# PRACTICE-BASED INNOVATION PEDAGOGY: LEARNING IN THE MIDDLE OF ACTION

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## Abstract

This paper makes a connection between learning, innovation and pedagogy in the context of vocational adult education in Finland 2009-2011. The paper identifies the social dimension of organisational learning in practice-based innovation. The action planning phase of the action research process involved the Finnish association for vocational adult education and training, 43 Finnish vocational adult education centres, the companies training their employees, and research facilitators. As an outcome of the action planning phase the authors suggest a framework for constructing innovation pedagogy. The framework contains three levels, the exact contents of which will be constructed in coming action research phases of innovation pedagogy. These levels are: 1) The innovation system of the adult education organisation, 2) the innovativeness of the adult education organisation, and 3) the adult education organisation's education service strategies, i.e., what kinds of education services the organisation will produce together with its customers.All these levels should be taken into consideration when constructing strategy and practices for innovation pedagogy.

Keywords: Innovation pedagogy, action learning, innovation capability, practice-based innovation

## 1 INTRODUCTION

This study aims to generate knowledge and understanding that can be used for constructing innovation pedagogy in vocational adult education in Finland. Recent innovation discourse on practice-based innovation (Harmaakorpi and Melkas, a. and b. forthcoming) highlights the need for an interactive, interpretative and shared learning mode. Harmaakorpi and Melkas (b. forthcoming) emphasise that there is a need for different types of learning modes within different contexts of innovation actions in the everyday practices of organizations. Based on the concept of the ´third way` of learning (Elkjaer, 2004), the authors assume that organizations as learning environments, and the relationships and interactions between people in a specific pragmatic context of work practice are fundamental for practice-based innovation.

It has been noted that formal education may not actually improve practices (Van de Ven and Johnson, 2006). Also, the praxis recognizes the problematic; education is designed with acquiring degrees in mind rather than learning, and education is focused on teaching individuals rather than organizations. This process of information delivery (Gherardi et al., 1998), and the metaphors of the `Third Way` of learning (Elkjaer 2004) challenged us to form the following research questions:

- How do adult education organizations design learning in the context of innovation?
- What is innovation pedagogy according to adult education?

Learning in turbulent innovation environments within organisations is faced with new challenges. That challenge is pedagogy, which must be constructed from something which is just ´becoming`, and forming. Besides professional skills (capabilities related to e.g. interaction and knowledge processing), intuition and emotion are required as well. The study has a praxis-related research orientation (Mattson and Kemmis, 2007), which aims to make a change in how adult education employees participate in and construct learning activities (Alvesson, 2002). Praxis-related research is an umbrella term for action research (Argyris 1993; Argyris and Schön, 1978; Kemmis and McTaggart, 2000), dialogic research and cooperative inquiry (Mattson and Kemmis, 2007; Heron and Reason, 2001).

Innovation pedagogy for vocational adult education is investigated in a multi-voiced action research process involving the Finnish association for vocational adult education and training, 43 Finnish vocational adult education centres, the companies training their employees, students of adult education and research facilitators. This research process places emphasis on the ability of the adult education organisation to critically reflect upon its own current social and cultural practices. In this paper we examine and describe the beginning of one action research process. Our data consists of a questionnaire sent to all adult education personnel, four semi-structured interviews with core development persons, and a series of action research intervention workshops.

Following one PBI trend (Harmaakorpi and Melkas, a. forthcoming), the authors propose a framework for innovation pedagogy for vocational adult education in Finland. As a conclusion, a three-layered framework for innovation pedagogy in adult education is suggested. The first layer consists of how the organisational structure allows the employees, managers and customers to construct novel learning practices and supports them in this process, and how the structure facilitates the emergence of a positive learning culture. The middle layer consists of the employees and managers' innovation capabilities, particularly the pedagogical skills of educators as learning facilitators**.** The third level is formed of the pedagogical products of the practice-based innovation activities, i.e. the services, processes and models which vocational adult education offers to its customers.

