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# LEARNING OUTCOMES IN THE VIRTU PROJECT

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## Abstract

The purpose of this paper is to describe learning outcomes in the VIRTU project.

The VIRTU project – Virtual Elderly Care Services on the Baltic Islands - was a three-year EU project and it was carried out during 2010–2013. The VIRTU project aimed to create a new service model based on virtual technologies which would benefit the elderly people, their relatives and social and health care professionals of municipalities on the Baltic archipelago. The intention was to test, develop, research and disseminate new virtual elderly care services based on diverse technological applications. Current and future professionals from different sectors were encouraged to take advantage of the technological innovations as a part of their daily work.

The action model of Laurea University of Applied Sciences is Learning by Developing (LbD). This innovative action model is based on authenticity, partnership, experiential learning, creativity and research. Learning is related to development projects that are genuinely rooted in the world of work. Goal for this model is to produce new knowledge for all partners of the collaborative learning process i.e. students, teachers, working life partners and customers.

In the spring of 2012, 60 students of the Bachelor of Social Services programme participated in the VIRTU Project. Student's feedback showed that project work developed students' customer work competence generally in the form of guiding skills, i.e. distance guidance, and as developed methodological competence. Through the project, students learnt about elderly care and were able to take more responsibility of virtual services in community. They gained also a lot of concrete knowledge about virtual solutions of elderly care. They described working in the VIRTU Project as a pleasant experience and the student's attitude toward elderly developed into more positive direction. Based on student feedback, the VIRTU Project proved to be a good learning environment when project work was examined through the dimensions of Learning by Developing.

Learning by Developing action model increased participants' skills, knowledge and confidence and instill in them a belief that they can make a difference. Good relations are needed between groups to challenge inequality and exclusion. Besides creating new virtual service model, results can be seen in developed professional cross-border cooperation.

Keywords: development project, learning outcomes, Learning by Developing action model.

## 1 DEVELOPMENTWORK IN THE VIRTU PROJECT

The demographic changes in the Baltic Sea Region influence strongly for the social and health care services. Long distances, archipelago areas and the ageing population, bring challenges to provide ensuring equal services when budgetary conditions are limited. The possible lack of qualified work force is a common challenge in the social and health care sector. New working methods in elderly care are needed to guarantee the quality and attainability of the services in the future.

The VIRTU project was developed together with the elderly living a total of 16 municipalities in Finland, Åland and Estonia. Three Development Centres in Estonia and four Universities of Applied Sciences in Finland took a part in a project. Central Baltic INTERREG IVA Programme was financing the project and the budget of VIRTU project was 2,185 million euros for three years. [1]

The project's objectives were: 1) Develop qualitative and cost-effective virtual service model in the field of social- and health care services on the archipelago areas. 2) Support elderly inhabitants coping at home. Increase the quality of life through social interaction and to promote safety living at home. 3) Support and engage professionals working in the social and health care services to take advantage of the technological innovations as a part of their daily work. 4) Exploit the cross-border cooperation in developing joint solutions to common problems in the field of social- and health care services on archipelago areas 5) Support the service model's development to profitable and transportable business concept. [2]

The VIRTU project aimed to promote the social life of the elderly living in the archipelago or other remote areas. The purpose was to create and maintain social relations and to prevent loneliness. The VIRTU project developed preventive working methods and practices. Preventive services promote well-being and further self-fulfillment and a desire to learn. The virtual connection to services can be considered as a remote access service but it also enables to locally reach many services and fulfill conventional services. [1]

The service model, which was created during the VIRTU project, was named the VIRTU channel. The project applied Videra LTD's video conference system, called CaringTV, as a technical platform. This system enabled the elderly to be in simultaneously visual and audio connection with several users. Criteria for the VIRTU channel client selection was that the user had to be over 65 years old, living in project area and either the family caregiver, living alone or an elderly couple. The interactive VIRTU channel was tested together with elderly people, universities of applied sciences and municipalities. There were a total of 90 private elderly users in the VIRTU project and social and health care professionals had 36 VIRTU devices in municipalities. The VIRTU channel gave for the elderly opportunity to join in different kind of distance services like interactive broadcasts or they could use the VIRTU devices for bilateral contacts with other users or for example home care workers. About 1790 interactive programs for groups were produced during the VIRTU project. [1]

The VIRTU channel was divided regional groups where the elderly had opportunity to take a part interactive group programs locally. Municipalities and Universities of Applied Sciences worked as local pairs and the development work was made in co-operation. For example Laurea University of Applied Sciences and Municipality of Sipoo developed VIRTU channel together and were responsible for activities in local level. The co-operation consisted of 1) developing VIRTU channel activities and 2) supporting Sipoo home care organization to develop the VIRTU service model as a part of their daily work by organizing workshops for home care workers.

