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Cooperative learning through narratives of the LAB
studio learning program participants

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In 2012, Oulu University of Applied Sciences established non-degree training programs called 'Oamk LABs', which practice a new form of studio-based model of learning, they called the LAB studio model. Such model includes basic elements of traditional studio-based learning model (practice and reflection-in-action, solving real-life problems, active collaboration with peers and experts of the industry, as well as the learning space) and adds two more features of the multidisciplinary and international environment. This is maintained by keeping the application process open for Finnish and international students from various disciplines, as well as professionals for retraining and unemployed specialists.

Since LAB studio learning model is new and evolving phenomena, there is a continuous need to conduct research and contribute to its development. This study has looked at the students' perspective on the learning process by conducting narrative inquiry research in collaboration with two participants enrolled in one of the Oamk LABs programs. The primary research question for the study is: 'How do different participants experience the LAB studio learning model?' The answer to this is presented in the form of two stories placed in the Findings section. The stories were written using narrative analysis of the collected data (narrative interviews, sketched journeys and email conversations) and co-edited together with participants during the research process. The stories reveal two unique journeys reflecting various opinions on the learning model. Those opinions are shaped by the personal and professional background of the participants, as well as the unique circumstances under which each one has studied for the semester. Despite the differences both stories highlight various aspects of cooperative learning during the LAB studies. Thus, the second research question was formed: 'How do participants experience cooperative learning as a part of the LAB studio learning model?' The answer to this question is placed in the Discussion part of the research. Narratives revealed three main themes related to the challenges of cooperative learning in the LAB studies: communication issues, expectation gaps, as well as complications caused by the multidisciplinary and international environment.

Keywords: cooperative learning, LAB studio learning model, multidisciplinary and international environment, narrative inquiry

Contents

1 Introduction

Recent changes to the modern economy, caused by urbanization, globalization, and technological development have influenced all aspects of modern life (Heikkinen & Räisänen, 2015, p.160). This has led to increased demand in the labor market for knowledge workers. Workers, who are able to operate within ever-changing "societal structures and organisations that are constantly changing, while being able to solve challenges, which are characterised by confusing data, multiple users with differing values, and not having a right or wrong answer" (Heikkinen, 2018, p.17). There is an increasing need for new solutions corresponding to the complexity of modern problems, which require co-creation in environments comprised of multiple stakeholders: people of different ages, cultures and professional specialties (Heikkinen & Räisänen, 2015, p.160). Yet, performing successfully in similar settings requires from knowledge workers not only the deep knowledge of their own field, but also cross-boundary skills, which implies the knowledge of the ways their discipline interacts with others and the ability to communicate across the borders of disciplines, generations, social and cultural backgrounds (Heikkinen, 2018, p.18).

1.1 Locating the study

In 2012, Oulu University of Applied Sciences established non-degree training programs called 'Oamk LABs', which practice a new form of studio-based model of learning, they called the LAB studio model. According to one of the processes founding researchers, Kari-Pekka Heikkinen (2018, p.33), studio-based models of learning were introduced into higher education as a teaching methodology for art, design, and architecture students. The studio-based model of learning is characterized by the four following features aiming to create a strong learning practice community (Brandt et al., 2013). First refers to high focus on practice and reflection-in-action. Second, implies solving real-life problems, which add complexity and uniqueness of individual cases to the problem-based learning. Third includes active interaction and collaboration with peers and experts from the industry and fourth is the learning space, which is an essential part of studio learning experience (Heikkinen, 2018, pp.33-34).

The traditional studio model of learning is designed to develop experts with a deep knowledge of a specific industry and its tools, referred to as 'I-shaped specialists'. In contrast, the new LAB studio model created by Oulu University of Applied Sciences focuses on developing more well-

rounded individuals also known as T-shaped specialists. These specialists would have all the knowledge of I-shaped professionals as well as cross-boundary skills and competencies. As described by Heikkinen (2018):

> These so called T-shaped professionals are characterised by their deep disciplinary knowledge and understanding of systems in at least one area, and their ability to function as adaptive innovators and cross the boundaries between disciplines. … T-shaped persons are experts in specific areas (T's vertical stroke), called as I-Shaped Professionals (I- SP) and know how their discipline interacts with others (horizontal stroke). (p.18)

In order to fulfil the need for cross-boundary training, LAB studio model adds two more features to the traditional studio-model learning process, multidisciplinary and international environment.

In order to create such environment Oamk LABs strongly focuses on openness of the participants selection process. Program enrolls people from different disciplines including software development, graphic design, business, marketing, as well as health, education, journalism, and other professional fields. In addition, Oamk LABs application process is open for students from Oulu University of Applied Sciences, Finnish and foreign students of other Finnish universities. international exchange students, high-school graduates, professionals for retraining, and unemployed professionals.

Semester in Oamk LABs is organized in the form of a business pre-incubator, where most of the learning process is based on independent teamwork on a project. The self-guided work is supported by regular individual and group meetings, workshops from mentors, as well as lectures from university professors, invited experts, company visits and industry-related events. In addition, semester in Oamk LABs includes three main milestones referred to as 'Gates', where students present their project's progress. At the Gates, students are either allowed to proceed with the project or are advised to stop and join one of the other teams, who have passed through that Gate. Therefore, learning in the LAB environment happens through reaching milestones in the process of product development and involves various pedagogical practices, including project-based learning, problem-based learning, cooperative learning and master-apprentice (Heikkinen, 2014, p.4).

1.2 Motivation for the study

As a part of my master's degree program I have passed a three-months internship at one of the Oamk LABs at the position of a program assistant. This was a primary reason for my interest in the research matter. Some of my tasks, included contacting LAB alumni to collect feedback about their learning experience with the program and gather information about the current state of their projects and their professional development. During the whole internship period, I have been able to conduct over twenty individual interviews and receive three written responses to my questions. Collected data has been used solemnly for marketing purposes and has not been analysed in this study. However, the complexity of student opinions about their LAB experiences has assisted me in forming a better understanding of the context for my future research. It has also further narrowed my interest to exploring the student's perspective on the subject.

Together with the creation of the first LAB studio learning program in 2012, researchers from Oulu University of Applied sciences have also established LAB research group with the purpose of exploration and further development of the learning model. As this topic is relatively new, the list of published academic works is short and little research has been done on the student's perception of the model, as well as their experience in the program. The list includes a P.h.D. dissertation written by Kari-Pekka Heikkinen (see Heikkinen, 2018), who has done mixed method research with action research features on the LAB studio model of learning and its contribution to T-shaped knowledge of the bachelor's level students. The work profoundly uncovers the LAB studio model and will be often referred to in the following contextual framework for this paper. However, it needs to be acknowledged, that K.-P. Heikkinen was one of the main actors during their establishment and is currently a staff member at Oamk LABs. Therefore, a one-sided viewpoint on the matter is possible, causing a gap in the research covering the students' perspective on the LAB studio learning model.

1.3 Research questions

Narrative inquiry was considered as a suitable methodology that would be able to meet the need for studies discussing student experiences of the LAB program and, thus, contribute to the ongoing development of the phenomena. In the field of education, narrative inquiry has gained popularity as a deep qualitative methodology that helps better understand perspectives in a complex process of teaching and learning (Kim, 2015, p.18). Narrative inquirers collect stories about lived experiences of people, that are ought to uncover insightful nuances about the subject

of interest. Stories are created from various forms of data, which is later assembled by a researcher it in a chronology of events (Creswell, 2013, p.71). Thus, concepts of time and space in the collected narratives play an important role in the research process. Similarly, the educational setting of Oamk LABs program features both concepts. Being a form of studio-based model, the LAB studies take place in a shared space, while the learning itself is happening through reaching milestone in project development in forms of 'Gates' and 'Cycles'.