Chapter two presents the main theories related to this study. Firstly, the viewpoint to innovation capability is introduced. Secondly, the theory of social learning is combined to this field as a path to gain knowing from innovation pedagogy. In chapter three we present the research design, as well as the case at hand. Chapter four discusses the study through the research questions.

## 2 Practice-based innovation

The main idea of practice-based innovation is to put knowledge and knowing into practice. . Practice-based innovation emphasises the enriching mutual interaction of the innovation actors.According to Harmaakorpi, Tura and Melkas (forthcoming), one valuable innovation source are factors like the ability to interact, learn collectively, and build trustful relations between the innovating partners. These practice-based innovation authors claim that PBI is created by many triggers and takes place in the practical contexts of multi-actor innovation networks (Harmaakorpi, Tura and Melkas forthcoming p. 5). In order to enhance the innovation capabilities of employees, all aspects should be included in the training. Nowadays, all employees in an organisation ought to be cherished as a creator of innovation – it is the people who generate and adopt new ideas as well as transfer and devise them into practice. Both academics and practitioners strive to find ways to foster and facilitate innovation capability in organisations. (Melkas and Harmaakorpi, 2008) Discussion on applicable micro-level learning activities, learning culture and management for different phases of innovation processes is lively. Greater organisational flexibility is sought by reducing hierarchy and decentralizing power, authority, responsibilities and resources to smaller units located around core activities. The change is usually launched by flattening hierarchies and decentralizing structure; increasing teamwork, autonomy and self-conduct; and encouraging multi-skilling and new kinds of co-operation. Sufficient resources including slack, communication channels, widely distributed high quality knowledge, shared vision and risk-taking have typically been identified as determinants of an innovative organisational structure – in addition to an organic, flexible design. (Tiernan et al., 2002; Martins and Terblanche, 2003)

In the context of learning and innovation, organisations' learning systems ought to pay more attention to transformational change achieved through shifts in mindsets, consciousness and social agreements (Elkjaer, 2003 and 2004; Marshak and Grant, 2008; Van de Ven et al., 2008). Capabilities to facilitate collaboration, cooperation and participation – both inside and among organisations - are essential. A practice-based innovation process requires mechanisms for importing and exporting knowledge, ideas, ideals, proposals and practices. Inflow and outflow should be enabled in every stage of the innovation process. Innovativeness and innovations are closely linked to change and leading the change.

## 3 LEARNING

Contemporary organizations are between two learning approaches: learning as a management tool (Elkjaer 2003, pp.76- 77) for developing the skills of individuals, and learning as a social action in communities of practice (Elkjaer 2003, p.81) for developing the skills of the community.

> "It is the movement between the familiar and routine actions as well as between established and emergent social relations that brings about learning" (Elkjaer 2004 p.423).

Harmaakorpi, Tura and Melkas (forthcoming p. 4) define PBI "as innovation processes *triggered by problem-setting in a practical context and conducted in non-linear processes utilising scientific and practical knowledge production and creation in cross-*

*disciplinary innovation networks* ". So PBI occurs within a practical context, and in such processes there is a strong need to combine knowledge interests from theory and practice, as well as knowledge from different disciplines. A new kind of characterisation of expertise is also needed. (Harmaakorpi, Tura and Melkas forthcoming, p.4)

We suggest that expertise is required in at least three fields: expertise in perceiving the possible worlds, expertise as the ability to function as a broker and expertise in interaction skills, i.e. dialogue. Therefore learning ought to be a social process (following Elkjaer's (2003) social learning theory) where the learners explore their own experiences and actions through reflection in order to develop their practices. Therefore the point of departure for learning is the living experience of everyday life (Elkjaer 2003, p.39). Learners aim at making sense of their own behaviour and beliefs in the organisation. (Alvesson 2002). According to Elkjaer (2003 p. 44), " *to know is to be capable of participating with the requisite competences in the complex web of relationships among people and activities*". Based on this idea we suggest that there is no single, generalisable way to learn to be innovative, but, rather, there are different layers of experience related to it. In other words, learning to be innovative is always connected to the context, the present situation, other people and the operational environment. Innovation always takes place in a specific situation and context; people with their feelings, intuition and knowing are in a relationship with one another to learn something from their work practice, and learning takes place in an organizational system. Therefore learning and development are woven together (Elkjaer 2003, p. 39).

