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Learning throughout the Innovation Journey

A new dimension to Learning as a Search Process

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Abstract

This article explores learning processes of professionals in a case of innovation in education. Learning of professionals is here defined as a collective search process – in contrast to a predominant understanding of innovation in the public sector where learning primarily leads to knowledge gain and can be limited to the idea-generating phase. Based on a case study of a concrete innovation process in an educational network the working hypothesis is that practice learning comes as iterative search processes through discovery and takes place throughout innovation. A key finding points to learning through search has different characteristics and dimensions, and hence has effect on organizational culture and identity. The author argues that there is an until now uncovered part of the learning process with implications for understanding learning in funded public sector projects, and hence the article contributes to a change in the way learning can be understood in educational innovation.

Keywords: Innovation, Education, Practice learning, Professional Learning Communities, Educational Networks
1. Introduction & research question

Challenges in education have previously been described as complex problems (Van de Ven 1980). While the overall goal of education might be unambiguous, the task of education may be difficult to define and address and may differ with the local educational network. The complexity of education grows out of transversal measures where people and tasks move across several boarders; sectoral, institutional, cultural and administrative. Studies of collaborative innovation point to transversal network based collaboration as a way of addressing complex problems in the public sector (Aagaard et al. 2014; Balslev 2012; Torfing 2012). Complex problems cannot be resolved by standard solutions by one sector, one organization or one profession alone, but can be addressed through collaboration (Gray 1989; Van de Ven et al. 2008) especially when problems reach beyond what a single stakeholder can handle (Van de Ven et al. 2008: 22). One of the very first research projects on collaborative innovation in transition between lower and upper secondary schooling in Denmark indicates that the specific complex problems of transition can be addressed by transversal collaboration in networks across sectors and institutions. Transversal network collaboration is one of the important traits of the case-study behind this article.

For decades, the public Danish educational system has struggled with high dropout rates from secondary schooling (Balslev and Jæger 2011; Pihl and Harboe 2016; Weirsoe 2009), especially from vocational education. There are big regional differences regarding dropout rate of students in vocational training on a Danish national comprehensive plan. While a national dropout rate is difficult to calculate precisely, a decrease in dropout rates can be registered; from 15,9% of students in vocational training in 2014 to 11.6% in 2019 (Danish-Minestry-of-Education 2020). This positive development is partly due to national initiatives from the Danish Ministry of Education. There has been introduced a set of national goals for vocational training as well as initiation of big scale reforms in of both secondary and primary education (e.g. Børne-og-Undervisningsministereriet 2017; Regeringen 2013). In spite of these reforms, the share of the year group of young people dropping out of education is still high. Several studies point to the problematic transition between lower and upper secondary schooling in Denmark (Katzenelson 2009; Pless and Katzenelson 2007;
Weirsoe 2009). Furthermore, this transition between schools, for some students, is perceived stressful and may lead to different kinds of problems resulting in dropout (Katznelson 2009). In a Danish educational setting, the transition from lower to upper secondary schooling represents a characteristic break in the student’s educational experience and imply a large range of openings and choices for the young people. For some students, this transition may be characterized as problematic and side track their decisions (Balslev 2012: 23). This challenge of transition leads to the following research question:

How do professionals address a complex educational problem as dropout, and which types of practice learning can be identified when educational challenges are addressed through collaborative innovation?

This article builds on a case study of professional learning in a specific educational network in a project setting. The concept of professional learning is viewed in prolongation of innovation insights from a minor Danish study of collaborative innovation in the public sector The Transition Project (Balslev 2012). The Transition Project was designed to focus on 15 to 16 year old students in transition between lower and upper secondary vocational education in Denmark (Jørgensen 2011). The project was based on cooperation between educational institutions in southern and central parts of Funen, Denmark, and was launched with the goal of diminishing a high dropout rate from the area’s vocational schools. The normative belief and goal of the project was to establish initiatives designed to minimize the dropout rate, and the project arose due to the growing conviction that complex and unstable educational problems could not be addressed with standard solutions from one sector or one institution alone. Hence, this project was developed as a network oriented inter-municipal, inter-organizational and inter-disciplinary collaboration within the regional educational network between different educational institutions and professionals: Guidance Centre Funen, providing student supervision; four public lower and upper secondary schools; four municipalities; two upper secondary vocational schools; two technical colleges; the involved students and their parents; leisure time organizations and local businesses. This case study of the Transition Project sheds new light on
findings of a longitudinal study of innovation – the Minnesota Innovation Research Project (Van de Ven, Polley, & Garud, 2008) (hereafter MIRP). By carefully analysing the learning of professionals during an innovation process in an educational setting, the findings of this article contribute to innovation theory and social theory of learning with a deeper understanding of learning in funded public sector projects.