Therefore, guided by narrative inquiry methodology the given research was primarily aimed to answer following research question:

1. How do different participants experience the LAB studio learning model?

In many cases of narrative studies, this work including, the research process is guided not by a theory, but rather by experiences that emerge in the narratives (Clandinin & Conelly, 2002, p.40). This is true for the given study, were the first question was formed broadly enough, to allow the participants of the story chose what they want to tell, instead of me as researcher guiding them (Kim, 2016). When conducting the data analysis, the main highlight of the narratives appeared to be cooperative learning. This has shaped the second research question:

2. How do participants experience cooperative learning as a part of LAB studio learning model?

1.4 Structure

As explained above, the theoretical framework of cooperative learning was shaped by the data collected during the research. Therefore, the next chapter of the paper will discuss the notion of Johnson and Johnson's (2008, 2009) framework of cooperative learning theory developed from social interdependence theory. In the third chapter of this paper I provide the context under which the research was conducted. This includes defining the constructivist research paradigm together with the narrative inquiry methodology that have guided me as a researcher. There I also provide information about Oamk LABs in order to describe the context under which the research process occurred, as well as to define temporal and spatial frames of the presented stories. In the fourth chapter I provide step-by-step description of the research process conducted for this paper, including choosing research participants, data collection, and data analysis. Fifth chapter aims to answer the first research question by presenting the stories of two LAB participants, with a small researcher's reflection at the end of each. Chapter six discusses how

participants' experiences relate to the theoretical framework of cooperative, as well as provides the limitations and conclusions of this study.

2 Cooperative learning

As suggested by Clandinin and Conelly (2002, p.40) in the case of narrative inquiry research is not the theory that guides the research but rather the experiences told in stories. Thus, in many cases, narrative inquirers collect the data with an open mind without the influence of a specific theory (Kim, 2016). This has been true for the given study. However, in the process of data analysis, it has been uncovered that the main highlight for both of the participants' experiences during their LAB studies were different aspects of cooperative learning. For this reason, the next section is dedicated to cooperative learning with its roots coming from Deutsch (1949, 1962) social interdependence theory and the five basic elements that defined Johnson and Johnson (2008, 2009).

2.1 Social interdependence theory

According to Johnson and Johnson (2008, 2009) in the 1950s and 1960s, Deutsch (1949, 1962) developed a social interdependence theory suggesting three ways social interaction including positive interdependence in a form of cooperation, negative interdependence in a form of competition and no interdependence. Each determines a particular interaction pattern and psychological processes within an individual. Positive interdependence implies promotive interaction where individuals endorse and supplement each other's actions in order to achieve group goals. This suggests psychological processes that include a substitution of one person's action for another person actions (substitutability), an openness to influence and being influenced by others (inducibility) and contribution of positive psychological energy to the external objects (positive cathexis). This way of interdependence leads to a transformation of personal interests into common ones with new objectives taking place. Therefore, "demonstrating the transition from self-interest to mutual interest is perhaps one of the most important aspects of social interdependence theory" (Johnson & Johnson, 2008, p.12). Negative interdependence implies oppositional interaction where individuals restrain and discourage each other's actions in order to achieve personal goals. This promotes the following psychological processes of non-substitutability, refusal to the influence of others, as well as negative cathexis. Within such interaction, individuals have a double focus with an aim to improve their own productivity while preventing others from generating more results then they do. "Thus, self-interest is strengthened and the motives to win and avoid losing are strengthened" (Johnson & Johnson, 2008, p.12). In the case of no interdependence, the interaction is absent, meaning that a person acts independently towards

achieving personal goals by focusing on their own productivity and disregarding the actions of others (Johnson, Johnson & Smith 2007; Johnson & Johnson, 2008, 2009).

After conducting a meta-study comparing the outcomes of positive interdependence, negative interdependence and individualistic efforts it was uncovered that cooperation leads to better achievement results than competitiveness or individualistic efforts. This is due to the fact that more time is dedicated to tasks with a higher level of involvement. In addition, positive interdependence was also shown to create stronger interpersonal attraction and peer support, as well as lead to better decision making while appropriately interacting with other people's perspectives (Johnson & Johnson, 2008, 2009).

2.2 Basic elements of cooperative learning

Johnson and Johnson (2008, 2009) actively use social interdependence theory in their studies to define five basic elements of cooperative learning. These five elements draw upon Deutsch's theory (1949, 1962) and include positive interdependence and promotive interaction, as well as individual accountability together with personal responsibility, appropriate use of social skills and group processing.

As suggested by these researchers positive interdependence can be structured into three categories: an outcome interdependence occurs when the group has common goals; a means interdependence implies that group members have complementary resources, roles, and tasks; and a boundary interdependence refers to a group having a common exterior competitor, a uniting identity, and shared environment (Johnson & Johnson, 2008, 2009). Different ways of structuring group work within these categories has shown to lead to different outcomes. Thus, it was noted that goal interdependence leads to better productivity than a resource interdependence. At the same time, a resource interdependence when individuals do not share the same goals with other group members results in a decrease in each other's productivity (Ortiz, Johnson & Johnson, 1996). Although even in cases when the goal and means are interdependent there can still be challenges:

> The more complex the procedures involved in interdependence, the longer it will take group members to reach their full levels of productivity (Ortiz et al., 1996). The more complex the teamwork procedures, the more members have to attend to teamwork and the less time they have to attend to taskwork. Once the teamwork procedures are mastered, however, members

concentrate on taskwork and outperform individuals working alone. (Johnson & Johnson, 2008, p.22)

Promotive interaction implies group members endorse and supplement each other's actions toward the shared goal. Those include behavior based on trust, effective exchange with needed information and materials, help and assistance, providing group mates with feedback and confronting other's arguments in order to promote better decision making, as well as openness to other opinions and influence (Johnson et al., 2007; Johnson & Johnson, 2008, 2009).

In order for effective promotive interaction to take place, group members should possess a range of interpersonal and small group skills, which suggest the following actions: getting to know each other, communicating effectively, motivating each other and dealing with conflicts (ibid). "Especially when groups function on a long-term basis and engage in complex, free exploratory activities over a prolonged period, the interpersonal and small group skills of the members may greatly influence the level of members' achievement and productivity" (Johnson & Johnson, 2008, p.24).

Cooperative learning also increases the level of responsibility of an individual compared to an individual work since the focus stays not only on accomplishing personal tasks but in facilitating the actions of others (Johnson et al., 2007; Johnson & Johnson, 2008, 2009). Responsibility grows with the group and individual accountability taking place. The first implies an assessment of the whole group achievements with the results given back to the group to analyse. While second suggests an assessment of every individual in the group with the results given back to the individual and the group as well (ibid). Johnson and Johnson (2008) note that "the lack of individual accountability may reduce feelings of personal responsibility" (p.23), which may lead to the decrease of individual investment in the group work. This may occur on occasions when it is hard to measure the individual contributions of group members, when there is a high possibility of excessive work, when there is a low level of cohesiveness in the group, and when there are low expectations for the final result (Johnson et al., 2007; Johnson & Johnson, 2008, 2009). It has also been shown that in general as the group grows personal contributions seem less valuable to the individual, it becomes harder to keep individual accountability and communication frequency tends to decrease together with individuals tending to restrain their opinion that would oppose to the overall group belief (ibid).

Another aspect of cooperative learning which enhances promotive interaction and support the notion of individual and group accountability is group processing. Johnson and Johnson (2008,

2009) define group processing as sessions that help the group to outline which actions were helpful or not and decide on the next steps with which a group shall proceed. This has shown to produce better achievement results than in the case of individualistic effort or group work without group processing (ibid).

2.3 The role of teacher

Depending organization of the group work, Johnson and Johnson (2008, 2009) define three types of cooperative learning where each has a particular role for teachers. Informal cooperative learning consists of group work targeting that lasts from a few minutes to one class period. Formal cooperative learning implies students working together for one class to several weeks in order to reach a common learning goal. The cooperative base groups are formed for long-term learning with stable membership (Johnson et al., 2007; Johnson & Johnson, 2008, 2009). "Typically, cooperative base groups are heterogeneous in membership (especially in terms of achievement motivation and task orientation), meet regularly (for example, daily or biweekly), and lastly for the duration of the class (a semester or year) or preferably for several years" (Johnson & Johnson, 2008, p.31).