It is our view that knowledge, learning, and innovation all develop simultaneously within a course of action (Gherardi, 2006). Knowing is dynamic, concrete, and relational, and it is about interaction between the knower(s) and the world. We are inspired by the application of pragmatism and social learning theory, and we emphasise that pedagogy is needed to concretize learning goals, to create practice-based learning environments and to construct learning strategies for practice-based innovation. One of the objectives of constructing innovation pedagogy for adult education is to question existing meanings of education and open up new perspectives in order to combine different fields.

## 4 METHODOLOGY

The study has a praxis-related research orientation (Mattson and Kemmis, 2007), which aims not only at generating actionable knowledge in the workplace but also at changing the way employees are educated. Praxis-related research is an umbrella term for action research (Reason and Bradbury, 2008; Kemmis and McTaggart, 2000), dialogic research and cooperative inquiry (Mattson and Kemmis, 2007). In this orientation, knowledge, learning, and innovation all develop simultaneously within a course of social interaction.

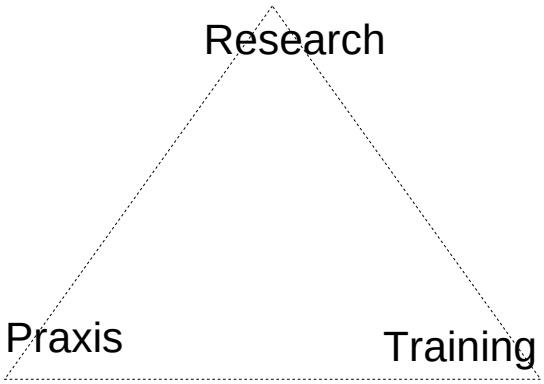


**Figure 1**. The research setting of the study (inspired by Mattson and Kemmis, 2007)

Figure 1 presents the research setting of the study. The research organisation is responsible for generating new theoretical and actionable knowledge. The training organisation will develop its training programmes and pedagogy to better serve its customers.

In our study we try to understand the learning needs of the organisation and change actions related to innovation activities. Thus, our methodology is participatory action research (Argyris and Schön, 1978; Kemmis and McTaggart, 2000). It aims at improving practices and questioning goals, everyday actions and self-understanding. It is also related to learning processes within organisations or other communities. Thus, it is self-education for the practitioners themselves. (Kemmis, 2001 p. 95) Action research is not only an instrument for problem-solving, but it also helps people to encounter each other on a humanistic level as persons in a community (Park, 2001 p. 83).

## 5 CASE AIKE Oy

The Finnish Association for Vocational Adult Education and Training (AIKE) is the cooperation body of the 43 Finnish vocational adult education centres. The association aims at improving the professional competence of the working-age population, increasing the possibilities for studies based on the students' own choices, and supporting entrepreneurship in cooperation with the economic life. The association emphasizes the importance of high proficiency, credibility, innovation capacity and environmental sensibility. (Source: AIKE Oy web pages)

Its customer groups consist of the labour and education administration, the economic life and the citizens educating themselves. Training is organised either as staff development training purchased by enterprises, employment training provided by the labour administration, vocational basic education, training aimed at vocational qualifications, self-motivated vocational supplementary training and apprenticeship training funded partly or completely by education administration. (Source: AIKE Oy web pages)

The task of AIKE Oy, part of the AIKE Group, is to promote vocational adult education through various development projects. There is an ongoing search for new development projects. The target is to offer education, research, marketing and communication

services to local SMEs. This could then be an example of a new type of networking for other regions as well. (Source: AIKE Oy web pages)

### 5.1 Research design

We designed a process aiming at polyphonic interaction among employees from different units and professions inside an organisation, as well as their partners and customers. This was inspired by Stephen Kemmis' (Carr and Kemmis, 1986; Kemmis and McTaggart, 1988; Kemmis and Wilkinson, 1998; Kemmis and McTaggart, 2000; Kemmis, 2001) work in the field of educational action research.