## **2 LBD-MODEL AS A LEARNING METHOD IN THE COMMUNITY**

Laurea's strategic choice is to integrate its three main tasks - education, regional development and research and development - in the working life oriented Learning by Developing action model (LbD). Laurea's pedagogical innovation, LbD-model is based on authenticity, creativity, partnership, experiential learning and research. The LbD model is built on a development project that is genuinely rooted in the world of work, whose progress requires collaboration between lecturers, students and workplace experts, and which produces new knowledge and new practices. [3]

In VIRTU project LbD was based on authentic partnerships between Laurea, Sipoo municipality, home care nurses and clients as users. In this kind of learning environment the progress was made through the identified stages. According to Raji [4] all of the partners participate as equals, finding meanings for consequences in order to produce new competence in their varying roles and responsibilities. The outcome is learning of individuals leading to personal professional growth. In working life, you are expected as a professional to manage changing and unexpected situations which mean that you have to know, understand what you know and be able to act in order to find new kinds of solutions.

The purpose in workshops with Sipoo home care was to share experiences, mutual reflections and award and test meanings between the individuals and their environments. The main goals for co-operation were to clarify the future in home care where the solutions of well-being technology are part of the basis of nursing interventions. Also there was a need to have a support for orientation how to use new devices and what kind of services could be possible for elderly people. In the workshops home care workers and senior lecturers also explored for example the benefits of virtual services; how the devices could help work of nurses, could it save time by doing some home care visits online, or could it improve social connections between elderly people. As a learning community we finally achieved the production of new knowledge in the forms of new products, services, processes, working models and working culture. [4]

The idea of that all parties are involved (eg. users, service providers) can affect the innovation process. Working together means the integration of different competences and is based on mutual trust. In this way new technological and service ideas and inventions are found and formed. This method also strengthens the implementation and use of new inventions in their used environment and commits the users to these inventions [5]. At the beginning of a new LbD project one does not know what kind of learning will take place. Since the project has connections with authentic working life, the learning outcomes cannot be "wrong" as such, but they can be something unexpected. [4]

In the VIRTU project LbD model was useful when the service design was planned and tested. Service design refers to user-driven planning and shaping a service experience so that a service responds to the user's needs as well as to the service supplier's purposes and targets. We were especially interested in methods exploring user's implicit needs; how feelings, unspoken needs and tacit knowledge can be systematically recognized and studied. An innovation culture requires multi-disciplinary team work. This kind of collaboration takes a form of team work which is characterized by member's positive dependency on each other [6]. A pragmatic learning concept emphasizes collaboration, the activities that change individuals and the environment and the role of experiences and interaction. Pragmatism does not see education only as an academic exercise to increase general knowledge, but also as answer to why and what should one learn. Learning is vocationally directed, so every learning situation should lead toward increased practical competence. [7]

In the VIRTU project learning was active and consisted of reflection and building experiences, of handling new situations and of trying to act in a purposeful way. According Taatila & Raji when talking about community learning the two characteristics of LbD model are: 1) LbD results in learning for individuals and the community, the generation of new competence in forms of new habits and action models and new innovations, 2) learning takes place when participants achieve new ways of action and new habits to meet an ever-changing world. [7]

In the VIRTU project there were several communities learning about new technology and working methods. One group was the home-care nurses, second group the VIRTU users and Laurea was working with both groups. The people of Sipoo municipality were also involved as learners in the community as the information was given and the participation was made possible. The whole community has to be aware of the project if we want to achieve long-term, sustainable change. We help communities to deliberate, plan and take collective action to meet specific ongoing or urgent needs [8].

Community-based approach promotes local ownership of processes of change and so ensures better mobilization and management of knowledge and resources for implementing plans of action. There might have been some obstacles in working community; problems of dependency, transparency, accountability, maintenance of hierarchies and ineffectiveness. It is important to build on communities' own initiatives, putting energy and resources where they can best serve as catalyst for change.

To achieve a contextual understanding during the process we should know what challenges and unmet needs are faced in the community. Connections with outside structures including governmental and other organizations help to avoid duplication and identify to facilitate networking. During LbD project we tried to use facilitation, which is the key to enable what community or group wants to see happen. We helped them to better understand and analyze their own needs, articulate their vision for change and then search and plan their own solutions. We tried to create conditions for trust, flexibility and patience. We had to remember not to come with ready-made solutions, but let the learners find the solutions. It can be time-consuming process, because it should be dynamic and not controlled.

