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DESIGNING AND IMPLEMENTING AN INNOVATIVE MASTER'S DEGREE PROGRAMME: A CASE STUDY

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ABSTRACT

Innovativeness has become a major competitive factor for companies, networks and regions, and renewal is very important for any business. The purpose of this paper is to increase knowledge of how education can contribute to new kinds of innovative business competences. The paper analyses the design and implementation processes of the new Master's degree programme in Service Innovation and Design targeted for practitioners. This is an action research based case study. The profound analysis of the case material and the participant observations during the four-year process show that the main issues related to the success of a new master's degree programme tend to be (1) clear objectives, (2) extensive research on future competence needs, (3) a committed and strongly led development team, (4) comprehensive networks with the key players in the competence area, and (5) a thorough documentation of the whole process as a basis for continuous development.

Key Words: Master's degree, curriculum, business studies, service innovation, action research.

INTRODUCTION

The demand for service innovation and design (abbr. SID) competences has rapidly increased among companies and other organisations across all industries (e.g. Ostrom et al., 2010). Fundamental changes in the economic environment, demographics and new technologies are driving businesses to seek sustainable efficiency and effectiveness through new, service based business models. Innovativeness is a major challenge for companies (e.g. Freel, 2005). Companies have to offer continuously improved or totally new service concepts to remain one step ahead of the competition and at the same time complying exactly with customers' latent needs and expectations (see e.g. Edvardsson et al., 2006). The importance of service innovation has enormous implications for competences and the knowledge base that underpins them (Ojasalo, 2009). More emphasis has to be laid on an ability and sensitivity to anticipate changes in customers' behaviour and expectations, and in the consequent competence to design better value propositions and create new service concepts. Business managers and developers need to understand service value from the customers' perspective, create a vision, develop it and put it into action. To create profitable business, they should be able to design definable, repeatable, scalable and unique service concepts (Ojasalo, 2009).

Consequently, several national and international research projects and government and industry reports have underlined the increasing need for service innovation and design competences (e.g. Succeeding through Service Innovation, 2008; Supporting Innovation in Services, 2008; The Future of Service Business Innovation, 2010). To answer this need, Laurea University of Applied Sciences in Finland has developed a new Master's degree programme in Service Innovation and Design. This unique degree programme in Service Innovation and Design aims to create the distinctive competences needed for future success. The main objective of the degree programme is to provide education which is based on the genuine competence development needs of companies and other organisations. The Master's degree programme in Service Innovation and Design was launched in 2009 after two years of intensive development work. It is a 90 ects credit-point professional

program that trains students from diverse backgrounds to become practicing service developers. The entry requirement for Master's studies at Finnish universities of applied sciences is that an applicant hold a Bachelor's or Master's level degree and has acquired at least three years of relevant work experience after graduation. The final selection for the degree programme takes place through an entrance examination. The SID Master's degree programme is provided in English and can be completed alongside a full-time job in 18 – 30 months.

When designing curricula, universities have to balance needs and desires of diverse stakeholders, and curriculum design is influenced by both external and internal factors (e.g. Nash, 2002). Strong external influences come typically from employer concerns, the job market, publications, and society in general. Internal influences include for example educational beliefs, disciplines, institutional purpose and mission, as well as student characteristics. Increasing enrolment, responding to students' and employers' needs, as well as internationalisation are typical general objectives of curriculum design (Jackson, 2003). Many universities, concerned with providing curricula that are current and targeted to both student and employer needs, are tailoring their curricula to target specific skill sets (Phillips, Settoon & Phillips, 2008).

In creating a curriculum, the main challenge lies not only in renewing the outcomes and contents of teaching to better respond to the future needs of the business environment; the changes in the environment seem to be so large that the curriculum should also find new ways to facilitate the continuous development of the region and of business through research, development and innovation (abbr. RDI) activities. The aim of the curriculum is therefore to create flexible conditions for the content of learning to arise from practical activity (Kivelä & Ojasalo, 2007).

