

## Co-Learning Service Design within the PALI Project

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### Abstract

Small- and medium-sized enterprises (SMEs) rarely apply the methods of service design in developing their businesses. In part, this arises from the shortage of available service design expertise. Universities of applied sciences (UASs) have acknowledged the need for service design education, but do not yet have enough experience and practical knowledge to include the studies into curricula.

The PALI project (Competitive Advantage through Service Design) facilitates co-learning of service design amongst UASs. The project is a collaborative effort of HUMAK, Novia, Oulu and Savonia UASs, which form an interdisciplinary environment with several educational fields; tourism, cultural management, design and business administration. Co-learning in the project is based on real-world service development cases implemented in co-creation teams of UAS staff, UAS students and SME representatives.

This paper looks at how the co-learning environment has been constructed throughout the project. The most crucial question turned out to be knowledge transfer, which has been based on an iterative cycle consisting of three phases; progressing, learning by doing and reflecting. The challenge of integrating teaching and research has been addressed by creating a Broker model in which each UAS has a service design expert acting as a project generator between the UAS and SMEs.

**KEYWORDS:** service design, case study, learning, knowledge transfer, interdisciplinary

### Introduction

Small- and medium-sized enterprises (SMEs) are faced with a need to develop their business operations and service innovation activities towards a more customer-oriented direction. This may be achieved with the help of the methods of service design, which are presently rarely applied by the SMEs. At the same time, service design has not yet established itself as an operational tool kit for business development in the Finnish universities of applied sciences (UASs). There is a growing interest in the methods, but not yet enough experience and practical knowledge of the best ways to include them into curricula.

PALI (“PALvelusta LIiketoimintaa”), or Competitive Advantage through Service Design, is a research project funded by the Finnish Funding Agency for Technology and Innovation (Tekes), and the participating UASs and SMEs. In this one-year project, HUMAK, Novia, Oulu and Savonia UASs joined their forces in 2011 to explore with service design methods together with their students and with 20 SMEs from different parts of the country operating in different fields of business. In the PALI project, the following research questions were tackled:

- What is the present level of service know-how in the Finnish SMEs?
- How to increase the SMEs’ know-how in the field of service business?
- How to strengthen the role of UASs in providing SMEs with know-how in the field of service business?
- How to construct an interdisciplinary service design clinic to manage the transfer of know-how from UASs to SMEs?

The approach used is a combination of qualitative and quantitative methods. In addition to the approaches of learning by doing and co-creation, a quantitative survey on service know-how among SMEs nationwide was conducted to provide background information. As a whole, the research strategy is based on case study methodology.

This paper looks at how a co-learning environment has been constructed throughout the project. What are the elements and processes when implementing service design methods through a learning by doing approach? In other words, how do we identify the “pain”, what kinds of “painkillers” should we use, what are the benefits and how are the actors reacting in the process? This will include the perspectives of all the stakeholders; UAS staff, UAS students and company representatives. What are the lessons we have learnt?

## Methodology

The study is conducted using case study strategy, as case studies may offer insights that might not be achieved with other approaches. We are at an exploratory stage of our study, and case studies have often been viewed as a useful tool for the preliminary stage of a research project, as a basis for the development of more structured tools. We also need answers to ‘How?’ and ‘Why?’ questions. Furthermore, our case is a contemporary event where the relevant behaviour cannot be manipulated. Typically, case study research uses a variety of evidence from different sources, such as documents, artefacts, interviews and observation. In a case study, an investigation into a phenomenon in its context can be undertaken; case study research may be based on any mix of quantitative and qualitative approaches. (Rowley, 2002.)

The research context in our case study is the above in section 1 described PALI project. Research design is the logic that links the data to be collected and the conclusions to be drawn to the initial questions of a study, or an action plan for getting from the questions to conclusions. It should ensure that there is a clear view of what is to be achieved by the case study. This involves defining the basic components of the investigation, such as research questions and propositions. Theoretically, our research phenomenon relates to value creation and services marketing (Edvardsson, et al., 2011; Grönroos, 2010; Grönroos and Ravald, 2011). In our project, we have a project plan with goals, which define the previously presented purpose and questions for our study. The study’s unit of analysis is the project itself. It is a unique case.