One essential element in the VIRTU project and community learning was building capacity in leadership. Effective, skilled leadership that fosters initiative, creativity and responsibility amongst group members can be transformative. We supported leadership skills by listening and giving and receiving feedback. We encouraged deliberative dialogue between organization leaders and the members they lead. We worked with key group members to build capacity for thinking critically, identifying problems, setting goals and finding solutions collaboratively. To achieve the long-term sustainability of initiative and autonomy of group it is required that community organizations are left strong and able to cope independently when the project involvement inevitable ends. A successful withdrawal requires concerted planning; community organizations must have clear expectations of the process, and viable plans and capacity to fulfill the functions vacated by the outside agency like Laurea in this case. [8]

The members of the group should be recognized and rewarded for their efforts. The outcomes in terms of community empowerment should be monitored, to ensure continual learning and improvement. More strategic use can be made of evaluation processes to feed into new program development.

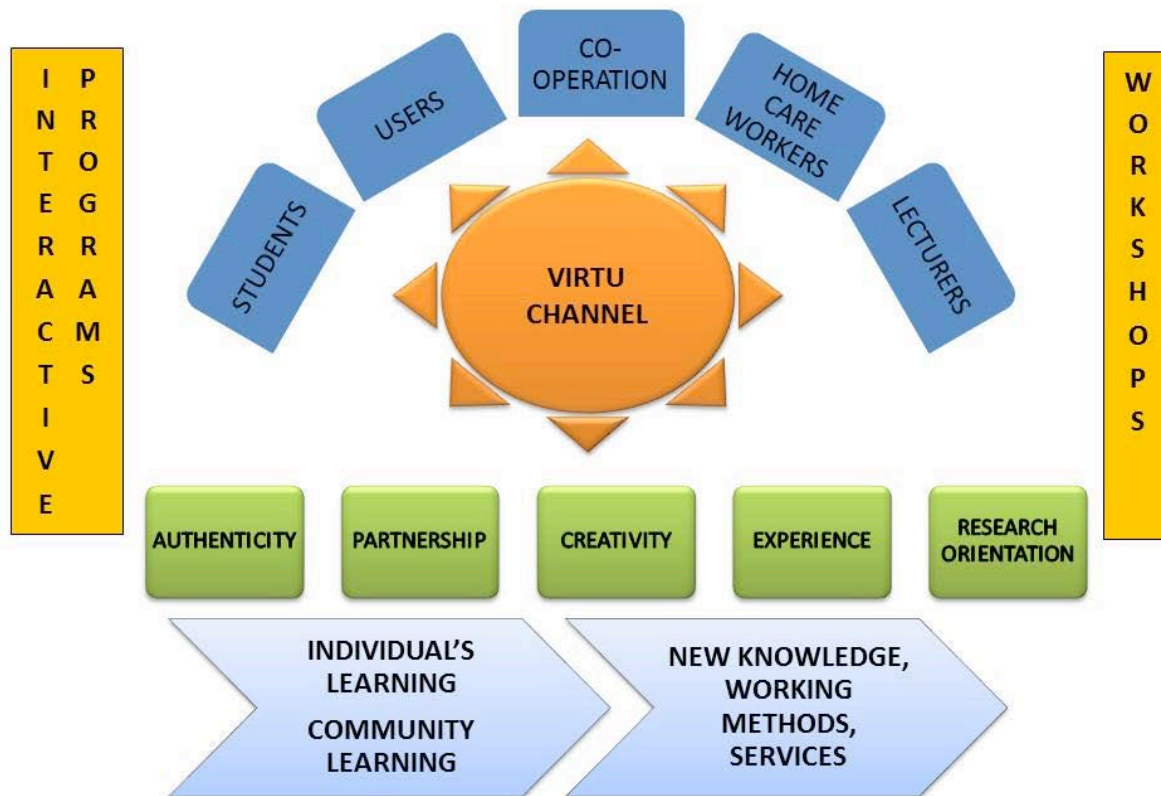


Figure 1: The LbD-model in the VIRTU project

### 3 STUDENTS AS PART OF THE LEARNING COMMUNITY

During years 2010-2013 almost 400 students took part in the VIRTU project. Students came from different Bachelor's and Master's degree programs, such as nursing, social services and business management. Students' role was linked to different study units, like thesis process, practical studies or elective courses. The students have possibilities to learn different kind of skills like interaction, languages, counseling, elderly care and development work. Main forms of learning activities consist of planning, producing and evaluating the VIRTU channel programs for the elderly in cooperation with Sipoo municipality. Program contents aimed to support elderly users, create and maintain social relations and promote health.