At a general level, the development process of university curriculum is in line with any development process. A typical curriculum development process includes the phases of setting objectives, planning, implementing, assessing, and continuous development. In Twining's (2004) approach, curriculum development starts from the (1) vision, which is followed by a planning cycle consisting of four consecutive stages. They are (2) planning, (3) implementing, (4) assessing, and (5) evaluation. Twining and Richards (1999) mention that this is an oversimplification. In reality, each stage is not discrete and one may begin at any point in the cycle and will not always follow through the whole cycle in order. Nevertheless, the implementation stage bridges the intentions with what is achieved, and the evaluation stage helps the developers refine the plans for future action.

The purpose of this paper is to increase knowledge of how education can contribute to new kinds of innovative business competences. It shows how the need for new competences is found and analyzed and how the new degree programme is planned, implemented, assessed and continuously developed. The methodological approach of this paper is an action research based case study. The case of the study is the Master's degree programme in Service Innovation and Design. The initial design process took two years, starting from the initiation of the project in 2007 and ending up to the point when the first students began their studies in the programme in 2009. During the on-going implementation process the further development of the programme has continued. The remainder of this article is divided into three sections. Next, the method of the study is described. Then, in the Findings section shows how (1) the objectives for the new degree programme have been set and the curriculum designed, (2) the degree programme has been implemented, and (3) the degree programme has been assessed and continuously developed. Finally, the findings are discussed and conclusions drawn.

METHOD

This article is an action research based case study. Next, the characteristics of action research, case study and their use in the present study are briefly explained.

The idea of action research was introduced by Lewin (1946) and several definitions have been provided for action research (Kemmis & McTaggart, 1988; Oja & Smulyan, 1989; Zuber-Skerritt, 1992). In action research the purpose is, at the same time, to develop solutions to practical problems and to develop knowledge or academic theory. The person involved with conducting action research is a change agent in practical problem solving and also an academic researcher developing scientific theory (Gummesson, 2000). According to Rapoport (1970, p. 449), "action research aims to contribute both to the practical concerns of people in an immediate problematic situation and to the goals of social science by joint collaboration within a mutually acceptable ethical framework." In other words, a researcher faces two goals, one goal is to solve a practical problem within an organization, and the second is to generate new knowledge and understanding about other organizations (McKay and Marshall, 2001, p. 46).

Case studies have often applied the action research approach successfully (Howell, 1994). The case study approach implies the detailed examination of a single example of a phenomenon. A case study allows a research to retain the holistic and meaningful characteristics of real-life events, such as organizational and managerial processes (e.g. Gummesson, 2000; Yin, 1984). The empirical evidence of a case study may be qualitative, quantitative, or both. Sources of evidence in the data collection for case studies can include interviews, direct observation, participant-observation, documentation, archival resources, and physical artifacts (Yin, 1984).

The author of this article has been the head team designing and implementing the new Master's degree programme in Service Innovation and Design (SID). Thus, she has had the two roles of an action researcher: academic researcher and practical change agent. The design process started in 2007, and the first students began their studies in 2009. The design and implementation processes have been truly collective involving a great number of stakeholders. In the beginning, the development team was composed of four faculty members. In autumn 2008, a few more faculty members (lecturers) became involved in the team with the purpose of curriculum development. In November 2008, seven of Laurea's faculty members took part in the international Service Design Network seminar in Amsterdam where the curriculum was further developed with other seminar participants. As the degree programme was launched in autumn 2009, there were ten members in the team of lecturers, and the figure grew to 12 by autumn 2010. The team of lecturers has had regular development meetings (2-3 hours) approximately every second month. One-day development workshops have been arranged for the lecturer team at the beginning of 2009 and 2010, and half-day workshops in 2011 and 2012. Currently, in 2012 when the third application period for the programme is starting, there are 16 lecturers in the team responsible for the further development and implementation of the degree programme. Moreover, the students and business partners are also involved in the further development of the programme.