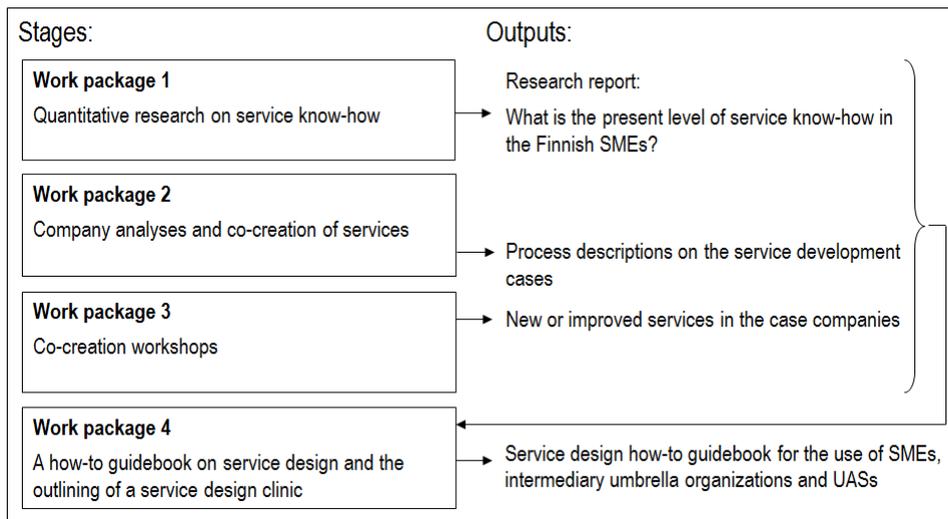
Data collection was guided by a case study protocol defined in the project plan including an overview of the project, field procedures, such as use of different sources of information, and access arrangements to these sources. In this case study, multiple sources of evidence (data) were used. These include documents, archival records, interviews, direct observation, participant observation, project meetings, workshops, and physical artefacts. For example, a research report on the present level of service know-how in the Finnish SMEs, and also process descriptions on the service development cases have been used. These different sources yield different kinds of insights. Whatever the sources of evidence that are used, there are three key principles of data collection that need to be observed; triangulation, case study database, and chain of evidence (Rowley, 2002). We need further work on analysing our exploratory results by examining, categorizing and tabulating. In exploratory case studies, an alternative analytic strategy is to develop a descriptive framework for organizing the case study (ibid). The descriptive framework for our case study of Co-Learning Service Design within the PALI Project consists in brief of the following themes:

- knowledge transfer
- co-learning amongst the UASs and within each UAS
- co-creation teams of UASs and SMEs
- “lessons learnt” or propositions for further research

According to the research approach defined by moderate constructionism and abduction (Järvensivu and Törnroos, 2010), we are in the phase of finding the research focus. The next phase will be extending the research framework, case analysis, and finally assessing validity and transferability.

## Implementation

The project is being implemented in four work packages, as presented in the following Figure 1. In the first three work packages, both quantitative and qualitative data has been produced to be processed into a service design how-to guidebook for SMEs, intermediary umbrella organizations and UASs. At the end of the project, a national seminar will be organized for the purpose of experience and know-how distribution.



**Figure 1** Project stages and outputs

The first work package produced background information for the forthcoming business development cases. The quantitative survey concentrated on the following research questions:

- How do Finnish SMEs perceive the significance of service competence for their business operations (product orientation vs. customer-driven service orientation)?
- How do Finnish SMEs perceive the level of their service competence?
- How do Finnish SMEs utilize their customers in developing their business operations?

Altogether 104 company representatives from a wide range of industries responded to the electronic questionnaire. The results suggest that service competence is perceived to be slightly more important than product know-how for SMEs' business operations. The subjective perception of the present level of service competence in terms of SMEs' service preconditions and service quality settled above average on a scale from 1=poor to 4=excellent. As for customer-oriented development, as much as over 70 per cent of SMEs seem to utilize their customers in developing their business operations. Service design was reported as a familiar concept by 31 per cent of the respondents.