Despite the dynamic evolution of the teams during the LAB semester, the latter form of group work has several similarities to the organization of group work in the LAB studies. The role of teacher in cooperative base groups includes, creation of the groups, providing the tasks and expectations for the group achievement, sustaining the five basic element of cooperation, organization of regular meetings and systematic assessment of the group's progress (Johnson et al., 2007; Johnson & Johnson, 2008, 2009). Similar tasks are supported by the role of the master in the LAB studies of by the organization of the learning process, that be later discussed in the Research context and presenter in Table 3.

3 Research context

This chapter aims to provide a context under which the research was conducted and explain the non-traditional structure of the paper. First section will place the given research within one of the five existing qualitative research paradigms - constructivism. Second section will provide a piece of theoretical information that justifies the suitability of the narrative inquiry for the given study and provides the main features of the research process in narrative studies. The last section aims to describe the circumstances under which the research process was conducted, as well as to place the readers within the spatial and temporal context of the stories presented in Findings.

3.1 Constructivist research paradigm

According to Hatch (2002), modern qualitative studies done in education can be categories within five main research paradigms that shape our assumptions about what is research and how it should be done: positivist, postpositivist, constructivist, critical and poststructuralist. Considering the research context, studied phenomena and methodology chosen for this study, the research paradigm under which this paper is written is constructivism (see Table 1).

As is described in the third section of the Research context the LAB studio learning model is contextual and personal (Heikkinen, 2018, p.25) since the whole educational process is shaped by people and context. At the same time, individual experience and the perspective through which individual reality is built is the central concept of narrative inquiry methodology. Therefore, the studied learning model together with the methodology suggested for this research, places the given paper within the ontological frame of constructivism, which suggests that the reality is created by the subjects, and thus multiple realities exist "in the form of abstract mental constructions that are experientially based, local, and specific" (Hatch, 2002, p.15).

While ontology refers to our understanding of reality, research epistemology refers to our belief of how people acquire knowledge about reality. In the case of constructivist epistemology, constructivists believe that it is impossible for researchers to stay objective and distant, are co-constructing the meanings of their studies. The chosen methodology of narrative inquiry, that is described in the following section of this chapter, fits all of the above features of the constructivist paradigm, with the stories and their meaning being co-constructed with the participants of the research.

Table 1. Constructivism research paradigm. Adapted from Hatch (2002).

Research paradigm stands	Constructivism
Ontology: nature of reality	Multiple realities are constructed
Epistemology: what can be known; the relationship of knower and known	Knowledge as a human construction; researchers and participants co-construct understanding
Methodology: how knowledge is gained	Naturalistic qualitative methods
Products: forms of knowledge produced	Case studies, narratives, interpretations, reconstructions.

3.2 Narrative inquiry methodology

"As a method, it begins with experiences as expressed in lived and told stories of individuals."

(Creswell, 2013, p.71)

Research of narrative is not a new approach in the field of literature, linguistics and history (Creswell, 2013, p.70; Kim, 2016), however, the acceptance of narrative inquiry as a common research methodology in other disciplines took a turn in the 1980s. The start of the narrative tradition in academia was signalled by the publication of the two issues of *Critical Inquiry* journal in 1980 and 1981, which in 1981 were compiled in a book On Narrative (Kim, 2016, p.5). Further interdisciplinary development of the narrative inquiry was supported with the launch of the annual series *Narrative Study of Lives* by Josselson and Lieblich, and Narrative Inquiry journal in 1993 (Creswell, 2013, p.71).

Kim (2016, p.10) believes that a big contribution to researchers' attention towards narrative inquiry was done, by an American psychologist Jerome Bruner (1915-2016), who in the 1980s developed the theory of narrative construction of the reality. Bruner believed that there are two modes of thinking and understanding the truth and reality: pragmatic and narrative. The former relies on quantitative research, logic, empirical proof; its main objective is to provide objective truth and definite answer. Whereas the latter "uses stories to understand human actions and experiences … it incorporates the feelings, goals, perceptions, and values of the people whom we want to understand, and thus also lead to ambiguity and complexity" (Kim, 2016, p.11). Denzin and Lincoln (2011), relate the active development of narrative methodology with the

period of Experimental and New Ethnographies in 1990-1995, and the period of Postexperimental Inquiry in 1995-2000, which "were defined in part by concern for literary and rhetorical tropes and the narrative turn, a concern for storytelling, for composing ethnographies in new ways" (Denzin & Lincoln, 2011, p.3).

Nowadays, a narrative inquiry has fully developed into an independent qualitative methodology and is actively used in various research fields and approaches, including human developmental perspective, organizational orientation, feminist narratology, philosophy, psychology, sociology, business, economics and education (Creswell, 2013, p.70; Kim, 2016, p.7).

3.2.1 Narrative inquiry in education

> "Narrative inquiry is education is grounded in educational philosophy."
>
> (Kim, 2016, p.19)

In the field of education, the narrative inquiry has gained popularity as a methodology that allows us better to understand the lived experience of students and teachers in a complex process of teaching and learning in a classroom (Kim, 2016, p.18). Connelly and Clandinin (1990) are the first researchers who used the narrative inquiry in the educational field in their article Educational Researcher. Since "education is a development within, by, and for experience" (Dewey, 1938/1997, p.28, cited in Kim, 2016, p.18), narrative inquiry is a suitable methodology for educational sciences, where a study of narrative is "the study of the ways humans experience the world" (Connelly & Clandinin, 1990, p.2). Stories can represent the experience in the classroom, and therefore have a great contribution to the research in education (Goodson & Gill, 2011). Through their epiphanic power (catharsis) stories have the power of illustrating other settings for people with no teaching experience for example (Kim, 2016, p.19). Hence, in order to engage in a dialogue with all educational stakeholders, and what is more, make sense and correctly interpret what is happening in schools, it is essential for educational researchers to have strong listening and storytelling skills (ibid).

Moreover, according to Kim (2016, p.19) narrative inquiry is no more solemnly used as a research methodology but has a great impact on education as a whole, contributing to the curriculum, teaching, and learning. It is actively used in as a pedagogical strategy teacher education; as a teaching and learning process for educational professionals through reflections; as a part of

professional development for teachers who have not started their practices; as a platform for building networks between literacy, pedagogy, and multiculturalism (Kim, 2016, p.19).

3.2.2 Research design with narrative inquiry

Narrative studies have two different approaches to conducting the research, where one of them focuses on the types of narratives that are central to the research, or what Kim (2016) refers to as narrative 'genres'. Creswell (2013, pp.72-73), for example, outlines four popular types, including biography, in which the researcher writes about experiences of other people; autobiography by Kim (2016), or autoethnography by Creswell (2013), which are written by the subjects of the research; life history that depicts a whole life of an individual; and oral history, that focuses on the personal reflection of one or few individuals about an event, it's causes and effects. However, it is important to emphasize that researchers in narrative inquiry encourage to experiment with forms and be open for other ways of storytelling, including literary-based narratives in a form of fiction, novel, poetry and visual-based narratives, such as photographic narrative, digital storytelling, and others (Clandinin & Connelly, 2000; Creswell, 2013; Kim, 2016).

Creswell (2013) when talking about narrative inquiry as one of the five qualitative approaches in research states that research and structure can vary and is open to the researcher preferences. However, it is still possible to identify several steps that seem to be common among all of the studies done with the narrative inquiry. Those are defining research interest, finding one or more suitable participants for the research, collecting the data in different forms, analyzing the data the collected data by writing the stories, collaborating with the participants of the research in order to discuss and negotiate the meanings behind the stories (Creswell, 2013, pp.74-75).

3.3 Placing stories at Oamk LABs

Oamk LABs are non-degree educational programs at Oulu University of Applied Sciences, that offer full-time LAB studio-model of learning for students. During their studies participants create multidisciplinary teams and develop projects, products, and services that target one of the three global industries: games in Game LAB, health and wellbeing in DevLAB, and education technology in EduLAB.