All students involved in the VIRTU project gave feedback of acting in the project. They had to define their learning experiences in the VIRTU project, how working in the VIRTU project fit to their study units. Students' feedback was mainly very positive. Students saw project work as a positive experience and the VIRTU Project gave an interesting opportunity to learn about a new form of elderly care.

The students' feedback can be observed throughout LbD models five characteristics. The VIRTU Project gave for the students an authentic environment to develop their competences in elderly care and development work and an opportunity to apply learnt information in practice. The significance of interaction in encounters with the elderly was pointed out as central by students. In Learning by Developing model R&D projects are seen as a learning environment which enables for formations of new habits of actions [3].

According to Raji [9] partnership can be seen as doing together, learning together and sharing competences between all actors in the project. In the VIRTU Project the students' experience was that they were in the learner's role when encountering the elderly in group programmes, although they were counselling the elderly. The students' attitude towards the elderly and elderly care took a turn for the better, and appreciating the elderly was emphasised in the operation. The students and the elderly could be seen as partners who were sharing experiences and learning from each other in a positive way.

The students had to reflect on the functionality of methods in VIRTU channel activities. Student feedback showed the significance of assessment and critical reflection of the applicability of methods as part of the VIRTU Project operation. Research orientation is seen as the utilisation of research knowledge and knowledge of research methods in projects and in personal competence development [10]. Working in the VIRTU Project developed the students' professional competences like client work, development work and network.

Projects aim to solve problems and develop operations in cooperation. Project work requires creativity for producing new ideas and operating models. [3], [10] On VIRTU channel, the students were allowed to practice the methods they had chosen and use them in a creative way in a new virtual learning environment. They had to work with the elderly using video conference system and tried to create interaction with group of elderly.

VIRTU Project proved to be a meaningful experimental learning environment and modifier of attitudes for the students. In students' feedback learning with the elderly and from the elderly were crucially noted. In Learning by Developing model experiential nature can be seen as communal sharing and utilising experience-based knowledge [10]. The VIRTU project introduced to the students opportunities of interactive distance guidance as a working method in social and health care services. Students had a chance to apply methods and theoretical information in the face-to-face sessions. The project offered a good possibility to study elderly care methods in practice through experience. The students' learning outcomes can be focus in five characteristics of Learning by Developing model in Fig.2.