The current analysis of the design, implementation and assessment of the programme is based on direct and participant-observations during the process and the following written documents:

- Memos of the SID degree programme lecturer meetings in 2007-2011
- SID degree programme application report for the Ministry of Education and Culture in 2008
- SID degree programme curriculum
- Formal, comprehensive self-evaluation reports on the degree programme written in 2010 and 2011
- Student feedback for all study units and students' answers of the initial stage feedback questionnaires
- Self-evaluation reports written by lecturers for each study unit
- Memos of the SID Advisory Board meetings in 2009-2011
- External evaluation (Konttinen et al., 2012)
- Other documents for developing the SID degree programme (e.g. Multiform thesis guidelines, Competence development plan, Master's thesis evaluation criteria)
- Statistics and other documents of Laurea University of Applied Sciences (e.g. strategies, quality system)

FINDINGS

In this section, the design, implementation and assessment of the Master's degree programme in Service Innovation and Design are analysed.

Setting the objectives and designing the curriculum

In Finland, the Ministry of Education and Culture reviews plans for new master's degree programs in universities of applied sciences and makes the decision whether or not the universities are given the permission and financing to provide such education. The Ministry of Education and Culture has also set the national minimum requirements for students applying to a master's degree program provided by a university of applied sciences. The applicants must have a completed bachelor degree and at least three years of relevant working experiences after their graduation. Thus, the students of the master's degree programs are already professionals themselves in their field. The studies, which can be completed along-side a full-time job, are meant to strengthen their professional competences as well as to boost their own organizations.

The strategic intent of Laurea University of Applied Sciences was the first impulse for a totally new degree programme. The renewed strategy focused on service innovations and internalisation, and highlighted the status of master level degrees. In the beginning of the development process, the main objective was to create a plan for education which is truly based on genuine competence development needs of companies and other organizations, particularly in the Helsinki capital region where the case university is located. In particular, the main target group of the new programme was international professionals working in the Helsinki capital region. It was stressed that every aspect of the plan for the new degree programme is carefully and reliably studied and motivated. Motivating the real need for this kind of education was based on own research and on various national and international government and industry reports, studies and statistics dealing with competence needs now and in the future. Moreover, the plan was based on discussions and interviews with service design professionals and academics in several organizations. A broad report on the significance of service innovation and design competence in international and domestic operating environments was drawn up as a basis for preparing the application.

As a result of a lengthy development process, Laurea submitted the application for the Master's degree programme in Service Innovation and Design (Master of Business Administration) to the Ministry of Education and Culture at the beginning of 2008. The plan of the new Master's degree programme was accepted in spring 2008, and public financing for the education was confirmed so that first students could enroll on the programme in fall 2009.

After receiving approval from the Ministry of Education and Culture to launch the new Master's degree programme, the curriculum underwent further development based e.g. on various research reports and other written material. Lecturers have had a crucial role in designing the new degree programme from the start. Four lecturers, which had a strong back ground in service research, established a service design team in the beginning of 2007, which kick-started the design process. This service design team began to actively develop competence in the field through, for example, taking part in international conferences focusing on service design competences. At the end of the design process, the SID curriculum was processed at the Service Design Network conference in Amsterdam in November 2008, where Laurea's lecturers held a workshop focusing on the SID curriculum. The curriculum was developed further with international experts in January 2009, when Laurea arranged the second international Service Innovation & Design seminar in its campus. Moreover, the SID Advisory Board commented on the SID curriculum. After the launch of the degree programme in 2009, updating the competences needs has continued intensively until the present day.

Based on the extensive research and discussions, a framework of SID competences was developed. Afterwards, these competence areas were divided into study themes consisting of more specific study units (each 5 ects credits). In other words, the SID curriculum is constructed from themes and study units, which are derived from competences in the SID field. The themes are:

- Business and Management Competences in Service Innovation (15 ects credits + elective studies)
- Value Creating Competences (15 ects credits + elective studies)
- User-centric Service Design Competences (15 ects credits + elective studies)
- Master's thesis: Service Development Project (30 ects credits)

The SID competence level definition is established on the learning outcomes relevant to Level 7 in the European Qualifications Framework for Lifelong Learning (EQF 2008):