As a part of my master's degree program, I have passed my internship at Oamk LABs, in Oulu University of Applied Science, where I was part-time employed as a program assistant at one of the LABs. One of the main tasks I have received from my work supervisor was to update information about the LAB's alumni and the current state of the projects they developed during their LAB semester. In order to accomplish this task, I managed to get in touch via email with 24 LAB graduates, and gradually conduct 21 individual interviews. Other three students have answered my questions in written form by email. The data collected for the interviews is not analyzed for this research, however, it provided me with strong insights about Oamk LABs and their learning model, which will be presented in the following section.

Another task I was assigned to accomplish during my internship was updating and improving Oamk LABs website content and portfolio of their students' projects. I have analyzed all of the existing information on the website and some of the research available from the LAB research group. Therefore, the following description of the LAB studies is based on my personal observations during the four months of the internship, and is supported by the current content of Oamk LABs webpage (Oamk LABs, n.d.), research done by LAB research group (see Heikkinen 2014, 2018; Heikkinen & Räisänen, 2016, 2018; Heikkinen & Stevenson, 2016; Heikkinen, Seppänen, & Isokangas, 2015; Karjalainen, Seppänen, & Heikkinen, 2016), and data collected from individual interviews with previous EduLAB.

3.3.1 LAB studio learning model

The recent changes of the modern economy caused by the rapid globalization, urbanization and technology development, in particular the ICT that is influencing all industries and spects of modern life (Heikkinen & Räisänen, 2015, p.160), has led to the increase of the labor market's demand for the knowledge workers, who are able to operate within the 'societal structures and organisations that are constantly changing, while being able to solve challenges, which are characterised by confusing data, multiple users with differing values, and not having a right or wrong answer' (Heikkinen, 2018, p.17). New solutions corresponding to the complexity of the modern problems require co-creation in the environments comprised of multiple stakeholders: people of different ages, cultures and professional specialties (Heikkinen & Räisänen, 2015, p.160). Yet, performing successfully in the similar settings requires from knowledge workers not only the deep knowledge of their own field, but also cross-boundary skills, which implies the knowledge of the ways their discipline interact with others and the ability to communicate

across the borders of disciplines, generations, social and cultural backgrounds (Heikkinen, 2018, p.18). This combination of skills constitutes the so-called 'T-shaped professionals', where the vertical stroke stands for the deep knowledge of one discipline and horizontal stroke stands for the cross-boundary skills (see Figure 1).
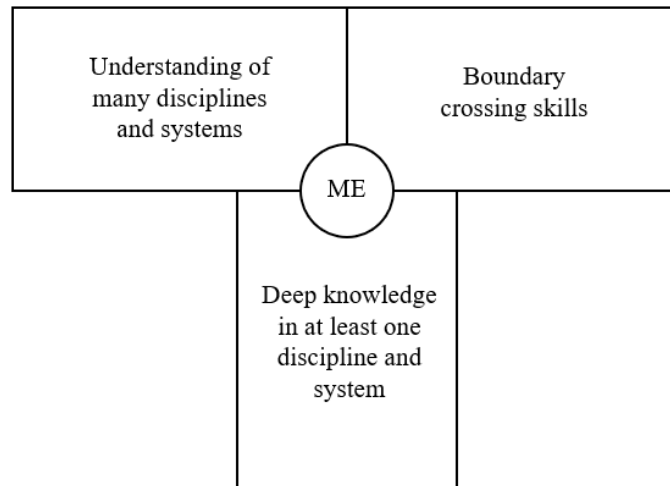

Figure 1. T-shaped professionals. Adopted from Heikkinen (2018).

According to Heikkinen (2018) LAB studio model is a studio-based model of learning called to provide the modern knowledge workers with mentioned above skills of the T-shaped professionals. Studio-based models of learning were introduced into higher education as a teaching methodology for the students from industries of art, design and architecture (Heikkinen, 2018, p.33). Existing research defines four main features of studio-based model, including high focus on practice- and reflection-in-action; solving real-life problems, which add complexity and uniqueness of individual cases to the problem-based learning; active interaction and collaboration with peers and experts from the industry; as well as, learning space, which is an essential part of studio learning experience (Heikkinen, 2018, pp.33-34). As a form of studio-based models, LAB studio model has all of the four listed features adding to them multidisciplinary and international settings in order to create an environment suitable to train the cross-boundary skills, demand for the T-shaped skills in their graduates.

The establishment of the first LAB studio learning model took place at the Oulu University of Applied between years of 2012-2014 and was caused by the radical changes in the ICT field of Oulu business environment in 2011, with hundreds of products development employees losing their jobs (Heikkinen, 2014, p.5). Gaming industry was considered to be a solution for the problem, which gradually led to a study conducted in 2012 by Eeva Kangas and Jussi Autio with

Oulu gaming companies with the aim of exploring educational need for industry. In the conclusions of the study, researchers stated the following:

> ...most companies stated that the education should focus on specialised expertise, which would help to generate a variety of specialists for the field. For this reason, the companies hoped that the education would not be general in nature, offering something for everyone. Instead, the education should enable each participant to focus on strengthening their own skills and special expertise. As a whole, however, the education should be based on a multi-disciplinary foundation, meaning that experts from a variety of fields should meet during their studies instead having to wait until actual employment. (Kangas & Autio, 2012, cited in Heikkinen, 2014, p. 5)

For this reason, Oulu Game LAB was the first LAB developed by Jussi Autiona and Kari-Pekka Heikkinen in 2012 at Oulu University of Applied Sciences with multidisciplinary environment, problem- and project-based learning, concept development and internationality as the main cornerstones of the environment (Heikkinen, 2014, p. 5). In addition to that, the two main purposes of the for the development of LAB learning environment was to assist students with employment and encourage establishment of new businesses in different industries (Heikkinen, 2014, p.4). After continuous implementation of the model in different fields Oulu University of Applied Sciences has expanded their focus into on three global industries: games in Game LAB, health and wellbeing in DevLAB and education technology in EduLAB, brought together under one umbrella of Oamk LABs. At the moment of the research every LAB enrolled around 30-40 participants per cohort.

The interest of academia in the LAB studio learning concept has led to the establishment of the LAB research group at Oulu University of Applied Sciences in 2012 with the purpose of exploration and further development of the learning model. At the same time, this interest has encouraged the development of international LAB network with similar university programs all over the world. In 2014 Oulu University of Applied Sciences have published a handbook (see Heikkinen, 2014) defining common features of the LABs, including 'an approach focused on business, learning by doing, teamwork, leadership and solution development through creative and multidisciplinary processes' (Heikkinen, 2014, p.4). At the same time, every LAB studio can have an emphasis on their aspect or field of learning, as well as teaching methods, which is why the environment of every LAB is dynamic and varies according to the needs of the local economies (Heikkinen, 2014, p.5).

3.3.2 LAB semester

As mentioned above, the industry emphasis and pedagogical practices in every LAB studio may differ, which is why describing the distinctive organizational features of Oamk LABs studies, that I observed during my internship are crucial for understanding the context of the research and the stories of the participants analyzed in this study in particular.

Studies at Oamk LABs are full-time and cover one or two semesters, by the end of which LAB graduates receive 30 or 60 ECTS credits respectively. Therefore, on a regular basis students are not enrolled in any other courses during the semester. However, it is possible to participate in the program according to one's study plan, e.g. as an internship, thesis research, optional studies, minor etc.

LAB studies are organized in a form of a business pre-incubator, where most of the learning process is based on the independent team work. The main pedagogical practices that are covered in the LAB learning environment are project-based learning, problem-based learning and cooperative learning (Heikkinen, 2014, p.4). At the beginning of the semester students receive a problem based on which they collaboratively have to develop the concept of the future solution in a form of a service or a product. Students may choose problem out of the ones provided by the LAB, by the partnering companies or organizations, or suggest one themselves.