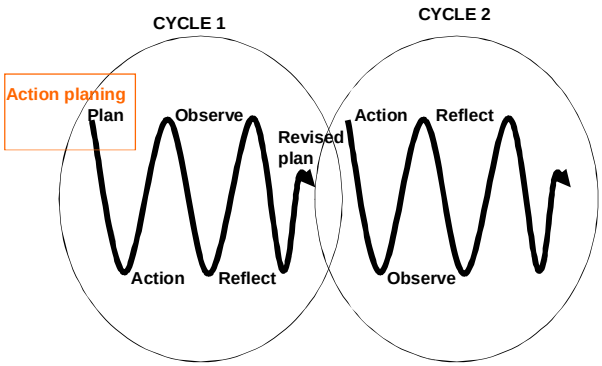


**Figure 2.** Action research cycle

Figure 2 presents the cycles of action research. In theory, the action research spiral is described via straightforward stages; planning, action, observation and reflection. However, in practice it is more of a multi-layered action research process in which various aims exist. As it is, the research methods may change as well according to the aims and hopes of organisations (Mattson and Kemmis, 2007).

### 5.2. Research process

Planning as the first phase is often considered to be rational decision-making related to preferable actions and ways of implementation. But in the case of action research, planning should not only concentrate on collecting and analyzing diagnostic information to reach unanimity and 'correct' action steps, but, instead, the focus of the planning should be on committing the participants to collective reflection. During the planning phase it is essential to cherish the polyphonic process by bringing out and articulating the multiple socially constructed realities, i.e., the diverse worldviews, conceptions and priorities that the participants of the process have. By discussing, reflecting and interpreting diverse worldviews it is possible to share understanding of aims and actions worth pursuing together.

#### 5.2.1 Preunderstanding via questionnaire

To enrich the researchers' pre-understanding and to grasp the variety of socially constructed realities, a questionnaire was sent to all the adult education centres, and additional interviews were conducted as well. The questionnaire was built on idea of practice-based innovation (Harmaakorpi, 2006).

The questionnaire was made using ZEF software, and it was sent to all adult education centres in May-June 2009. In the questionnaire, innovativeness was approached from three perspectives: innovativeness in working life interaction, innovativeness in the courses, and innovativeness in designing the training programme. The respondents were asked to give a free-form answer to the question pertaining to innovativeness in adult education. The questionnaire was sent to all principals, field managers and representatives of different educational fields. People were also asked to forward the questionnaire to their colleagues in the same organisation. The questionnaire was sent to 700 people in total, 199 of whom responded with the response rate of 17%. Of those who completed the questionnaire, 5.9 % were principals and 16.5 % were field managers. The largest group of respondents was educators with 53.2 %. One-fourth of the respondents (24.9 %) were project managers, field managers and secretaries.

In the open questions of the questionnaire people were asked how innovativeness is realised in adult education in Finland. Is it innovative? The following quotes are excerpts from the responses.

*"In some fields there are innovativeness and skills, but they are not practiced very consciously or actively. The system drives the students towards achieving a degree, not towards exploring something new. "*
*"Innovation skills are rather unfamiliar to most of the educators. Getting students active in innovation requires a lot more training programmes and using new teaching methods the educators are not yet familiar with. Also, the needs of the working life are somewhat strange to the educators."*
*"The education centres learn slowly, and currently the training programmes are based on something other than the future needs of the working life."*
*"...Many future needs of the working life and the society do not even exist yet. Life-long learning and continuous development are a part of future employees' professional skills."*

When talking about innovativeness, it is important to examine what kinds of meanings different people have assigned to it. From the free-form answers to the questionnaire it became evident that innovation was seen and worded in several different ways. The meaning of innovation was examined by asking what innovativeness is from the viewpoint of a) the working life, b) educators and c) those project workers who work in close contact with companies. Some quotes are presented in table 1. In the following table, there are nine different ways of wording innovation.