According to findings in the MIRP-research specifically (Van de Ven et al. 2008) and to innovation theory in general (Cooper 2014; Rogers 2010), learning is closely connected to production of knowledge in the innovation journey. Furthermore, the MIRP-research reveals that learning cannot be contained to the idea-generating phase (Polley and Ven 1996; Van de Ven and Polley 1992; Van de Ven et al. 2008) as implied in established innovation project models (Cooper 2014; Rogers 2010). This trait has implications for the conditions of future public sector innovation projects and feeds into the working hypothesis that practice learning comes as iterative search processes through discovery and takes place throughout innovation. Furthermore, this hypothesis has implications for areas related to innovation, such as evaluation. Hence new forms of project evaluation have been growing in the recent years (Balslev 2019; Dinesen and de Wit 2009; Krogstrup 2017). But this will not be discussed here.

The goal of this work is to contribute to a more comprehensive understanding of the learning journey in innovation through a qualitative case study of practice learning process in an educational network among professionals – here educational supervisors – in their collaborative effort to address high drop-out rates. This case study investigates how specific types of search processes may be used to address a complex problem like drop-out – a problem related not only to public youth education but also relevant for other professions, organizations and legislations (for a definition of search, see section 3). Hence the focus is practice learning in a case of implementation of a specific innovation project within the context of a publicly funded pilot project – The Transition Project. In the following section a theoretical foundation is build up as a framework for examining learning processes empirically.
2. Literature review

3.1. Cognitive and constructivist learning theory

In a modern educative setting, learning can be defined and understood as a cognitive and individual effort (Illeris 2009; Piaget 1964). In this cognitive perspective, building on Piaget (1964), Illeris characterizes learning as either cumulative, assimilative or accommodative (Illeris 2009: 48-57). Especially assimilative learning has been important attribute of modern education with its characteristics of a gradual systematic upbuilding and incorporation of coherent new knowledge. Assimilative learning processes are most common in everyday life and also in education, where new knowledge is added to the existing repertoire of knowledge. In a traditional educational setting, this type of learning is, by teachers, expected to take place in the student’s head. Hence, this understanding of learning has been the dominant understanding and the backbone of building education. Nonetheless not only in education has learning traditionally been viewed as a gradual and more or less predictable and controllable endeavour. In organizational studies as well as in innovation studies the learning process has been understood in a scientific way and captured in models pursuing to achieve fast transition from idea to market and process stability in the effort of trying to contain uncertainty in fixed stages built on, or understood as, a more or less stable and linear trial and error process – e.g. in the Stage Gate model (Cooper 1990, 2014) and in the understanding of diffusion of innovations (Rogers 1995, 2010). However, new understandings of organizations and innovations as complex processes (Van de Ven et al. 2008) is equally pushing the understanding of learning towards an ongoing process. This understanding encourages professionals to plan iterative processes of repetition and rediscovering returning to point of departure.

Constructivist learning theory can shed light on the actual and practical learning processes in addressing the complex problem of transition in education through collaborative innovation where different stakeholders contribute to change. Innovation theory points to the aspect of learning as a crucial part of knowledge production in the innovation journey (Edquist 2010; Van de Ven et al. 2008), however the concept of learning in the theoretical work of the thorough longitudinal studies in
the MIRP-research only touches the collective dimension of learning briefly (Van de Ven 1980: 776-78, 59). Therefore, this study contributes with a more detailed approach to the social dimension of learning. This social dimension is furthermore crucial in the understanding learning in the innovation process and hence, the strengthening of the concept of collaborative innovation in public sector education where the interaction amongst professionals in local educational networks is central for the innovation practice (Balslev 2012: 116).

