sales channels" (see Osterwalder; Pigneur, 2010, 16). The BMC does not see customers as value creators, nor does it suggest how service could be embedded in customer's contexts, activities and experiences (cf. Heinonen et al.,2010).

The research process took 18 months and consisted of 15 steps (Table 1). The interaction in which data were generated and understanding increased consisted of ideation workshops. The process included twelve interactive workshops in which data from pre-understanding, interaction, interpretation and increased understanding, and existing theories were interwoven together. The research process was conducted in Finland and related to the activities of the Finnish Service Alliance. The other author of this paper planned the workshops beforehand and facilitated and documented them. The workshops were documented by writing notes during and after each workshop, by collecting all the raw material produced by the participants during the workshops (notes, writings, and drawings made by the participants), by taking photographs, and by recording the most important parts of the workshops. After each workshop, the business model canvas, which was the central researched object, was further developed based on the data and increased understanding generated in the interactive workshop. The actors of the workshops were researchers and practitioners. In this case, "researchers" include academic researchers from seven universities and other research related organizations. They were professors, senior researchers, doctoral students and coordinators of large national research programs. "Practitioners" refer to representatives from companies and other organizations (Group A). "Practitioners" also include master level adult students who conduct their studies alongside their full time job in companies and other organizations (Group B). 18 researchers and 106 practitioners participated in this process. Thus, altogether 124 persons were involved in the research process. The data were qualitative in nature, and its subjective interpretation took place during and after the interactive workshops both individually and collectively. In general, the emphasis shifted from theoretical thinking and model development towards practical model development and testing. The participants of the first workshops were mostly researchers (Steps 1-6) while the participants of the later workshops were mostly practitioners (Steps 7-10, 14).

The outcome of the empirical research process

As the outcome of the empirical research process, a new service design tool was developed, called Service Logic Business Model Canvas (Ojasalo; Ojasalo, 2014). The new canvas is a modified version of the original BMC and it has the following elements. Each element of the canvas is considered "from our point of view" and "from customer point of view." The elements are recommended to be developed in the following order, if there is no case-specific reason to develop the elements in some other order.

1. Customer's world and desire for ideal value
2. Value proposition
3. Value creation
4. Interaction and co-production
5. Revenue streams and metrics
6. Key resources
7. Key partners
8. Mobilizing resources and partners
9. Cost structure

The application of Service Logic Business Model Canvas includes three main phases:

1. Light application version of Service Logic Business Model Canvas
2. Information gathering and development work with selected service design methods
3. Full application version of Service Logic Business Model Canvas

The contributions of the research relate to four differences between the new canvas and the original Osterwalder and Pigneur's (2010) canvas. These contributions are explained in the following.

First, the developed Service Logic Business Model Canvas adapts the business model thinking to service logic. Each building block of the present canvas is adapted to service logic. The original Osterwalder and Pigneur's (2010) framework view the business from the provider viewpoint. The present framework has both the provider and customer viewpoints explicitly. When building a business model with help of the new framework, one has to consider how each element should be constructed and how they look like "from our point of view" and "from customer point of view". In this way, the present framework makes sure that the service logic is present in each phase and element in the business model development.

Second, the Service Logic Business Model Canvas is designed to be applied to each customer profile separately. The original Osterwalder and Pigneur's (2010) framework has the "Customer segments" element suggesting that the

other elements of the business model should be identical to each segment. This is often difficult or impossible while the characteristics of each segment may be very different. By using the framework individually to each relevant customer profile, it is possible to have a deep understanding of the customer logic and requirements of each profile. Consequently, in such a case the total business model may be a set of profile specific sub-models.

Third, the Service Logic Business Model Canvas gives a recommendation of the order in which the elements of a business model should be developed. The existing literature is contradictory when concerns the question, whether or not a business model's elements should be developed in certain order. Or should it start from certain defined element or activity? (cf. Johnson et al., 2008; Osterwalder; Pigneur, 2010). Our recommendation with the present framework is that the starting point should be in the block 1 describing the customer's world and then follow the given order. However, if there is case-specific reason to develop the elements of the business model in some other order, then we recommend following that order. Anyway, the process is likely to be iterative rather than straightforward (Demil; Lecocq, 2010, Kindström; Kowalkowski, 2014).