**Table 1.** Different ways to word innovativeness

| | | | |
|---|---|---|---|
| Innovativeness from the viewpoint of **Employee** | *"It is new ideas"* | *"The systems require that degrees are attained through learning-by-doing"* | *"One can question old working methods"* |
| Innovativeness from | *"New teaching* | *"We make courses* | *Multi-actor* |

| | | | |
|---|---|---|---|
| the viewpoint of **Teacher** | *methods"* | *challenging enough"* | *cooperation in designing new pedagogical methods* |
| Innovativeness from the viewpoint of **Project worker** (in working life) | *"To implement courses in different ways"* | *"Teachers should visit workplaces."* | *"A dialogue with companies and critical examination of my actions…"* |

The respondents wished that adult education could provide training for people who interact with companies. Naturally, this will create readiness (willingness) for the dialogue with the working life; the education centres can also try and make the companies invest in enhancing the skills of their employees. It was seen as important that innovativeness and innovation activities belong to every member of the organisation, not merely the management or development chiefs. However, this is currently not the case in adult education. The same became evident in the interviews; the interviewees felt that employees have innovation potential once it is given the chance to flourish, i.e, once the employees were given the chance to participate and affect their work. The current vocational adult education training programmes that involve innovativeness are designed for the managerial level or product innovation departments.

### 5.2.2 Preunderstanding via interviews

Four semi-structured interviews were conducted in June 2009. Although the interviewer had a set of themes and questions to use, the conversation was quite free-form and depended on the interviewees' interests related to the themes. The interviewees were chosen by AIKE, and they were known as being active in the development of education. The following discussion is based on these conversations. However, who exactly said what it is not stated here.

There is a certain kind of conflict going on between those in contact with the working life, and those with a degree in pedagogy. Most of the educators are pedagogically competent and they are interested in the learning results of the student. However, their main driving force is in making the person attain a degree. This school of thought should be separated from coaching that aims at developing the company as a whole rather than individual persons. In addition to this, the evaluation of learning should be modified as well. Currently the situation is "we evaluate because it is stated so in law".

There is a wide gap between developing the working life and educating the employees already active in the working life. This gap should be narrowed. The focus of adult education should be shifted from "individual learning" to "the organisation learning through individuals". Adult education centers should be able to create close relationships with the working life. As a result, it will also be possible for them to predict such future changes and possibilities that are still invisible.

The educator's view on learning has an impact on the way s/he teaches. Creativity, for example, is a controversial theme. Some educators think that "creative financial managers sit behind bars". Innovativeness cannot be taught in its own training program. Somehow it should embedded into all the programs; for example, the students could be given tools for awakening their own innovativeness.

It would be valuable to bring out the adult educators' various views on learning. Every educator faces the class with his/her own personality, guided by certain values and beliefs. Expressing these beliefs out loud may prove beneficial. Different beliefs can be shared in communities. This interaction will thus enhance learning in the organisation. How is this interaction organised on a daily basis? That is a question to be solved.

The outcomes of the questionnaire and the interviews were analysed and compared with Finnish national innovation strategies. As a result it was concluded that adult education does not yet fulfil the role it has been given in the national innovation system. There is evidently a need to define the new innovation pedagogy and to create an action plan.

### 5.2.3 Planning for innovation pedagogy in action planning workshops

The building blocks of innovation pedagogy were constructed in a multi-voiced process. As the outcome will define the direction of adult education in Finland, the task was, and still is, challenging. The first cycle (see Fig. 2) focused therefore solely on exploring the challenge that the actors will be facing when constructing common ground for the action research process.

The planning phase from cycle 1 (see Fig. 2) was commenced during spring and autumn 2010 in collaboration with the Finnish Association for Vocational Adult Education and Training (referred to as Aike Oy in this study). Aike Oy functioned as the coordinator of the process. All 43 education centres had the opportunity to participate in the process, and six voluntary centres joined in the action planning workshops for the construction of the innovation pedagogy. "A group of key persons" representing six education centres has been founded to monitor as well as facilitate the action process, and their first joint planning meeting was held in June 2010.