Constructivist learning theory treats learning as processes that leads to the build-up of new mental structures, hence a change of the individual capacity. Originally constructivism is a cognitive theory concerning the relation between the individual and the world. Thus, the individual’s processes of creating perception of the world through thought and speech (Hermansen 2001: 50-51). Here, language is a tool of perception, which points to a close relation with environment as well as with other people (Illeris 2009). Building on scholars such as Bandura (1977) Agyris (1992) and Schön (1983), Illeris understands learning as a social interaction between the individual, the surroundings and peers – in this case the colleges. In this perspective, learning can be defined as processes of interplay (Illeris 2009: 14-16, 272) and consists of communication, collaboration and action as well as of sensemaking (Weick 1995; Weick et al. 2005). Sensemaking as a part of learning can be understood as a process of interplay – here among professionals – hence, the meaning professionals attach to themselves or the meaning attached to them by others (Weick et al. 2005: 417). Thus, sensemaking is both the making, the giving and the taking of meaning in a continuous interplay. Furthermore, the social dimension of learning contains an aspect of collaboration that with Illeris’ words can be described as a learning situation where people strive to learn and develop something together. In this sense collaborative learning contains synergy evolving when people think and act together. Take sports or music as examples; here, group intelligence exceeds the individual’s capacity. Through collaboration the group can achieve an extraordinary result that would not have been possible for the individual alone (Balslev 2012: 124).
Where the MIRP-researchers cease to deepen the social dimension of learning it is obvious to draw on the constructivist tradition behind collaborative learning where – in Senge’s perspective – people learn how to learn, together (Senge 1999: 13) building up a culture – a professional learning community – where opinions and perspectives flow freely allowing insight which could not be reached separately. Furthermore, this aspect of collaboration and social interaction points to a constructionist understanding of learning, where humans form perceptions of the world together as a common process of creating and negotiating sense and meaning. With this awareness, a constructionist view on learning can complement the social and cultural dimensions of learning.

Engaging the cultural aspect of learning demands motivation from the involved stakeholders to involve in dialogue as well as in transformation, and hence this type of learning is a demanding discipline (Danelund and Sanderhage 2009). Truly understanding the social dimension of learning among professionals from several institutions demands an understanding of learning in communities. To this end, Wenger contributes with a social theory of learning where the participation in the social practice change not only what we do, but also who we are, and how we understand and make meaning of what we do, as Wenger pinpoints (2008: 16). Communities of practice change over time and with it, so do strategies of collaboration. This means that communities of practice are anchored in local culture where stakeholders let go of their constraints and engage in open dialogue inviting the otherness (Danelund and Sanderhage 2009) – hence creating common knowledge (knowledge that occasionally will be new in the actual situation). Communities of practice can be characterized by their; duration, relations, common ways of solving problems, spreading of information, mutual identity and perspective of the raison d’être. Al in al; common cultural traits, tools, things (Jæger 2005: 163) – ways of learning.

This leads to the question of how people learn in their professional communities of practice – or educational network as it is defined in the present study – when professionals engage in solving complex problems. The MIRP-researchers state, that learning comes in the form of search processes as a continuous search for new ways to solve given problems where different types of search processes occur in different parts of the innovation process (Van de Ven et al. 2008: 67 ff). From an empirical stand the
MIRP-researchers explain learning in different stages of a change process: especially to types of learning is highlighted: 1) a positivistic take on learning as a convergent trial-and-error learning, and 2) a constructivist approach with divergent learning through search/discovery (Dornblaser et al. 2000; Van de Ven et al. 2008: 67-92). In trial-and-error learning people try to replicate actions and decisions that lead to success, hence do less of what lead to failure. In a positivistic manner learning comes about through testing different fixed paths to fixed goals – testing coherence between cause and effect. So, to this end, trial-and-error learning represents a more or less simple test situation. This specific form of search is very suitable for learning in relatively stable settings allowing some kind of consistency in the relation between cause and effect – settings where – as Polley and Ven (1996: 873) state – people have a priori knowledge of end goal and method of the problem solving.

This means, learning through testing – trial-and-error learning – requires a relatively stable connection between cause and effect (Van de Ven and Polley 1992: 92), whereas learning through discovery decouple cause and effect and function through chaotic search processes (Van de Ven et al. 2008: 204). Van de Ven explains:

"Trial-and-error learning means you have a clearly known goal in mind and you are experimenting with different paths to get there. Learning by discovery is not knowing the goal or means, nor the context of action, so people have to discover by experience what goals they like and in what contexts/conditions before they can begin to learn by trial and error".