- Knowledge
  - highly specialized knowledge, some of which is at the forefront of knowledge in a field of service innovation and design, as the basis for original thinking and research
  - critical awareness of knowledge issues in SID and at the interface between different fields
- Skills
  - specialized problem-solving skills required in research and innovation in order to develop new knowledge and procedures and to integrate knowledge from different fields
- Competence
  - manage and transform contexts that are complex, unpredictable and require new strategic approaches
  - take responsibility for contributing to professional knowledge and practice and for reviewing the strategic performance of teams

There has been a strong involvement of different stakeholders in the design and further development of the SID curriculum. In summer 2007, Laurea University of Applied Sciences was accepted into the international Service Design Network (SDN), which, through collaboration based on multidisciplinary competence, aims to profitably address the needs relating to both practically and scientifically developing the service design competence area. Today, almost 200 companies and higher education institutions from around the world belong to the network. The SID team members have participated in all annual SDN conferences which have provided a good opportunity to discuss the degree programme with other service design educators and experts. In January 2008, Laurea University of Applied Sciences was a founding member of another international service design and innovation network. Originally, this service design network aimed at bringing together Nordic higher education and research institutions within the competence area. Currently, this network has extended to other parts of Europe, such as UK and Italy. The network has agreed to arrange a Service Design and Innovation research conference: the first ServDes conference was held in Oslo in 2009 and the second in Linköping in 2010. The third conference was arranged at Laurea in February 2012. This ServDes.2012 Conference is part of the Helsinki World Design Capital 2012 programme. The SID lecturers were in the key role of organising the conference, and SID students submitted papers/workshop ideas for the conference. They all also had a poster presentation there. The curricula of different universities providing service design education were discussed in a workshop in the conference. Moreover, four international Service Innovation and Design seminars have been held at Laurea (2007, 2009, 2010, and 2011). Laurea's SID lecturers have initiated and organised the seminars, and invited several leading international experts from business and academia to give a keynote presentation or lead a workshop for each of the four seminars. All these events and networks have strongly facilitated the following of the contemporary international discussion in the competence field.

The SID Master's programme has impressive knowledge in its Advisory Board not only by academic standards but also in terms of business competence and experience. The Advisory Board consists of ten highly experienced business executives, entrepreneurs and academics in the field of SID. SID Advisory Board was assembled six months before the first SID students began their studies. SID Advisory Board has convened four

times in each year: 2009, 2010 and 2011. In its meetings of several hours, the Advisory Board has applied diverse methods for processing the needs arising from the SID competence base. In addition, the members have commented on the curriculum, participated in a development workshop organised by the SID students, worked as evaluators in the entrance examinations, and taken part in the launch of the SID, in the planning and implementation of the annual SID seminars and the ServDes conference, and in the SID teaching as visiting lecturers.

Implementing the degree programme

At the master's level, the professional expertise of students has to be taken into account and a mechanism that allows the tacit knowledge sharing has to be applied, i.e. learning from each other and creating new knowledge together. In line with innovation theories, the aim has been to reach a heterogenic group of SID students (i.e. different educational backgrounds, different employment histories and jobs, many nationalities). Heterogeneity of the students is a fruitful ground for innovation and creative thinking. That is why team bonding among the SID students has been one of the main targets when the students begin their studies. In the first orientation day, they immediately start working in small groups to get to know each other and to familiarise themselves with the active role of a student, i.e. active dialog instead of passive listening. Their first orientation task has been to prepare a creative presentation based on written material in small groups on (1) Laurea's learning philosophy, Learning by Developing, (2) Laurea's quality assurance system, (3) the Master's level competences, (4) the SID curriculum, and (5) the Master's thesis process.

Two tutor lecturers have divided the groups in half and hold one-hour individual tutoring discussions at the beginning of the studies with each student. Students have completed their personal study plan, the Competence Development Plan, as a basis for the discussions, and the plan is supplemented during the studies. In the Competence Development Plan, students set competence development targets from four different perspectives: (1) reflecting general Master's level objectives (law, EQF), (2) reflecting the subject-specific objectives of the SID curriculum, (3) other personal competence development goals, and (4) thesis learning outcomes. Subsequent tutoring discussions are held as necessary with each student.