The researchers organized three workshops for educators, managers and partners. The partners were representatives from other education centers, public administration, trade unions, the Ministry of Education, and companies. In addition to this, the customers of the education centres, i.e. the companies, and three students from adult education centres were interviewed as well. (See table 1 below)

**Table 1.** Interventions

| Actors | Place | Time | Method |
|---|---|---|---|
| Educators | Seinäjoki | 16.8.2010 4 h | Participatory workshop |
| Management | Seinäjoki | 17.8.2010 4 h | Participatory workshop |
| Partners | Helsinki | 20.9.2010 4 h | Participatory workshop |
| Students | Vaasa | 26.11.2010 4 h | Interviews |
| Companies | - | - | Inquiry done |

| | | | |
|---|---|---|---|
| | | | via ZEF and telephone |

The target was to co-create:
- Innovation in adult education
- The role of adult education centres in the national innovation system
- Innovation expertise in adult education
- Innovation pedagogy in adult education
- A strategy to enhance innovativeness in education centers.

The data from the workshops (from August through November 2010) was videotaped, and one researcher acted as a participating observer. After each workshop the data was analysed by searching for generative themes and by analysing the learning needs, hopes, fears and ideals of the organisations, partners and customers. The following table summarizes the free-form answers of the customer organisations.

**Table 1**. Free-form answers from the customer organisations

| Adult education meets well the changing needs of the working life | Innovation competence is a part of the education | Education is directed at the entire organisation rather than individual people | Personnel development and training is a part of our organisational strategy |
|---|---|---|---|
| The nature of everyday work has changed and will continue to change very rapidly in the future as well, which sometimes creates the impression that education institutions do not quite know what work really is today On the theoretical level [our] competence is good. There are shortcomings related to knowing the everyday life and its realities.. | I consider work management and work competence to include the development of a so-called entrepreneurial ("in a healthy way") attitude in each employee and professional. It would be important to learn to see that both the employer and he employee will benefit. | Individual substance competence is precisely what should be taught to either one person or a group of few people. If I understand correctly, there are already models suitable to the training of an entire organisation. In the future companies will need more support in the development of their own core processes. Granted, support process training can be scaled wider, but the core processes are what create the company's profits. | There are problems related to recruiting competent personnel. It is very important to train personnel during their employment. |

| | | | |
|---|---|---|---|
| There is competence, but we are too slow in meeting the needs of employers/the working life. Too heavy (long study programmes). | In a municipal organisation the decrease in hostility towards change and the implementation of new practices suffice as innovations. Importance and significance will increase in the future. | A successful organisation consists of creative individuals that are given the chance to develop themselves. Teaching through force-feeding, teaching the entire organisation, is unlikely to increase creativity. Granted, it works in some issues, but not in creativity education within an organisation. | We must strive for the education to support the strategy of the organisation. Even more attention will be paid to this in the future. |
| The need for specific training will increase in the future. | In the future the significance of networking and communication skills will increase further, sales skills should be improved in particular. | Education/training directed at individuals is needed, but when the aim is to change attitudes, education possibilities on the level of the work community will be very important. | The personnel always has the chance to seek education that increases their competence when they so wish. |

It was the wish of the researchers that all levels of the organization system be represented. A systemic understanding (Elkjaer 2004) of the relationships between individuals in vocational adult education and vocational adult education organizations formed the basis for the development of the innovation pedagogy as a whole. The following narrative illustrates a situation in which innovation pedagogy is constructed:

> The work (how innovation pedagogy should be constructed) begins with a few eager people, who start building a network and some common ground. They undergo negotiations related to innovation pedagogy by asking what exactly is important, to whom, and why. During this discussion they find out where different interests can be combined.
>
> First, mutual understanding is generated in small groups - this group is in a key role in spreading the word. They make contacts with new people and go through the same social process with them; they explore each other's interests and seek mutual understanding. Then, in the long run, this social activity will create a network of social engagement, i.e., of people willing to work towards mutual goals.