In other words, fairly stable conditions allow convergent learning through testing whereas learning through discovery refers to divergent and experiential learning where the search processes of learning undertake in relatively unstable settings driving people to try out different scenarios and alternatives for solutions for complex problems that tend to evolve while being solved. This type of learning demands subtle understanding and interpretation of how the obtained knowledge can be used in relevant settings (accommodatively) (Van de Ven et al. 2008: 67 ff.).
In the thorough longitudinal studies of the MIRP-studies the researchers explain learning as a search process through which people seek to solve problems. The MIRP researchers point out two dimensions of the search process; goal and path. Hence a trial-and-error-learning is possible when both dimensions are known, while learning by discovery is chosen when goals and paths to some (and varying) extent are unknown. Three search processes are posed in the MIRP-studies:

1. **Periodic search** – with known goal and path – where the known goal can be tested in practice
2. **Chaotic search** – with known goal and unknown path – where the search process focusses on finding new ways towards a known goal
3. **Random search** – with unknown goals and paths – where goals and paths to get there are produced along the way throughout the search process

In other words, random search is an expression for search processes where professionals follow unplanned goals and random paths to get there within the given domain (e.g. youth education) – bottom line; the knowledge of the professionals is limited so they experiment their way towards appropriate solutions. Whereas chaotic search limits the domain of search to the path-dimension working from a given goal (e.g. transition to secondary schooling). And lastly, periodic search through the trial-and-error approach represents a planned and systematic method of finding the – in contest – best of practice known paths to the common goal (e.g. mentoring as a way to stability for young people in the transition to upper secondary education).

These dimensions of the search process – goal and path – hence have significance for professional learning and sensemaking in a practical, collaborative work setting in dealing with complex problems. Our everyday language supports the understanding of learning as a search process. For example, *to look for something* indicates that one engages in searching which again implies the exitance of something to look for; a fixed goal and maybe also a fixed path. While, *to find or discover something* indicates that there is not necessarily a fixed goal or path, you are trying to follow. According to the longitudinal empirical studies of innovation these different strategies of learning occur in different stages of the innovation project. The MIRP-researchers detect no trial-and-error-learning by periodic search in the start due to no a priori knowledge or fixed goals in
this phase (Polley and Ven 1996; Van de Ven and Polley 1992; Van de Ven et al. 2008). On the contrary, the beginning of an innovation process is characterized by learning through discovery while the later stages of implementation are characterized by more straightforward learning through testing (Van de Ven et al. 2008: 86).

In summary, the MIRP-researchers identify three different types of search processes connected to practice learning. The search perspective on professional learning in collaborative everyday work settings can help to reveal which types of practice learning are actually used for handling of and sensemaking according to a complex problem like the transition challenge in the case of the Danish Transition Project. This leads to the next session of the article briefly describing the method of the study.

4. Method

4.1. A Qualitative Case-study

The research sustaining this article builds on a qualitative single case (Yin 2009) with an embedded case. The research focus is the project handling in a Danish public school selected from one of four municipalities connected to The Transition Project. The case in the study is an example of a typical case (Yin 2009: 48) with traits of representativeness that allow generation of knowledge that may be informative for other resembling cases. The case study duration was two years from 2010 to 2012, and the generation of data was conducted through several different kinds of qualitative methods; research log, observation, workshops, developmental meetings and interviews – qualitative in-depth interviews to focus groups and expert interviews with international researchers of education and innovation. For more detail see (Balslev 2012: 208-48).

The study builds on a constructivist research design founded in Engaged Scholarship (Van de Ven 2007). Engaged Scholarship is a research method that obliges the researcher systematically to involve project participants at a practical level as well as experts throughout the entire research process. The goal of this specific research
approach is continuous validation and practice anchoring of the research problem as well as theory building and conclusion development. With Engaged Scholarship, the goal was to create a learning space – a change laboratory – among researcher, informants and experts allowing all parties to reflect on their preunderstandings of the educational transition, challenges and needs. As an example of a change laboratory a theatre workshop – building on the Forum Theatre tradition (Boal 1995) – was completed among professionals, experts, politicians, families and students from the Transit Project. The theatre workshop mirrors reality and functions as tool to better understand the context of life and work (Balslev 2012: 229-32). This method gives voice to different positions and may facilitate change. In this sense the theatre workshop is an experimental method and contributes to a pragmatic validation of research results through a working live method embedded in practice and not isolated from it. Furthermore, the method allows the researcher to access different perspectives and understandings of the innovation process and hence get a glimpse of the informant’s perception of their learning journey – this, by presenting small unfinished or ongoing narratives. Through these incomplete narratives the informants were invited to participate in reflection on complex everyday educational transition challenges revealing paradox (Stacey and Griffin 2005). The narratives presented in the theatre workshop were generated through research logs, formal and informal meetings as well as through interviews.