The second and the third work package involve co-learning amongst the participating UASs and within each UAS, as well as co-creation of services in teams of UAS staff, UAS students and company representatives. The related activities have run parallel throughout the project.

Co-learning began with a kick-off meeting in January 2011. In the meeting, the project plan was reviewed and the principles of project work were established. In addition, Professor Satu Miettinen introduced service design as an approach to the project group. The next face-to-face project group meeting took place in March 2011 in a service design workshop instructed by Professor Satu Miettinen. The goal was to further familiarize the project group with the service design methods and tools. After the workshop, the actual hands-on work in the case companies was launched. Later in the year, two more face-to-face meetings were organized; the project group met in September 2011 at the Service Design Conference in Tallinn, and again in November 2011 to conduct further work on the project's business development cases in the University of Lapland's SINCO (Service Innovation Corner) prototyping lab. Besides the face-to-face meetings, the project group has had monthly telephone meetings, which have been planned and recorded.

The main means of co-learning, however, have been the service co-creation activities. The hands-on work in altogether 20 case companies began with defining the development target in each SME. The next phase, identification and discovering, focused on understanding the customers, the service contexts and the business environments. The process continued with concepting and designing phases, which involved visualization, co-creation and participatory design. As a result, a new or an improved service was designed for each of the case companies. In some case companies, the process is still on-going. Due to the limited project duration, the phases of building, implementing and measuring were excluded. Thus, the project has concentrated especially on understanding and generating.

The "pearl" of the co-creation activities have been the total of 18 co-creation workshops co-directed by Service Designer Reetta Kerola. The focus of the workshops has been in teaching the UAS staff, the UAS students and the company

representatives how to apply the methods and tools of service design in their own projects, and to show them how these projects can benefit their customers. The framework for the workshops is presented in the following Figure 2.

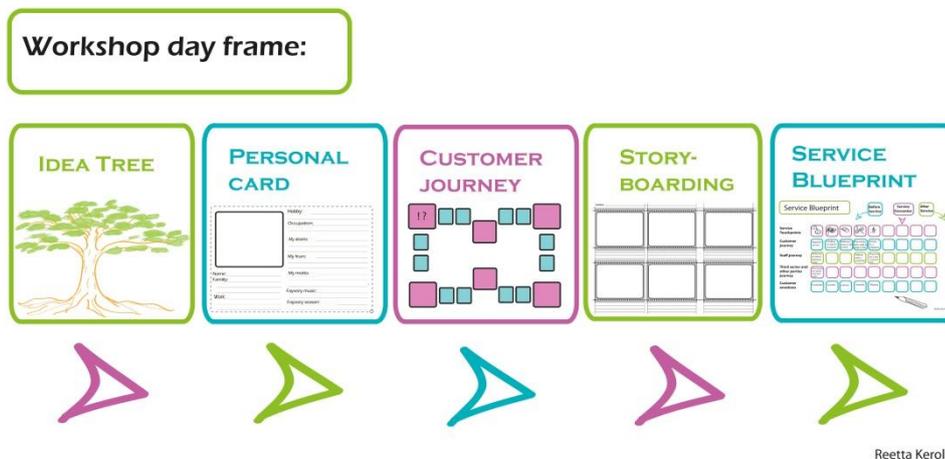


Figure 2 Workshop day frame

All of the selected tools are based on visual understanding, as visualization is a key tool in service design. Visual presentations help in bringing together the different ways of discussing the subject at hand. Ideally, the group of workshop participants includes company staff with diverse positions and responsibilities, and a varied mixture of present and potential customers. An expert on service design guides the group through the goal of processing existing ideas into new ideas for service concepts. In the process, a relaxed atmosphere is important to ensure that every participant's voice is heard.

The first of the tools selected for the workshops, Idea Tree, presents the thoughts of both the company and the customer representatives, and thus gives a solid background to the challenges at hand (Johnson and Shneiderman, 1991). A large poster with a picture of a tree is used with branches spreading on both sides; one side is for the thoughts of the company representatives and the other for the customers' opinions. The branches are named with different topics, which encourage the group to think of the various values, needs and challenges of both parties. (Hyysalo, 2009; Hämäläinen, Vilkkä and Miettinen, 2011; Miettinen, 2011.)