## 6 DISCUSSION AND IMPLICATIONS

The general ability to construct possible worlds has been defined as general expertise in practice-based innovation. Developing this expertise in both their own organisations and in their customers is seen as a central task for adult education organisations. The task of adult education organisations is to increasingly invest in developing not only work performance expertise, but organisational expertise related to developing work itself as

well. Developing expertise in the new kind of practice-based innovation requires new pedagogical solutions - innovation pedagogy. The meaning of the concept of innovation pedagogy in the context of adult education is defined from the development point of view and is close to the terms "*learning by doing*", "*learning by developing*" *and "learning by innovating*".

Following one trend of practice-based innovation (Harmaakorpi and Melkas, a. and b. forthcoming) and the social perspective of learning (Elkjaer, 2003 and 2004), the authors propose a framework for innovation pedagogy. Innovation pedagogy emphasizes the importance of the reflection of adult education's current social and cultural practices and an understanding of the practices (Gherardi, 2006), values and conceptions of one's colleagues. The following figure suggests how the contents of innovation pedagogy could be constructed.

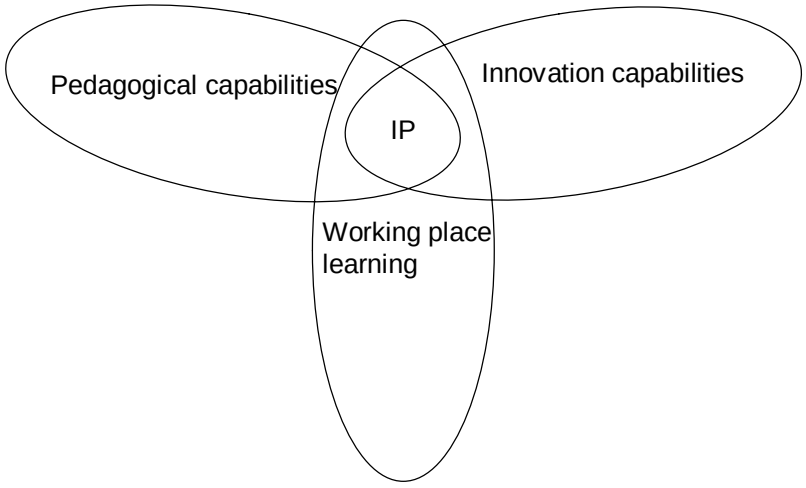


**Figure 3**. The contents of innovation pedagogy

Innovation pedagogy aims at fostering the innovativeness of the organisation by paying attention to shifts in mindsets, consciousness, and social agreements (Elkjaer 2003 and 2004), as well as to practice-oriented (Gherardi, 2006) education development.

In action research, the planning phase is critical. However, often the time required for planning is underestimated – the planning may take several months. Following the notions of the social dimension of learning (e.g. Elkjaer, 2003 and 2004), planning in this study is not considered an analytical decision-making process but more like a social process of commitment and organisation. It is fundamental that the people involved discover what their relationships to one another and the organization are. Therefore it is important that the actors are not rushed during the action planning phase. They need to have time and space to construct authorship rather than to be dragged kicking and screaming into action.

The questionnaires, interviews and workshops provided the researchers with valuable information on the opinions of the different interest groups. For example, it was revealed that there is tension between working life project personnel and pedagogically educated teachers. Currently the system was built so that individual persons are the ones who learn. The interviewees and workshop participants called for a change of mindset that would result in organisations learning through individuals. In the open questions of the questionnaire the respondents emphasised that the adult education organisation should develop its own innovativeness. The same idea of innovativeness as a development need or issue in need of changing was also brought up in the educators' workshop and in the interviews of the three students. They blamed the system for being too degree-oriented, and proposed instead that the focus be on exploring the future needs of the working life and the employees, as well as developing practices related to the future needs of working life.

Elkjaer (2003 p. 49) does not distinguish between coming to know about practice and becoming a practitioner. Thus, developing pedagogy for innovation in adult education requires multilayered reconstruction. Mattsson and Kemmis (2008, p.186) remind us that in praxis-related research "changing praxis necessarily involves changing not only each participant as an individual actor, but changing patterns of activity."