Participants are also guided that all following steps of the semester are based fully on the independent decisions of the team: the roles of the team members, their tasks and deadlines, work schedule and organization of the working space etc. The LAB staff is willing to create an environment as close as possible to the environment of the young startup companies. Therefore, among other things that, participants have to deal with is to learn how to organize their team working while sharing it with other teams.

Being a studio-based model, a big focus at the LABs is dedicated to their space. In case of Oamk Labs, Game LAB has grown and moved into a separate building located in Oulu downtown, next to the office building of the Finnish game company 'Fingersoft'. While DevLAB and EduLAB share the space at the Kotkantie Campus of the University of Applied Sciences. This includes three main rooms (one for DevLAB, two for EduLAB) designated for the working spaces that can be transformed according to teams' needs, one room for lectures and workshops, one kitchen space and few other open spaces for staff and research team. All places are free for the use of students.

Semester has a linear chronological structure (see Table 2; Appendix 1), where the learning is happening through reaching milestones in the process of product development (Heikkinen, 2014, p.4). In case of Oamk LABs, there are three main milestones which LAB staff and students refer to as 'Gates'. Gates are organized pitching events, where teams have to present project progress to the LAB masters, mentors and invited experts of the industry. After their presentations students receive feedback according to which the concept is either allowed to pass the Gates and team may continue the development or is being cut. Teams, whose concepts have not passed the Gates are then reformed through redistribution of the team-members into the groups that have passed the Gates (see Appendix 1). Thus, students start the LAB semester working in pairs on the initial concept of the project and, gradually, teams grow into groups of 5-6 people formed after Gate 2. After the Gate 2 team compositions generally does not change. Before the Final Gates team progress is assessed three times at the 'check-in' project presentations for the mentors and other teams, which LAB staff and students refer to as 'Cycles'. At the Cycles teams receive feedback, without any of them being eliminated. The Final Gate symbolizes the end of the LAB semester. Students are free to choose whether to continue with the project development or stop.

All of the three Oamk LABs share the similar chronological structure, however the duration of the stages and project evaluation criteria at the Gates and Cycles may differ depending on the LAB.

Such structure promotes two types of interdependence involved in the learning process (Johnson et al., 2007; Johnson & Johnson, 2008, 2009). In the period between the start of the semester students engage in the positive interdependence having to work with other participants in team, while at the same time competing with other team for continuation of their project (see Figure 2).
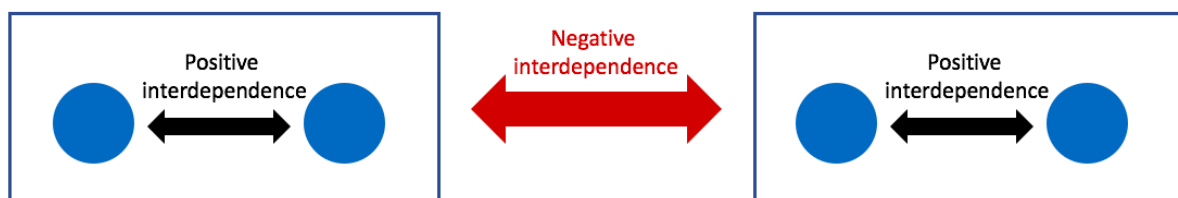

Figure 2. The double level of interdependence in the LAB studies.

Before starting the work, pairs sign the LAB Team Agreement, which is then regularly resigned by the newly formed teams throughout the LAB semester. The main aim of this procedure is to define the ownership over the work of the team, as well as ensure the transferring of Intellectual Property Rights (IPR) from Oamk to the after the end of the program (see Appendix 2).

Table 2. Stages of the LAB semester.

Stage	Description
Start	At the first stage students are divided into pairs to work on the concept of the product for 2-3 weeks. Pairs sign the LAB Team Agreement (see Appendix 2).
Gate 1	Pairs present their preliminary ideas to the jury. All of the teams receive feedback and the best ideas are chosen to continue working on product concept for the next 3-4 weeks. Participants from the ideas that were cut join the teams that have passed the gates. New teams sign the LAB Team Agreement (see Appendix 2).
Gate 2	Teams present their validated concept to the jury. All of the teams receive feedback and the best ideas are chosen to continue working on product demo for the last 2 months. Participants from the ideas that were cut join the teams that have passed the gates. The final composition of teams is formed, teams signs the LAB Team Agreement (see Appendix 2).
Cycle 1-3	Regular check-in presentations with LAB master's and other teams. Teams receive the feedback about the level of their progress, none of the teams are eliminated.
Gate 3 / Final Gate	Final presentation of the product demo, where all of the teams receive feedback. Team can choose to stop working on the project and receive 30 ECTS or continue to the product path.
Product Path	An optional semester of LAB studies, worth of additional 30 ECTS. During the product path teams continue to work on their project and aim for finished product, service or startup.

LAB learning environment also includes master-apprentice model with guidance from 'LAB masters' - people 'responsible for the operational activities of the LAB environment' (Heikkinen, 2014, p.4). Hence, the self-directed team work is supported by individual and group meetings with mentors. This encourages student independence, as well as allows the teacher to break "free from the traditional mould and becomes a facilitator of learning, a coach for teams

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and individual learners, and a project consultant" (Heikkinen, 2014, p.4). In addition, studies are combined with obligatory and non-obligatory workshops and lectures from mentors, university professors and invited field experts, and includes company visits and industry-related events in Oulu or other Finnish cities. For better understanding the implementation of master-apprentice model in the LAB studies, Table 3 illustrates the comparison of LAB master's role to teacher's role in cooperative learning by Johnson and Johnson (2008, 2009).

Table 3. LAB master role compared to role of teacher in cooperative learning by Johnson & Johnson (2008, 2009)

Role of teacher in cooperative learning	LAB master role
Form heterogeneous groups of four (or three).	Groups are formed at the beginning of the semester by interest; groups grow during the semester.
Schedule a time when they will regularly meet (such as the beginning and end of each class session or the beginning and end of each week).	Regular individuals and team meetings.
Create specific agendas with concrete tasks that provide a routine for base groups to follow when they meet.	General guidelines and Gates expectations are given to the team; routine and tasks are created by the group.
Ensure the five basic elements of effective cooperative groups are implemented.	Supports the five basic elements of effective cooperative groups in the teamwork.
Have students periodically process the effectiveness of their base groups.	Gates with feedback from masters, mentors and invited guests.

The combination of the pedagogical models involved in the LAB studies is believed to lead to the obtainment of the entrepreneurship skills together with the growth of the network beneficial for future learning and employment (Heikkinen, Seppänen & Isokangas, 2015). In addition, some of the LAB alumni have outlined their learning outcomes from LAB in a form of improvement of English level proficiency, deepening the theoretical knowledge of participants' own discipline by practicing, discovering the insights of the professional fields from other team members and the experts of the industries involved in the studies, as well as experiencing the real-life working environment.

3.3.3 Types of applicants

As mentioned above the main two features that distinguish LAB studio learning model from other studio-based models are multidisciplinary and international environment. Being both the settings that are fully created by the human factor, there is a great emphasis on the selection of the students enrolled in the LAB programs. The multidisciplinary environment is created by enrolling students and professionals from different fields and industries. Whereas the international environment is created by enrolling local and international students and professionals.

In case of Oamk LABs, the application process has been structured into three main channels of enrollment allowing people of different status and age to participate in the LAB semester. First channel is open for all of those who study at the Oulu University of Applied Sciences, including Finnish and international degree students. Second channel of application allows students from international universities partnering with Oulu University of Applied Sciences through the Erasmus program to enroll in Oamk Labs as their exchange studies. Third channel is designed for anybody interested in the program to enroll through Open University of Applied Sciences, including Finnish and international degree students from other Finnish universities, secondary school graduates, employed and unemployed professionals etc.

At the same time, the application for the LABs is open to students and professionals of different levels from various fields, including software development, graphic design, business, marketing, as well as medical studies, education, journalism etc. This allows participants to create multidisciplinary teams with a variety of different expertise covered in one group to work on a project.