The Service Innovation and Design programme is conducted using the Learning by Developing (LbD) approach developed and adopted by Laurea itself (Raij, 2007). Learning by Developing is the pedagogical innovation that the Finnish National Evaluation Council based their decision on when Laurea was appointed as a Centre of Excellence in Education. The LbD approach is based on the principle of involving students in diverse and demanding research and development projects, carried out in cooperation with companies and other organisations (Raij, 2007). For example, the SID Master's students have been working for a long-term project (2010-2012) called CoCo that aims to enhance co-creation in the b-to-b context and to create concrete tools and methods for involving customers in the processes of both designing and delivering services. The CoCo project is carried out in conjunction with four b-to-b service companies, Laurea, VTT Technical Research Centre of Finland and Tekes (The Finnish Funding Agency for Technology and Innovation). The students have analysed the current state of the co-creation approach in the companies, and now they are starting to organise workshops in the companies where they will utilise different service design methods. Under the guidance of lecturers and experts from business and other organisations, students receive genuine, research-oriented and multidisciplinary learning that is completely different from memorising facts by heart for exams. In other words, a great deal of learning is based on practical problem solving in authentic cases, either in larger projects such as CoCo or in the students' own organisations. This greatly motivates students, since they are able to directly contribute to their own work and the development of their organisations. Consequently, the role of teacher changes from traditional lecturer into that of coach.

Typically, two lecturers are in charge of a study unit. Also, theses supervisors work in pairs since it is important to get more viewpoints in every development project. The studies include an average of three days of intensive contact sessions, i.e. face-to-face instruction, once a month (one Thursday-Friday-Saturday, at 9 am - 5 pm

each day). One of the five-credit study units involves three full days of face-to-face contact sessions usually arranged one month apart. It has been important to agree the intensive contact days for the whole calendar year at least six months ahead. During the contact sessions, students take part into workshops, group discussions, assignment presentations, or any other interactive events, which allow personal knowledge sharing. Also more traditional teaching methods such as lectures are in use, though these events are tried to keep in minimum, and if held, external speakers from companies are often invited to lecture (business case stories). The students complete various assignments between the contact sessions. The assignments are completed in a larger RDI project or related to students' own organisations in order to involve them, and transfer and disseminate new knowledge in the organizations. The assignments include for example customer research, blueprinting of service processes, designing scenarios for new service concepts, or some accounting tasks.

Competence evaluation is based on the objectives described in the curriculum. Overall evaluation criteria (based on EQF level 7) have been produced as a tool for study unit evaluation. Evaluation has mainly focused on assignment results, learning diaries, active participation or similar. Exams have not been arranged; theory has been studied through application within practical assignments.

Assessing and further development of the curriculum and the implementation

Regular SID lecturer meetings and SID Advisory Board meetings are the two main forums for the quality and effectiveness monitoring and related developing. In connection to lecturer meetings, student feedback and development proposals from different sources are discussed and the necessary rectifications made. Moreover, the degree programme has taken part in formal external evaluation processes (see e.g. Konttinen et al., 2012). The strategy implementation plan of Laurea University of Applied Sciences describes the key indicators, which are used for measuring the impact of the degree programme. Continuously monitored indicators include:

- Study progress, student-specific number of credits (accumulation of studies)
- Level of student feedback (quantitative and qualitative)
- Participation of students in face-to-face contact sessions and workshops
- Participation of students in Laurea's RDI projects
- Number (i.e. the appeal rate) and backgrounds of applicants

The SID degree programme complies with Laurea's quality system. Student feedback is gathered from each study unit. Quantitative data is displayed for students on a virtual platform. The lecturers have also access to all open comments. Study unit feedback is discussed at the lecturer meetings. Based on the feedback and personal experiences, lecturers draw up a self-evaluation on the study unit, which is saved for public view. In addition to the study unit feedback, initial stage feedback is gathered from students after their first six months of studying in the degree programme. This feedback is also visible for students on the virtual platform and discussed at the lecturer meeting. Graduation stage feedback is collected subsequently. The Student Affairs Office submits reports to the head of the degree programme before each lecturer meeting, which allow monitoring study progress on student level. The prerequisites for studying are constantly monitored.