In the first phase of the research project an introductory study was conducted. The study demonstrated how The Transition Project could be understood as *service* and *organizational innovation* – service innovation as the finding of new ways of supporting students in the transition between school systems, and organizational innovation as the effort to affect the cultural system level of professional transversal collaboration. The findings inspired the second and main phase of the research project where service innovation – the actual process of transit between lower and upper secondary schooling – was studied. The results in this article gather insights from the second research phase of the case study and focuses on the learning of professionals in their collaborative endeavours towards scaffolding transition and inventing new activities e.g. parental networks. As a clarifying note, learning in this article is not to be
understood as a didactic endeavour or a methodological problem, but rather as social interaction amongst professionals influencing change and taking decisions in a work life setting.

5. Results

5.1. A supplementary Search-approach in Practice Learning

The MIRP-researchers’ learning theory build on mathematical models (Van de Ven et al. 2008: 184-91) which tend to make them abstract and difficult to understand at a stakeholder level. This part of the article will anchor the search processes into the actual stakeholder level in the Danish educational context of the case study and pass on the results of the investigation of learning understood as a practical process of search.

The search processes in The Transition Project reveals themselves through the professional’s search for new ways to help the young people in the transit between educational systems and hence new ways of collaborating in the local educational network. The actual mentors who work in the project were trying to implement the project idea of a smooth transit through professional collaboration. But the question is how broad or narrow the project agenda and project management allowed their search for better ways of transit? This question points to the idea quality in the project goal which is built into the project and frames the space for implementation in the balance between emergent search strategies and fixed designed strategies (Balslev 2012: 344). An empirical example of a divergent idea quality is the Transit-Mentors understanding of The Transition Project as a “pilot project” and a “training track” (Transit-Mentors 2011: line 230) in the understanding that the mentors develop transition initiatives along the way – which means a fairly open project idea allowing emergent search strategies.

Throughout the Transition Project, the professionals – the Transit-Mentors – learn through the two dimensions as proposed by the MIRP-research; goal and path (Van de Ven et al. 2008: 71 ff). In the Transition Project, goal and path alternate regarding
levels of explicitness and how they are understood and made sense of by the mentors. From the project start the idea of “parental networks” – which in a Danish context is a wide-spread and well-known educational activity – represents an important project element agreed upon by the project Steering Group and interpreted plus implemented by the Transit-Mentors (Jørgensen 2011). Thus, parental networks can be understood as a search path to reach the goal of parental involvement. This leads to the understanding of learning through testing a known path to a known goal, hence Periodic search through learning as an act of testing in terms of the MIRP-research.

However, the idea of parental networking meets barriers in the actual implementation and does not lead to the required goal of parental involvement – but is, on the contrary, by the parents perceived as stigmatization (Balslev 2012: 346). This fact leads to the initiation of another type of search with the parental involvement as a continuous goal, but with new and alternative ways – unknown paths – to reach it; chaotic search. Here, the mentors discover and create new paths towards the known goal in an act of learning through discovery. Hence, regarding the MIRP-studies, this study points to different results in the analysis of learning in the innovation process. As stated above the MIRP-researchers detect the exact opposite; learning through discovery in the beginning of an innovation and learning through testing in the later stages of implementation. In this specific case study, learning by discovery was at its high in the implementation phase which – as we shall see – can have consequences for future public innovation projects.

Table 1 sums up the empirical observations from the Danish Transition Project in light of learning seen as a search process.
However, the Transit Mentors find it difficult to search for new paths to meet the overall political goal of The Transition Project; to enrol more students to vocational education. This diffuse goal hides complex local problems leading the Project Manager to break down the overall political goal into subsidiary goals (Balslev 2012: 348). Thus, the goal-dimension is not as unambiguous as described by Van de Ven et al. (2008). This study indicates a goal hierarchy with the overall goal as an intentional principle (leading to more students in vocational education and over time more young self-supportive individuals) and concrete subsidiary goals (e.g. dialogue-meetings between students and mentors). Accordingly, the search process is expanded to different goal dimensions or understandings of goal qualities – diffuse as well as concrete. Hence, indications of a third search dimension:

The study reveals empirical evidence leading to a dimension of principle to be added as a third search dimension in the understanding of a specific intention or meaning behind the more diffuse overall goal in the top of the goal hierarchy. This intentional top-goal colours the search process and gives direction to the possible paths to the goal. Consequently, a revised search pattern is posed:

1. Search from a known principle, known goal, known path
2. Search from a known principle, known goal, unknown path
3. Search from a known principle, unknown goal, unknown path
In this case, the supplementary search approach – the dimension of principle – is detected as a given part of the project objectives (a part of the project funding program). The project management frames the search processes from this known principle (of more students in vocational education) and lets the Transit Mentors search their way towards unknown tangible subsidiary goals through unknown paths to reach the subsidiary goals – search pattern three (as listed above).

“It is complicated, but interesting work, as is our transit mentoring. It is very important that we try out different paths, and that we don’t go down the wrong ones, and there are very many paths” (School-Principals 2011: k: 422-27).

In conclusion, the practice learning process consists of many different trials in the search for the preferred paths to preferred goals meeting the overall intention of the project – the idea quality. The case shows different understandings of the overall intention as well as the paths and goals and an collective element of learning is established in the professionals’ sensemaking process of augmentation for the preferred paths and goals (Balslev 2012: 355) – as showed in the above-mentioned example of parental network. The case study results point to an important aspect of funded innovation projects in the public sector. When learning takes place throughout the project it demands adequate project liberty for learning iterations throughout the project. In highly ambiguous project-periods the innovation process must permit development and elaboration of plans to reach certain initiatives, that can become successively more detailed/known and agreed on as discoveries are encountered through the practical learning process. To this end the case study has implications for understanding professional learning in innovation projects. The next section will discuss identity and culture in relation to this specific way of learning – learning throughout the innovation process.
6. Discussion – The Innovation Journey; Identity, Culture and Learning

6.1. Alternating Identities

The study reveals that change through new project initiatives is closely coupled to steering group project intentions (alternating understandings the project goal), in this situation leading to co-existing organizational identities (Balslev 2012: 365 ff). The overall project goal is grown from a normative educational logic, where sensemaking proceeds through educational ideology building on the notion of a smoother transition leading to a decrease in dropout – as stated in the introduction. On the other hand, the project is designed from a utilitarian logic giving sense to the project initiatives through economical rationality. These co-existing organizational identities (Albert and Whetten 1985: 89 ff; Hatch and Schultz 2004) alternate throughout the project phases and between different stakeholders – Steering Group members and Project Members do not build up the project identity from the same logic. The understandings of goal and path in the Steering Group and among the Project Members are not aligned. The Steering Group creates meaning primarily through a utilitarian logic and tries to pass this logic to the Project Members through sense-giving. Hence, an identity paradox understood as alternating organizational identities characterizes the implementation of The Transition Project. To this end, there does not exist mutual organizational identity and perspective of the raison d´être as in Wenger’s understanding of the communities of practice, and neither a possibility of mutual redefinitions of organizational identity (Hatch and Schultz 2002). On the contrary, this study displays an innovation project is at risk of capsizing due to the alternation of identities. However, the Project Manager plays a central role in translating different project intentions and understandings between the Steering Group and the Project Members. Furthermore the Project Manager seeks to screen the Transit Mentors from identity clashes in atmospheres of distrust from the Steering Group (Balslev 2012: 370). The Project Manager has a very important function in buffering and bridging between the Steering Group and the Project Members by taking sense from the utilitarian logic in the Steering Group (sense-taking) as a top-town process and translates by making new meaning and passing this on to the Project Members (sense-giving), and consequently altering between co-existing
logics. The Project Manager thus links between the Steering Group’s top-down sense-giving and the Project Group’s bottom-up normative understandings – sensemaking – of what is good work with transition between educational settings. Consequently, this case study can be analysed as a bottom-linked process with the Project Manager in a central translating role, creating a bridge between dual organizational identities – between top-down and bottom-up processes by making sense through listening to both management and practice. In this identity moulding process, the Project Manager co-shapes a project culture allowing co-existing organizational identities.