Throughout the enrollment process all applicants are interviewed by masters of the LAB of applicant's choice via Skype or in person. During these interviews both parties have a chance to get familiar with each other, define applicant's interests and needs, adjust student's study plans etc.

Considering the different backgrounds of the applicants it is important to emphasize, that after enrolling in the program all participants receive a 'student' status. Therefore, in this research word 'student' does not refer to any age frame nor to the level of participants' education and is applied to people enrolled in the program.

4 Research process

Taking into account the discussed-above features of narrative inquiry methodology in qualitative studies, this section will be dedicated to the step-by-step description of the research process conducted for this paper, including choosing research participants, data collection, and analysis.

4.1 Data collection

Narrative inquiry approves different forms of qualitative data collection, including narrative interviews, photographs, documents, letters from research participants (Creswell, 2013, p.71). In the case of this research, I have selected a narrative interview as main form data believing that this will both provide me with a sufficient volume of data to uncover a learning experience of a 4-months-long program, as well as fit conveniently into the tight schedule of the program participants. Moreover, I have already had experience in conducting more than twenty interviews with LAB alumni during my internship and felt comfortable having live communication with the participants. In fact, those interviews, in particular, was one of the primary reasons to consider narrative inquiry as a suitable methodology for my study.

Among three broad groups of qualitative interviews based on the degree of the researcher's control over the process: structured, semi-structured and unstructured interviews, narrative researchers tend to choose the latter one, where: "It is the interviewee, not you, who controls the content, including where to begin the narrative, what will and will not be disclosed, the scope of the interview, the order in which topics are introduced, the passing of the interview, and the amount of detail" (Kim, 2016, p. 163). In order to stay loyal to the narrative principles and not suppress the process of sharing and storytelling from the research participant, it is advised not to conduct a structured interview or a survey that would frame the responses into the needed frame of the social context of the study (Kim, 2016, p. 165). However, it is still possible to apply the external structure on the discussion guided by research objectives or theoretical frames, as long as we stay adaptable to the circumstances and give the respondents freedom of choice and expression (ibid).

While choosing a narrative interview for my data collection, it has been clear that my interest lies in a specific period of participants' life related to their experience with the LAB program. Therefore, despite keeping the process as open for the storytelling as possible I have prepared a list of possible questions, topics, events that took place during the semester (see Appendix 3).

During the interviews, I have chosen to either include or not include them in the discussion depending on the specific context of an individual case. This, in my opinion, has kept the limits of the interview within the frames of the research objective, but also helped participants not to get overwhelmed by the pressure of telling me something "interesting", encouraging the discussion and boosting their creative process of storytelling.

In fact, Kim (2016, p. 170) suggests several techniques of the narrative interview that help bring out the valuable data for the storytelling process. Those include replacing the 'yes-no' questions, with descriptive, exploratory and open-ended questions, as well as following-up with clarifying questions, asking for examples and using a two-sentence format technique and clearly stating the methodology features:

> Life history researchers Goodson and Gill (2011) advise that it is crucial for us to share our research intentions and our methodology with the participants, sharing the importance of the narrative inquiry methodology and our research purpose helps our participants understand and be aware of the value of their own voice and the importance of sharing their own experiences and stories. (Kim, 2016, p. 170)

Therefore, a description of my research purpose and methodology had not only prevented me from possible ethical issues related to 'human research' during data collection but also encouraged my interviewees to be more proactive during our conversation. When explaining to the participants the feature and aims of narrative inquiry methodology, as well as narrative interview techniques, I mentioned following phrases "You are free to choose and in charge of what to tell me and what not to tell me", "When talking about any of your experiences, try to remember specific situations or examples of what had happened".

Taking all of this into account, the process of the interview has been divided into following steps: providing a person with a pre-interview research consent form and signing it; a description of the research objective together with a thorough explanation of the narrative inquiry methodology and techniques; sketching participant's journey at the program; and finally, the interview itself which included narrative question and clarifying questions (see Appendix 3).

Together with the interviews, I have also collected 'respondent-generated' visual data (Kim, 2016, p.178) in a form a journey that participants sketch on top of the line aiming to represent the LAB semester (see Appendix 4). This has, on the one hand, assisted the interviewees to answer my questions in a profound way, as well as was a useful tool in the following process of story creation. During the data analysis, I have additionally used 'digitally archived data'

(Kim, 2016, p.179) in a form of email texts generated in the process of co-editing the stories with the participants.

Since there has been no agreed consensus among the qualitative researchers on the optimal sample size, the quantity of the participants has always been the main criticism of a narrative inquiry methodology (Kim, 2016, p.161). Number can vary from 1 to more than 15 people depending on the research objectives, resources, depth of collected data and genre of the stories chosen for the study (ibid). In the case of this study, I have selected five possible candidates for participation in this research and conducted five interviews. However, due to the time frames of the research, as well as inappropriateness of some of the collected data for conducting narrative research I have selected two most suitable and sufficiently profound interviews for the analysis. The chosen participants belonged to the same cohort in one of the three programs included in Oamk LABs, however, belonged to different project groups. Both of the chosen interviews took place two weeks prior to the final presentation of the projects and the end of their students' LAB experiences (see Appendix 1). The interview with male research participant Mark was conducted on the 29th of November, whereas an interview with female research participant Anna was conducted the next day on the 30th of November. An issue of saturation of the study due to the number of selected interviews for the research will be further discussed in the Limitations of the study.

4.1.1 Building rapport

Narrative inquiry researchers deny the notion of 'objectivity'. On the contrary, they encourage a co-creative relationship with the research participant (Clandinin & Murphy, 2009). "Narrative inquiry, open-ended, emergent, and evolving, allows narrative inquirers to invite participants to become co-researchers, co-constructors, co-narrators, and co-storytellers. It gives us a possibility to embrace a relational understanding of the roles and interaction of the researcher and the researched" (Kim, 2015, p.99). This approach calls for the creation of trust, and belief in the value, of what the participant is sharing with the researcher.

In my case, the fact that during the first stages of my internship at one of the LABs I have still not decided on the research I would be doing for my master's thesis was helpful in the process of building a close relationship in general with the cohort of the program. At the beginning of the semester, I was introduced to the students, not as a research, but as a program assistant, who they could approach for any questions about the equipment, facilities, schedule, etc. At that

moment, I made sure to be clear about the fact that I myself am an international student and I am around the same age that most of the cohort was, which is why they could feel free to discuss with me about any non-program related questions. Even though, I was a staff member I was not necessarily involved in their daily team workflow, throughout the whole semester students would see me every day in the Oamk LABs facilities; my work responsibilities included regular interaction with them via online group chat to inform about changes in the schedule, tasks they had to complete and documents that they had to fill; students would approach me with questions about the equipment, ticket booking, and even invite me to their meetups. Moreover, I also had a chance to participate in a few exercises of the introductory workshops aimed at building trust and reliance among students.

In addition, the fact that LAB staff themselves have created a strong trust relationship with the cohort and the feeling of openness they had created by sharing the working space with students, has only supported a good comfort level of my future research participants, to talk about their experiences in the program later.

4.1.2 Ethical issues

Certainly, I did not have an equally close relationship with all 27 students of the cohort; with some, I had an opportunity to interact more, with some less. For this reason, I had a clear understanding of which of the students I could ask to participate in my research, and who would be able to share their stories with me more openly and freely than others. With that being said, I am highly aware of the ethical issues related to the questions of people being research 'subjects'. Therefore, in order to prevent possible criticism of my research for using close friendship with the participants of my research and benefiting from the possible vulnerability caused by it (Kim, 2015, p.102), I would like to be clear that as close as my relationship with the students of the cohort could get, it would be yet hard to call it friendship, but rather a good acquaintance. Moreover, I strongly believe that the level of comfort, and yet formal distance with students that I have asked to be my research participants was a strong foundation for our interviews.