We suggest (following the arguments and work of Elkjaer, 2003; 2004) that innovation pedagogy is never to be understood as a trigger for individual learning but as a part of a relationship between the members of the organisation (= students, educators, and managers), the people in the working life, and learning environments. It is important to design a holistic innovation pedagogy which enriches innovation systems on structural, cultural and individual levels alike through adult education. Therefore we suggest that adult education should pay attention to the three levels of innovation pedagogy when constructing strategies and practices for innovation pedagogy.

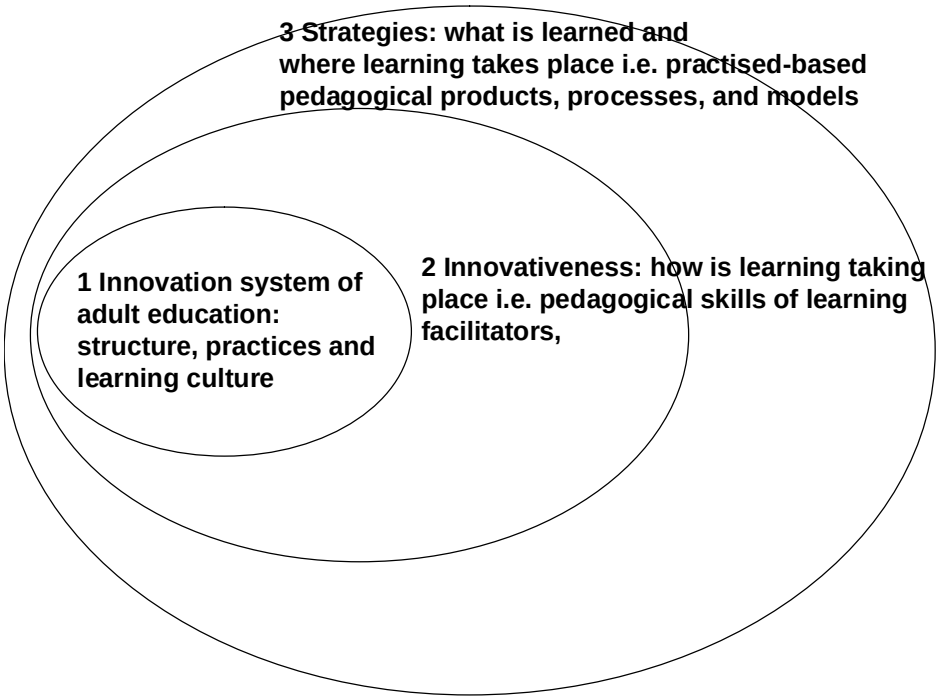


**Figure 3.** Levels of innovation pedagogy

Innovation was seen and worded in several different ways. Therefore it was important for the actors to deconstruct the word innovation and what it means on the different levels. It was also stated that innovativeness is not something that should be taught in a single course. It was seen more like an attitude that would flow through all courses. In the centre of the innovation pedagogy (Figure 3) is the vocational adult education system, how its organisational structure supports employees, managers and customers in the construction of novel learning practices and how the structure facilitates the emergence of a positive learning culture. The middle level consists of the innovativeness of the employees and the managers, and, particularly, the pedagogical skills of the educators as learning facilitators**.** The third level is formed of the pedagogical products of the practice-based innovation activities, i.e., the services, processes and models that vocational adult education offers its customers.

## 7 CONCLUSION

The study presents three levels to be used for constructing innovation pedagogy; the innovation system of the adult education organisation, its innovativeness and its strategies. These levels function as a framework for future action research processes in adult education. Innovation pedagogy is being constructed and implemented in the Finnish vocational adult education system. Polyphonic interpretation and multi-voiced communication are emphasised in the construction process, particularly in the action planning phase. As for future research, literature on the different levels of innovation pedagogy should be examined in more detail. It will also be interesting to see how this action research process will proceed.

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