The next tool, Personal card, is commonly used in service design to map the different customer journeys. In using the tool, the first step is to define the target group, after which three to four different customer profiles are created. This may be done either by interviewing one person at a time or by interviewing several people and hence getting an idea of a target group's needs. Besides factual information, the "soft" emotions-related values are considered; e.g. the lifestyles the customers prefer, and the kinds of dreams and fears they may have. (Mager, 2009; Miettinen, 2009; Hämäläinen, Vilkkä and Miettinen, 2011.)

With the fourth method, Storyboarding, comic strips are used to express story-like scenarios of enhanced customer profiles and service situations. The task is to visualize how the service could be improved, if there were no limitations, but anything was possible. This method is most effective when working in small teams where everyone can express their ideas freely. (Kelly, Raijmakers and van Dijk, 2010.)

The last method selected for the workshops, Service Blueprint (see Figure 3 below), can be used to fill the storyboard scenarios with more detail. The purpose is to understand the different levels of each step on the service timeline; service touchpoints, or the tangible aspects involving spaces, objects, people and interaction, customer journey, staff journey, and the journey of other parties. (Miettinen, 2009; Kelly, Raijmakers and Dijk, 2010; Koivisto, 2009.)

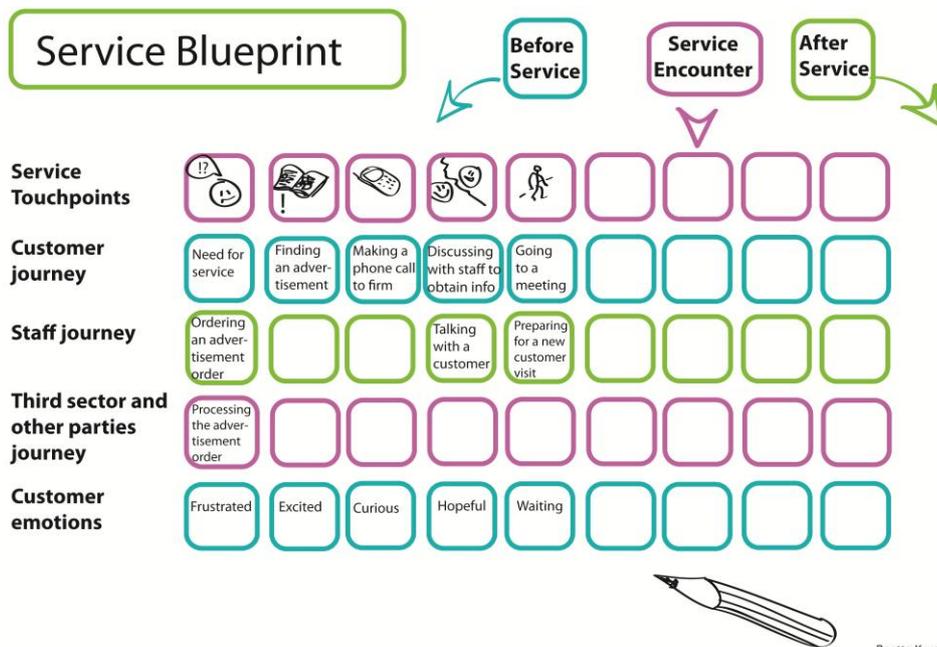


Figure 3 Service Blueprint

Reetta Kerola

As a whole, the co-learning and the co-creation activities have involved a large group of people, as illustrated in the following Table 1. The participants varied in their educational and professional backgrounds, as well as in their relationships with the development tasks at hand. Thus, the platform for co-learning service design within the PALI project has been genuinely interdisciplinary.

Total number of UAS staff involved	31
Total number of UAS students involved	105
Total number of SME representatives involved	37
Total number of customers involved	53
Total number of participants	226

Figure 4 Table 1 Scope of the project activities

From the viewpoint of UAS education, the project has produced 366 RDI-related credits (ECTS) constituting 9 772 hours of effort by UAS students. The total number of publications that are in progress is 11.