6.2. **Building Transversal Culture?**

With the words of the Steering Group the overall goal must lead to a change in cultures and professional roles (Steering-group 2012) hence, new professional learning communities (DuFour 2004; Hargreaves 2007). Once the Transit Mentors have succeeded with their learning process in the search for new and better ways for supporting young students in the transition between educational systems, the “new ways” must be implemented in the educational network through building up new culture (Senge 1999: 13). The implementation of the new-developed methods as supervision and parent involvement will – in the eyes of the Steering Group – affect positions and traditions and lead to a change of culture where professionals systematically are disturbed in their habits and routines, which demands motivation from the involved (Danelund and Sanderhage 2009). In other words, the innovations of the Transition Project are meant to diffuse into local school cultures. However, educational culture is resistant to change and – from a Transit Mentor perspective – is hard to influence (Transit-Mentors 2011). This resistance of cultural change can be supported by the argument, that culture changes over time (Wenger 2008: 16) and not over night. Besides, the gap between different professional cultures in primary and secondary education is perceived as insuperable in the local educational network (Transit-Mentors 2011: 23). This results in a challenging Transit Mentor task to implement new initiatives and build collaborative transversal network culture, and which in case-study, was not investigated further. Consequently, the mentors engage in learning processes to find new paths on two levels; the systemic cultural level as well as the individual student level. Hence the innovation process in this case can be defined as
both organizational innovation and service innovation (Bason 2007). The study reveals that organizational innovation reaching into the cultural milieu of different teaching professions takes practice learning with room for a more open dialogue inviting the otherness (Danelund and Sanderhage 2009). Hence, an open learning process with an experimental approach (Balslev 2012: 477). And this posing the question of how an open learning process can be established across educational networks and cultures. This is worth further in-depth study in line with e.g. the studies of the NetEduGroup investigating local and global educational ecosystems (Díaz-Gibson et al. 2020).

6.3. **Learning throughout the innovation journey**

With reference to a constructivist understanding of learning (Dornblaser et al. 2000; Illeris 2009; Polley and Ven 1996; Van de Ven et al. 2008; Wenger 2008) this empirical case study demonstrates learning as an ongoing search process in the project implementation where professionals take collective decisions in their efforts to reach the overall project goal. In this learning journey the unit of learning is collective and takes place as a process of interplay (Illeris 2009: 14-16, 272), and this in spite of the fact that the original planned learning unit – in the Transition Project – was individual; e.g. individual sessions of supervising students (Balslev 2012: 360). Through an effort to let project ideas and reality meet, the Transit Mentors cooperatively create new paths – like collective supervision – where learning is spurred by a social dimension, hence the professionals’ understanding of supervision change. As stated above The Transition Project was studied in the implementation phase which – by the MIRP-researchers – is connected to learning by testing, and not learning by discovery, as found in this case study. As shown here, learning by discovery peaked in the implementation phase. This leads to new perspectives for public sector innovation. The case study implies that public sector projects could take these new perspectives on practice learning into account when designing framework for publicly funded projects. If this study is taken into account, innovation projects cannot be designed to capture chaotic processes in the project start, hence planning on inclosing the chaotic learning processes to a minimum. Projects ought to be designed with a flexible framework allowing collective learning processes through search throughout the
innovation journey creating intentions, goals and culture that enhance chances of innovation (Balslev 2012: 473).

7. Concluding Reflections – Learning in the Innovation Journey

In this study, traditional understandings of public sector project work are challenged. In traditional and early understandings, developmental chaos – learning through exploring – can be isolated to the idea generating phase, while the implementation phase can be controlled in a roughly linearly manner – learning by testing. It is precisely this understanding which is challenged; that learning can be captured into a single innovation phase. This study reveals that different learning processes co-exist throughout the innovation journey, correspondingly in the implementation phase.

The research question of which specific forms of practice learning can be detected in addressing complex educational problems through collaborative innovation, can be answered by the following findings. Building on the three different search processes posed by the MIRP-researchers – periodic search, chaotic search and random search – this study documents a revised search pattern where professionals throughout the innovation process search their way towards unknown tangible subsidiary goals through unknown paths to reach these goals. The revised search pattern hence contributes to a nuanced understanding of practice learning throughout the innovation journey. The specific contribution of this study consists of a supplement to the innovation-oriented organizational learning theory initiated by the MIRP-researchers. The study of The Transition Project proposes an extra dimension to the search process; the dimension of principle – idea quality – in the understanding of a specific intentional goal setting differing between project stakeholders and project cultures. To this end the study sheds new light on how professionals learn while innovating as a trait of current public sector work life. Furthermore, the case study sheds light on how the deeper project intentions are seen as part of an overall goal.
setting, and how this is crucial and affects the search for appropriate answers to the overall project demands.