The appeal rate has been very high compared to the other Master's degree programmes in the Finnish Universities of Applied Sciences. In the first application period in 2009, the number of 1st place applicants totalled 8.8 the number of selected applicants. In the second application period, the appeal rate for all 1st place applicants was 8.84.

In addition to the formal feedback questionnaires, the voice of students has been heard through tutoring discussions, discussions in connection to teaching, and informal feedback received via email. There is also a student representative in the SID Advisory Board. Student feedback of different types has influenced further degree programme planning. For example, based on informal feedback discussions with the students in spring 2011, a totally new elective study unit "Tools for visual communication in service design" (5 ects credits) was

designed and immediately implemented in autumn 2011. The SID students have actively given development ideas and participated in the promoting of the SID. For example, two SID students developed a marketing plan and a future vision for the programme using creative service design methods and involving the students, lecturers and the Advisory Board members.

Future competence needs are forecasted and the curriculum is constantly evaluated in the following way:

- SID Advisory Board members highlight future prospects of different sectors
- RDI project partners (companies and others) highlight future prospects of different sectors
- Reports and studies published by different operators on domestic and international forums are monitored actively
- Lecturers take actively part in different domestic and international events and networks within the SID field
- Students take part in events, seminars and conferences within the competence area, and report on these on the virtual study platform
- Students provide direct links to the development challenges of several sectors (evident e.g. in development tasks and theses)

Due to the fact that the degree programme was launched in autumn 2009, there is not yet any long-term evidence (3-5 years) of the effectiveness of teaching. Still, there are, for example, already some signs of entrepreneurship: a few SID students have started a new company as a consequence of the studies. Currently, several students are planning of starting an own company. Additionally, the SID students have created lots of innovative development ideas for various companies and other organizations in their assignments and theses.

DISCUSSION AND CONCLUSION

This article contributes to the scientific literature by increasing the knowledge of the development of higher education focusing on new kinds of innovative business competences. It shows how the need for new competences is found and analyzed and how the new degree programme is planned, implemented, assessed and continuously developed. This article increases the knowledge of the phases and activities of degree programme and curriculum development in general. Competence needs change rapidly in almost any industry. Thus, clear and updated guidelines are needed for continuous higher education development. The findings introduced in this article are based on a successful practical case. This study has clear potential to function as a general guideline for the development of a new degree programme, although case specific adjustment is always required.

The presented case started with setting the objectives for the development process. This is well in line with the earlier literature describing the development of curricula and degree programmes (e.g. Ornstein & Hunkins, 1998; Phillips, Settoon, and Phillips, 2008). The literature tends to emphasize how faculty, students, and employers affect the objectives of degree programme being developed. Still, in many countries, particularly in Northern Europe, the education leading to a university degree is typically publicly financed and regulated. For example, in the present case, the studies in the degree programme are almost free to the students, and the government and the municipalities pay practically all the costs of the education. Then, naturally, the first objectives for the education come from the authorities of the educational system, in this case from the Finnish Ministry of Education and Culture. The present study suggests that, when the studies in a university are publicly financed, then the very first step of the development process of the degree programme is to carefully analyse and fully understand the objectives and philosophy of the relevant authorities in the educational system related to the type of education being developed. Moreover, when setting the objectives for the development process, the strategic intents of the university need to be taken into account, and it also is important the top management of the university fully supports the development process. This guarantees adequate resources to the development team.