Another way of approaching the 'human research' issue, is being clear with the participants about the research purpose and methodology. Put well in the words of Kim (2015):

> Placing a relational ethics at the heart of narrative inquiry, the researcher endeavors to obtain data from 'a deeply human, genuine, empathic, and respectful relationship to the participant about significant and meaningful aspects of the participant's life' (Josselson, 2007, p.539). We need to

be transparent about our research interests and purposes so as to make an alliance and a trustworthy relationship with the participant. Good narrative practice, according to Josselson (2007), requires ethical practice that involves the need to respect the dignity and welfare of our participants and intense collaboration with them about the area of the participants experiences and stories that are of interest to us. (p.103)

When I was settled about the research I want to conduct for this paper and its methodology, I have shortly approached my targets asking them whether they would like to participate. A successful approach of interviewing a person is a willingness to understand, respect and thankfulness towards the agreement of a participant to access their lives, worldview, and opinions by providing them with informed consent and confidentiality (Kim, 2016, p.158). Therefore, my participants were informed about the program I am studying at, the aim of my research, as well as the specifics of the methodology I will be using. Afterward, I have provided them with the pre-interview research consent form (see Appendix 5) containing all the information about the research, in order to familiarize themselves with the text beforehand. The research consent form was approved by my academic and internship supervisors.

At the interview itself, I had a checklist including two steps, before starting the interview session. This checklist included, firstly, once again a description of my research purpose and methodology, and, secondly, singing the pre-interview research consent form. Participants, were free to ask and discuss with me any questions, concerning their role in the research process.

4.2 Data analysis

As pointed out by Kim (2016) while being not identical data analysis and interpretation are additive concepts in the narrative research studies:

We analyze narrative data in order to develop an understanding of the meetings are participants give to themselves, to their surroundings, to their lives, and to their lived experiences through storytelling. Narrative researchers try to interpret meaning through an analysis of plotlines, thematic structures, and social and cultural referents. These meetings are to be analyzed and interpret concurrently in a transitional period to the research text. (pp.189-190)

Therefore, after collecting the interview data I have started a process of what Kim (2016, p.192) refers to as 'narrative smoothing', meaning the subjective interpretation and presentation of the

collected data in an interesting and engaging way for the readers, by connecting the gaps between the unprocessed data, creating context for better understanding, as well as filtering out the irrelevant data.

Drawing upon Polkinghorne, Kim (2016, pp.195-197) distinguishes two data analysis strategies that are used in narrative research: analysis of narratives, as a traditional pragmatic mode of analyzing qualitative data through fitting the codes found in an individual narratives into the bigger categories and patterns; and narrative analysis mode that "is based on narrative cognition that attends to the particular and special characteristics of human action that takes place in a particular setting" (Kim, 2016, p.197). The latter approach suggests compiling unique data of one narrative into a wholesome unit while staying faithful to the storytelling techniques in order to build a platform for empathy between reader and research participants:

> The purpose of the narrative mode of analysis is, then, to help the reader understand why and how things happened in the way they did, and why and how are participants acted in the way they did. The final story configured through the narrative mode of analysis has to appeal to readers in a way that helps them empathize with the protagonist's lived experience as understandable human phenomena. (Kim, 2016, p.197)

For this study, the narrative mode of analysis has been a guiding approach for the creation of the participants' individual stories presented in the Findings section of the paper, while the pragmatic analysis of the stories through the theoretical frame has been done in the Discussion section of the research.

One of the ways to analyze data through the narrative approach is by using a combination of methods that lead to the balance between the notion of telling and the notion of told, where "the telling means the researchers narrating, and the told means the data that are told by the participant" (Kim, 2016, p.200, italics in original). Those include recapitulating the told in the telling by distinguishing six pillars of personal narrative from the data (abstract, orientation, complicating action, evaluation, results, and coda), reordering the told in a storyline through telling, identifying a telling story pattern in the told of several participants and inferring a story from a nonverbal data (Kim, 2016, pp.198-205).

After transcribing the interviews and examining the raw data all of these methods have guided in some way the analysis for this research. Creating the stories comprised of following main steps starting with, highlighting, coding and reordering participants words into a temporal line according to the chronological structure of the LAB semester. Here the nonverbal data in a form

of the sketched LAB journeys collected from the participants have helped to ensure the correct placement of the 'told'. The next step involved shaping the stories by using the means of 'narrative smoothing'. This implied my subjective interpretation of the selected data from the form of 'told' into the form of 'telling' keeping some of the data in a form of quotes in order to support the narrative with participants' own voices.

During this phase I was also able to identify a shared plotline for both of the stories consisting of six sequential periods: a 'Preface' providing a background for participants' reasoning to enroll in the program, 'Start' depicting the first two and a half weeks of the semester, 'Gate 1' describing the period of three weeks after the first presentation of the projects, 'Gate 2' describing the time between the second presentation and the interview for this research, 'The interview' respectively reflecting the participants state, thoughts and learning outcomes at the moment of our discussions, and 'Epilogue' representing the last two-three weeks of participants' experience of the program including the final presentation of the project and the end of the semester (see Appendix 1).

The first version of the stories included only the first 5 stages of the story due to the time frame of data collection. However, staying in contact with the research participants throughout the process of story writing, have gradually been able to add the ending of the stories by analyzing the digital data from the email conversations with participants. The last step of the story creation phase was co-editing the stories with their "protagonists", which has ensured the reliability of my research process by verifying that the stories pose truthful information and accurately reflect their perceptions, worldview, and opinions.

At the end of every story, I have placed a small 'Postface' sections dedicated to the researcher's reflection on the narrative, with its short summary and defining points. The creation of the Postface sections did not involve participants.

After the phase of storytelling creation, I have conducted a pragmatic analysis based on the theoretical themes that have been uncovered in the participants' stories, which can be found in the Discussion section of the research.

5 Findings

This section presents stories of two participants enrolled in the same cohort in one semester of the Oamk LABs and worked on different group projects. Participants were given pseudonyms 'Anna' and 'Mark' in order to keep their identities confidential. Both of the participants have reviewed the text of the stories and verified that following narratives represent their experience in the program and reflect their thoughts and opinions.

Stories share the same plotline that was developed during the narrative mode of data analysis. This includes six phases that were placed in an order according to the chronological progress of the LAB semester (see Appendix 1): a 'Preface' provides a background for participants' reasoning to enroll in the program; 'Start' depicts the first two and a half weeks of the semester; 'Gate 1' describes the period of three weeks after the first presentation of the projects; 'Gate 2' describes the time between the second presentation and the interview for this research; 'The interview' respectively reflects the participants state, thoughts and learning outcomes at the moment of our discussion; and 'Epilogue' represents the last two-three weeks of participants' experience of the program including the final presentation of the project and the end of the semester. Short summary of the stories together with my personal reflections have been placed after every story at the 'Postface' section.

5.1 Anna's story

Preface

Anna is a foreign resident who has been living in Oulu since 2016. She moved to Finland to live with her Finnish husband, whom she met during her doctorate studies in Helsinki in 2012.