## Conclusions

The most crucial question in learning service design within the PALI project turned out to be knowledge transfer, both between the participating UASs, and from them to the participating SMEs. The process of knowledge transfer was based on the knowledge transfer model summarized in the following figure 4. In the model, there are three phases to systematically increase the participants' service design competence. The foundation of the model lies in a cycle of continuous development.

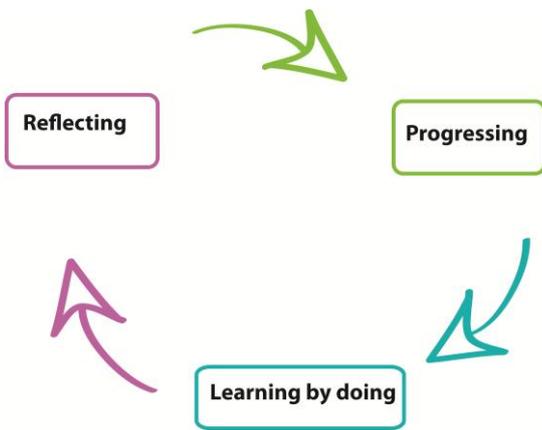


Figure 5 Knowledge transfer model

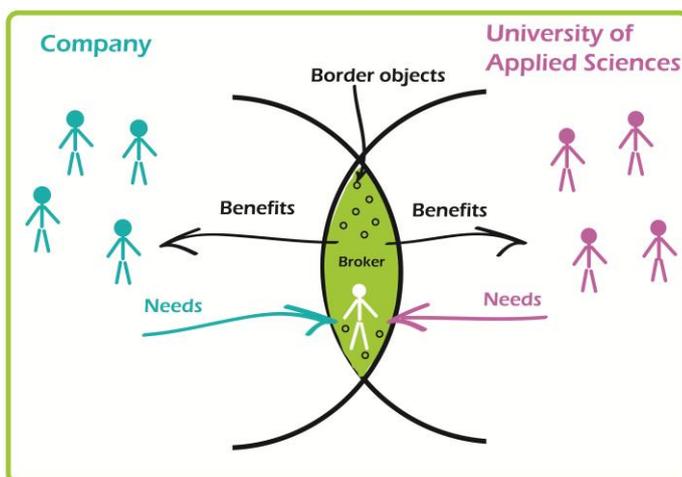
In the first phase (see Progressing, Figure 4 above), the project group was familiarized with the methods and tools of service design, and they learnt to select suitable ones for different cases. In addition, the project group discussed the different ways to integrate the service development cases into UAS studies. Each UAS applied different practices, but the challenges were the same: How to integrate teaching and research, and how to ensure the quality of student work?

Second phase (see Learning by doing, Figure 4 above) was about addressing real-world service-related problems in teams of UAS staff, UAS students and company representatives. The focus was on increasing the competitiveness of the participating companies while at the same time learning about the methods and tools of service design.

Third phase (see Reflecting, Figure 4 above) gathered all the lessons learnt in the previous phases. Experiences were discussed with the focus on detected best practices and possible failures. The lessons learnt were taken aboard when moving on to the second iterative round. Within the PALI project, the second round means two more practical service development cases into which the increased competence will be applied.

To tackle the challenges of integrating teaching and research, and of ensuring the quality of student work, a Broaker model (see Figure 5 below) was created. According to the model, each UAS has a service design expert who acts as a broker between the UAS and SMEs. The broker understands both perspectives and thus, is able to generate projects that benefit both parties. From the viewpoint of the UAS, the role of the broker is to change service opportunities into actual services. These changes from opportunities to services may be called border objects. The model has not been adopted into practice as of yet.

Figure 6 Broker model for integrating teaching and research



The further project activities include producing a practical service design how-to guidebook for SMEs, intermediary umbrella organizations and UASs, and the outlining of a service design clinic, or an interactive, hands-on platform for knowledge transfer between UASs and SMEs. The intensive workshops worked as a prototype for the forthcoming business clinic. In addition, a national seminar will be organized in order to share the experiences and lessons learnt. As for the research at hand, the next phases include extending the research framework, analysing the case study materials, and finally assessing the validity and transferability of the RDI that has been undertaken during the PALI project.

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