Additionally, it is here discussed how alternating organizational identities characterizes the implementation of The Transition Project, giving project management a task of translation and screening. Besides, the task of implementation implies a Transit Mentor task to diffuse new initiatives and build collaborative transversal network culture for example around the new ways of parent involvement – a task of cultural complexity that needs further investigation. In conclusion it is suggested to take these results into account when public institutions attempt to plan their development or innovation projects. Practice learning as an adaptive collective endeavour – in this case among educational professionals – cannot be captured for the sake of linear project planning and steering for predictable outcome and concrete performance information. Consequently, this study can have impact regarding publicly funded innovation projects, whereas it is here demonstrated how learning takes place throughout the project, and hence demands adequate project liberty for learning iterations – project liberty and flexible framework as project traits that are not always met by funds.

In ambiguous innovation projects learning through search can spur important discoveries especially with project liberty for mutual understandings of the overall intention as well as the paths and goals to reach them. Learning proceeds throughout and beyond the innovation journey and is influenced by both organizational identity and culture in the educational network.
References

Aagaard, Peter, Sørensen, Eva, and Torbing, Jacob (2014), *Samarbejdsdrevet innovation i praksis* (Djøf/Jurist-og Økonomforbundet).


Albert, Stuart and Whetten, David A (1985), 'Organizational identity', *Research in organizational behavior*.


DuFour, Richard (2004), 'What is a" professional learning community"?’, *Educational leadership*, 61 (8), 6-11.


Gray, Barbara (1989), 'Collaborating: Finding common ground for multiparty problems'.


Illeris, Knud (2009), 'Læring. 2. udgave, 3. oplag', *Roskilde Universitetsforlag*.
Jæger, Birgit (2005), *Ældre tæmmer teknologien: og bliver borgere i informationssamfundet* (Samfundslitteratur).
Pihl, Mie Dalskov and Harboe, Mikkel (2016), 'Lave karakterer og svag social baggrund øger risikoen for frafald', *Arbejderbevægelsens Erhvervsrid*, 12.
Pless, Mette and Katznelson, Noemi (2007), 'Unges veje mod ungdomsuddannelserne: Tredje rapport om unges uddannelsesvalg og overgang fra grundskole til ungdomsuddannelse og arbejde'.
Regeringen (2013), 'Et fagligt løft af folkeskolen', in Undervisningsministeriet (ed.).
School-Principals (2011), 'Focusgroup Interview', in Balslev 2012 (ed.).
Steering-group (2012), 'Developmental Meeting', in Balslev 2012 (ed.).
Torfing, Jacob (2012), 'Samarbejdsdrevet innovation i den offentlige sektor: Drivkrafter, barrierer og behovet for innovationsledelse', *Scandinavian journal of public administration*, 16 (1), 27-47.
Weick, Karl E, Sutcliffe, Kathleen M, and Obstfeld, David (2005), 'Organizing and the process of sensemaking', *Organization science*, 16 (4), 409-21.
Weirsøe, Mathilde (2009), 'Når det, man har lært, er helt forkert', *Asterisk*, (49), 6-9.
Notes

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ii In Denmark primary and secondary public schooling represents two separate school systems. Primary education is based in the municipal system under municipal and local legislation while secondary education is placed under national legislation. These organizational differences result in different didactical and pedagogical and professional cultures as well as different organizational structures.

iii This article synthesizes the study of collaborative innovation in the public sector from the PhD thesis Transformation and Education – Innovation, Learning and Collaboration (Balslev 2012). The focus in this article is learning aspects of the innovation journey.

iv The constructionist understanding of learning could be interesting to deepen even further, hence I contributes to the understanding of the social dimension of learning. However, I will continue with a constructivist perspective in prolongation of the central literature on learning in innovation (Van de Ven et al. 2008).

v This citation comes from a mail-interview on convergent, divergent and emergent understandings of learning which I conducted with Andrew Van de Ven the 10th of April 2012.

vi With this extension of the search dimension I am aware that, I should explain the 9 different combinations of “known” and “unknown” regarding the Principle, the Goal and the Path. I will in this article keep to the three listed combinations, hence these are empirically grounded.