Higher education development projects may sometimes be subject to various contradictory interests of difference stakeholders (c.f. Phillips, Settoon & Phillips, 2008). There is a danger that some influences may be more influential than the others if a faculty member works alone in planning compared to a process in which a group of colleagues plan an entire programme (e.g. Stark, 2000). The findings of this study suggest that clear objectives and a concrete project with an assigned person in charge tend to ease the balance of different needs and desires of diverse stakeholders. Even though the design and implementation processes have been strongly led by one person in the present case, the processes have been truly collaborative involving a large number of stakeholders. This study also reveals that analytical planning work with accurate and grounded argumentation, which to a large extent resembles scientific research, is crucial in order to make the plan reliable in the eyes of reviewers and other stakeholders. Later, this kind of a profound analysis of competence needs and planning of the programme based on the analysis tends to generate students who graduate more prepared to assume positions being demanded by employers.

When the objectives and the project team were set, the design of the SID curriculum started. The curriculum has been derived from the identified competence needs of businesses. The aim of the SID programme is to provide students with multidisciplinary knowledge in service innovation and design. This happens through advanced studies of different service theories and their implications for SID practice. The programme brings students to the forefront of recent developments in the SID field by including supervised development training. Another important objective is to improve students' competences in combining academic rigour with managerial relevance when working on independent projects. A central theme of the studies is that service business requires a distinctive approach to strategy, innovation and design. At the beginning of the studies, students acquire the competences related to deeply understanding customers/users, their latent needs and behaviours in their natural environment. At the same time, they study strategic management and new service development. They also familiarise themselves with the basics of design thinking. In the second semester, they learn methodologies for futures studies and deepen their competences in service design processes and methods. Moreover, they learn how to build a service brand, and to commercialise and sell services. Finally, service leadership and service culture is their last compulsory topic. The elective studies (15 ects credits) enable students to pursue their specific interests, as well as to overcome deficiencies in their service design skills. For example, service design tools, cross-cultural issues and management of business networks are topics that the student may choose. The SID studies culminate in a Master's thesis project. The aim of the Master's thesis is to develop the student's ability to carry out a demanding service development project independently.

The next main phase of the development process of a master's degree programme is implementing. This study extends knowledge by finding the relevant elements of successful implementation in the new master's degree programme. In the SID programme, the Learning by Developing approach (see Raij, 2007) is used. Learning in authentic business development projects requires an active approach, commitment, a combination of theory and practice, collaboration, the sharing of expertise in teams, problem-solving skills and reflection. During the projects, students learn about things in the authentic contexts in which the knowledge will later be used. In the projects, students have the opportunity to work on long processes, in which it is essential to understand things holistically, identify and solve problems. In addition to business projects, the SID students have had important roles together with the SID Advisory Board members in the arrangements for the annual SID seminars at Laurea, for example in the planning of workshop sessions held, wrapping up the workshops, and moderating the seminar.

The students of the SID programme have a varying and multidisciplinary background. This is a significant strength of the programme. Most of the students have their educational background (i.e. a Bachelor's or a Master's degree) either in the field of business administration, information technology, engineering or design. The group is international: almost all the continents are represented. The students work for many kinds of companies and organisations alongside their studies: multi-national corporations (both manufacturing and

pure services), SMEs and public sector. This all creates a unique and fruitful basis for innovative thinking. The heterogeneous group spends three days per month together and co-creates new competences by discussing, sharing and further developing the individual assignments they have carried out between the contact sessions. The social networks created during studies are essential from the point of view of creating new entrepreneurship: while working in these networks, students identify new opportunities and the threshold for starting out as entrepreneurs is lowered. A few new companies have already started by the SID students though the programme has been running only for about two years.

The relevance of the SID degree programme content is evaluated continuously in relation to latest research in the field and discussions within different domestic and international networks. For example, the members of the SID Advisory Board bring state-of-the-art knowledge of the contemporary issues and trends in SID in the business community. They also offer their personal network for the use of the programme.

In sum, the profound analysis of the case material and the participant observations during the action research show that the main issues related to the success of a new Master's degree programme tend to be (1) clear objectives, (2) extensive research on future competence needs, (3) a committed and strongly led development team, (4) comprehensive networks with the key players in the competence area, and (5) a thorough documentation of the whole process as a basis for continuous development.

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