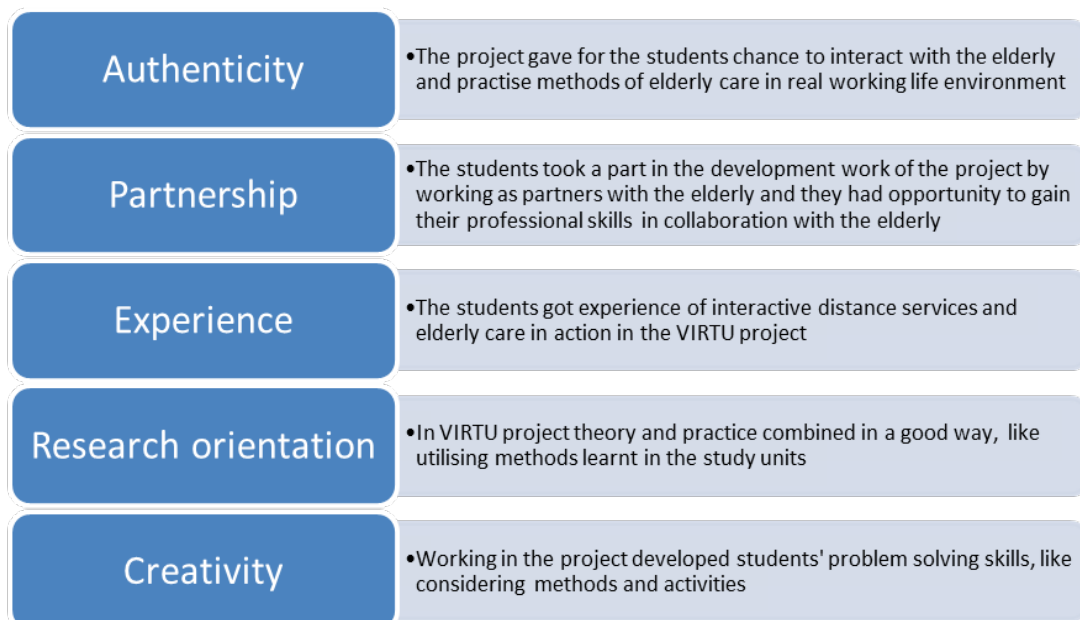


Figure 2: The students learning outcomes in the VIRTU project

## 4 CONCLUSIONS

During this collaboration were needed different professions to enable developing work between partners. Mainly there were needed profession such as leadership of nursing, clinical nursing and networking skills, producing scientific knowledge, developing quality of nursing by virtual interventions and evaluating the effectiveness of results through the process. There were many challenges during the process and we found out that the problems of technical devices raised up the biggest issue which also had an impact of the motivation of developing work. However it is also to import to notice that during the project there is a possibility to develop technical issues at the same time. There were also some critical points to have enough economical support to project work and also a lack of enough resources for nurses. Furthermore the members of project group changed which make it collaboration some difficulties. We also found out that during the process is very important to clarify goals, roles and duties of the collaboration more clearly that the ambiguities could be avoided.

When thinking of community learning we may include the concept empowering as well. That's how we can enable more people to play an active role in the decisions that affect their communities. An

"empowered" community is: confident, inclusive, organized, co-operative and of course influential. We worked in the VIRTU project in ways which increase people's skills, knowledge and confidence and instill in them a belief that they can make a difference. We needed also good relations between groups and challenged inequality and exclusion. There was always a danger that people don't contribute in meetings or they don't understand your constraints or they don't believe change is possible. The LbD model requires too working in ways which bring people together around common issues and concerns in organizations and groups that are open, democratic and accountable. We had to build positive relationships across groups, identify common messages and promote partnership working and networking.

In the VIRTU project we assumed that everyone knew what was expected of them, helping people to feel good about themselves and encourage people to believe that "they can do".

Questions that need answers when starting a new project:

1. Do partners have the necessary skills, knowledge and support to work effectively in the community and with communities?
2. Do organizations have strategies for dealing with competing demands?
3. Do people involved feed back to communities what has happened as a result of their involvement?
4. Are partners able to challenge targets or processes which compromise community learning?

In the future it is important to consider more how this kind of service model could be more flexible to respond the different needs of users, rather than we have to find right users, who fit in this form.

## REFERENCES

- [1] Tuominen, H. (2013). Baltic Sea cooperation and VIRTU project. In Karppi, M.; Tuominen, H.; Eskelinen, A.; Santamäki Fischer, R. & Rasu, A.(eds.). (2013). Active ageing online. Interactive Distance Services for the Elderly on Baltic Islands. VIRTU Project 2010-2013. Reports from Turku University of Applied Sciences 155. Tampere: Suomen Yliopistopaino – Juvenes Print Oy. pp.10-18.
- [2] VIRTU project [www.virtuproject.fi](http://www.virtuproject.fi)
- [3] Laurea University of Applied Sciences. (2011a). Learning by Developing LbD Guide.
- [4] Raji, K. (2013). Learning by Developing in Higher Education. Journal of Education Science. 2013/2, ELTE University, Budapest.
- [5] Saksela, T. & Raji, K. (2011). CIDE helps to develop welfare and health care services. Kehittäjä 1/2011. Laurea University of Applied Sciences.
- [6] Juujärvi, S., Pessa, K. & Räsänen, P. (2011). Service Design as a tool for regional innovations. Interdisciplinary Studies Journal 1(3). Laurea University of Applied Sciences. pp.13 – 22.
- [7] Taatila, V. & Raji, K. (2012). Philosophical Review of Pragmatism as a Basis for Learning by Developing Pedagogy. Educational Philosophy and Theory. Volume 44. No8. pp. 831-844.
- [8] Bofes, L. & Van Rensburg, D. (2000). Community participation in development. Community Development Journal 35(1).
- [9] Raji, K. (2006). Kehittämispohjainen oppiminen ammattikorkeakouluosaamisen mahdollistajana – Learning by Developing ammattikorkeakoulukontekstissa. In Erkamo, M. & Haapa, S. & Kukkonen, M-L. & Lepistö, L. & Pulli, M. & Rinne, T. (eds.). (2006). Uudistuvaa opettajuutta etsimässä. Laurea-ammattikorkeakoulun julkaisusarja. B11. Helsinki: Edita Prima Oy. pp.17-34.
- [10] Laurea University of Applied Sciences. (2011b). Learning by Developing (LbD) Strategy.