Fourth, the use of Service Logic Business Model Canvas includes both light and full application version. The business model development starts with light application version. The second phase includes information gathering and development work with selected service design methods. Based on this effort, a full version application of the framework is conducted, which results in possibly several detailed business models, one each targeted customer profile. In some cases the light application version may be the only effort, for example when there is no time for full version application or when there is not enough resources for research and development work.

4 Result: Evaluation of the usability of the interactive research and constructive method

Next, we evaluate the usability of the interactive research and constructive method in adapting business model thinking to service logic. The evaluation is based on our own experience and interpretations throughout the research process. Based on this, the above research methods have the following advantages and challenges.

4.1 Advantages

The advantages of the interactive research and constructive method were

1. Multidisciplinary and cross-industry research collaboration
2. High motivation and commitment of parties to research project
3. Rich data, innovative new ideas
4. Continuous critique of findings and ideas
5. Gradual build-up, validation and triangulation of the findings and theory

A clear advantage of the methods used was the **research collaboration of people from different backgrounds**. The people involved both practitioners and academics. Practitioners came from various industries and responsibilities, thus allowing a large spectrum experience, knowledge and opinions to be shared on service business during the research process. Also, the academics came from different universities and research organization with varying research backgrounds and interests. This diversity of participants involved in the research process made possible to learn from others and develop and test own ideas. As a consequence, they were highly **motivated to** commit themselves to the research process. Moreover, the diverse backgrounds of participants resulted in **extremely rich data**. This enabled new exploratory findings, development ideas, and interpretations which would have been unlikely to be found with other research methods.

Another advantage of the method was the **continuous critique of findings and ideas** that emerged during the process. Participants gave immediate critique if someone made an interpretation they did not agree. The data were also analysed between the interactive workshops, and the findings from previous workshops were discussed and criticized in the next workshop. They were criticized by both academics and practitioners. As the theory and the new ideas were built up gradually under continuous critique, they were also **validated** much more strongly than many academic theories. As the critique and comments for improvement came from practitioners from several industries as well as multidisciplinary group of academics, the theory was also effectively **triangulated.** The continuous critique and evaluation of findings increased the quality of the research.

4.2 Challenges

The challenges of the interactive research and constructive method were

1. Effort and time for organizing the research process
2. Discrepancy in communication and use of terminology between participants
3. Dealing with abstract theories with practitioners

Effort and time required to organize the research process represented a clear challenge. Our research required a longer time to refine the theory in an iterative stepwise process, 18 months. Scheduling the workshops was not easy

because of the number of participants. Also, documenting the discussions, notes and graphical illustration from workshops required substantial effort.

One challenge in working with participants with heterogeneous backgrounds related to **discrepancy in communication and use of terminology**. The difference was observable particularly between practitioners and academics. Academics used more accurate language and wanted to maintain conceptual clarity. Practitioners, on the other hand, tended to express their ideas more loosely and inaccurately. This caused some challenges for discussion and theory development.

Our research aimed at adapting business model thinking to service logic. Service-based business logics (Vargo; Lusch, 2004; Heinonen et al., 2010, Grönroos, 2011) are scientific theories and consequently rather abstract for many practitioners. **Explaining their principles to practitioners and bringing them down to a concrete level** was a challenge during the research process.

5 Conclusions

The purpose of this paper was to increase the knowledge of application of interactive research and constructive method in adapting business model thinking to service logic. The paper explained how these empirical research methods were applied in the development of Service Logic Business Model Canvas, and evaluated their usability. As a result, it found out that the advantages related to multidisciplinary and cross-industry research collaboration, high motivation and commitment of parties to research project, rich data, innovative new ideas, continuous critique of findings and ideas, as well as gradual build-up, validation and triangulation of the findings and theory. Challenges on the other hand, were effort and time required for organizing the research process, discrepancy in communication and use of terminology between participants, and dealing with abstract theories with practitioners.

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