In her home country, Anna received a four-year degree in English language studies, literature and linguistics. This later led to four more years of doctorate studies in translation and two more years of working as a university teacher. However, after living in Finland for more than two and a half years Anna was still searching for a job:

> *I have applied for a lot of jobs, and I haven't got anything. I have applied for some studies here, distance studies, tried to become a language teacher in Finland. But so far it has been very unlucky. In some cases, it was due to the lack of experience, and in other, employers have selected internal candidates, which is disappointing. I was expecting that with my curriculum I will find a job very fast. But, of course, this didn't happen.*

While trying to see what else her curriculum needs, Anna applied for one master's degree program at Oulu University of Applied Sciences. She later received an email that she was not accepted into the program. Although, the author of the email suggested applying to another one of the available LAB programs. When Anna was explained how LAB studies were organized, she decided to participate:

> *It sounded so interesting. Now, with the activation model of unemployment, you have to do a certain number of days every 65 working days. So, LAB also helped with not getting my unemployment money cut. That was a little positive thing. … Also, it was very interesting, because during my doctorate I was always working on my research alone. So, working as a team was a new experience for me.*

Start

When the program began Anna discovered that she was almost 10 years older than all of the other participants in the program. This was a shock to her, since she expected that the program was for the retraining professionals, unemployed people and master's degree university graduates who had not found a job yet:

> *I think that it's a really helpful concept and I have learned a lot. But I have felt a bit out of place in many situations. Precisely because of not being the same age as the rest of the students.*

The problem given to Anna and her first teammate as a starting point for their solution sounded very vague and was related to one of the public services provided by local municipality. After meeting the employees of the organization a few days later, they have understood that their expectations for the project were different:

> *It was the digitalization of the social services in Finland and I thought it was a super interesting project, super big. We could do something for the society. In this sense, I really liked the LAB, because many of the projects are for the society.*

Being a foreigner who lives long-term in Finland Anna has experienced many issues with local services. So, unlike her teammate, who came to the country for a limited period of time, Anna has taken the project seriously. She wanted to make sure that she shows her best performance from the first time and so she tried to control most of the processes. She started taking on most of the tasks, that she had to share with her 20-years-old teammate:

I guess age influences a lot. I feel basically too self-assured with my knowledge and my experience. I'm 32 and I know how to do these things. You are 20, so just come along.... and as I said I like taking control of things. I'm a control freak, so if I'm allowed, I always take control of the things.

For this reason, the main goal that Anna set herself, together with the LAB master for further studies, was to avoid taking over the control in the teamwork. She was advised not to respond to the question when she knew the right answer, but rather let the members of her team think, give their opinion, and learn by themselves.

Gate 1

At the first Gate, Anna's idea got eliminated:

That was very shocking. I had super high expectations, that I have to do better everywhere. Also because of being unemployed for so long, I have to show myself and everyone that I can do it, that my diplomas are worth it, and all these kinds of things. So, I was putting a lot of pressure on myself, I was very demanding.

Despite this disappointment, Anna hoped that the connections she gained during the last two weeks of work with the organization would be beneficial for finding a job in the future. So, after Gate 1, Anna emailed the employees to let them know that the project did not go through. She also mentioned that if they needed any help, she would love to work with them in the future:

It was that kind of projecting into the future work, that the project could bring. Which, once again, I think was coming from unemployment.

At the first meeting with the new team, Anna was surprised to hear that the night before Gate 1 the two original members of the project stayed up until midnight working on the presentation. They then followed-up with the question of how committed were the new members of the team to the project. Anna was impressed and concerned by this question. She was ready to commit as much as the project required, but she knew she was not going to agree on working 24 hours per day.

Even though working with the second team was much easier than with her previous one, Anna still felt like she didn't fit in with the team, mainly because of her age. She asked herself how she could relate to these people, despite having different interests and expectations from the program. She could clearly see that, for example, one of the teammates considered LAB only as a school project that would be over at the end of the semester. Anna could see that this was

a similar trend among all of her teammates. Their sense of responsibility was looser because they were younger and because the LAB project was a required part of their studies:

> *I am a person that really likes to work and when I'm working, I'm doing my 200% and probably because of my experience, all my career, I am at least ten years ahead of these kids. So, my idea of responsibility is much stronger than the one that they may have. They feel that they have responsibility for the project, and they have to study... Let's say it like this: they don't have so much in their mind that I do.*

She took the project so seriously sometimes that the master of the LAB had to remind her: "Remember it is not important, whether or not the project succeeds. It is the process that matters". So, Anna knew she had to adapt and change her mindset.

A bigger issue for Anna turned out to be the division of tasks and roles in the team. They could clearly define roles for most of the members based on their field of studies. A graphic designer was responsible for the design of their product and the visual material. A business student was making market research and competition analysis. But how could she contribute to the project with the background in translation studies? She has little experience in the IT field, so she tried to work on a website. She also went out of her comfort zone and took it upon herself to meet with people she did not know:

> *I never consider myself the best socializing person, so I was trying to avoid the task of going to [talk to] a group. Then many times I noticed that we would always talk that we have to go to meet someone, but nobody got the task. Everybody was kind of scared of going out and asking.*

But then Anna started noticing that her teammates were trying to compensate for the lack of some roles in the team by assigning to her that nobody else has taken responsibility for:

> *On many occasions, I had a feeling that I was the lady for everything. We divided tasks and the last one is for Anna. Because nobody knows how to do it, or nobody wants it. So as such, it's not a problem, because as I said I like working... But my role was very vague, very blur. So, I felt as part of the team, but at the same time I didn't find an identity inside the team.*

This was the moment when the LAB master pointed out to them that the lack of communication in their team had created a different level of expectations. He suggested that members of the team not just work on their tasks, but discuss daily were doing, how they are doing it, how much time it might take them, what were their thoughts, ideas, and expectations:

And of course, in the team, there has been a big problem of communication, and I myself I have to be blamed for it because I don't know how to maybe come and communicate with another person. But since in many cases we are working alone, and we think that because we're sitting in the same area, we are transferring information to one another. ... So indeed, teamwork is teamwork and not working alone in a team.

Gate 2

At Gate 2 things took a positive turn for Anna's team, which helped Anna relax and feel good about the progress of the project. The team has received good feedback and passed the Gate. One of the judges even suggested that they could apply for the grant. This was the point when Anna felt that she strongly related to the project, since working as a researcher herself she knew how to apply for grants and deal with similar formalities. In addition, it made her feel that the project was real:

It really felt like I can do something for the society, I feel very motivated with it. And I was learning a lot about the team. Even if I was exigent with myself and with my team not being constantly exigent. Learning to relax, have fun, enjoy. Learn what other people can do and what they cannot do and so on.

The first week after Gate 2 Anna was able to lower her stress level. She felt quite positive about the possibilities of the project. After the Gate 2, the team had to sign the LAB team agreement (see Appendix 2), which revealed a lot of undiscussed issues in the team, as well as the future plans of the members related to the project. One of the teammates was clear that he/she was returning back to his/her home country and was not interested in continuing with the project. However, another teammate who was also leaving Finland insisted on continuing work on the project. But Anna was unsure about her plans:

It has been difficult to communicate and to advance in certain tasks while being all in the same city, in the same room. Imagine when we are spread over two or three countries or two or three cities. So, I started feeling not so sure of continuing in January.

Moreover, the problem of measuring the contribution, and therefore the percentage of ownership of the project, added to the disagreement within the team. Some people suggested measuring hours of work. However, depending on the case, an important task could be accomplished within 5 minutes whereas less important one could take a few hours. Anna herself spent a lot of her time working on things that were not used later. Ann began to wonder if this meant that her contribution was worth less than the others:

And one of the team members insisted that his/her task has been mainly thinking. And I was like "Yeah, but we all think". And he/she was like "Well I have great ideas. Without ideas, there's no project". And I was like "Yeah, without actions ideas are worthless." So, I started to feel very unhappy about the situation I decided not to have a discussion at that moment. Because everyone started taking it too personal.

Soon after this discussion Anna caught a cold and had to work from home for four days. When she came back to the LAB, she was surprised to see that some of her teammates had marked her the individual assessment tool as "working too little":

Who said that? I was just home, and I was actually working, I wasn't just laying down on the sofa. ... that situation, it was compared to someone missing hours because he/she went on a trip. Well, it's not really the same, but I understand.

Despite the internal conflict things were going well for the project. They received word that they may have gotten a possible partner. This was one of the most memorable moments at LAB for Anna. In particular, because she was really happy for the original member of the team, who had initially suggested the idea for the project, instead of taking the LAB offered at the start of the program. Team and the master of the LAB were celebrating the occasion:

It felt very very good. ... Whenever I had work, it has been with contracts of the universities. And this idea of getting someone to give you money was interesting. It was a big victory.

Finding someone who was ready to invest in the project made Anna feel good about the reality of starting your own business and having someone ready to pay money for your idea. However, while trying to build a common platform for the collaboration with a possible partner Anna started noticing that the team started lowering standards of the project and slowly eliminating many features of the final product. She felt the team was getting too relaxed:

And that has created a bit of chaos in my work team. Because suddenly we have all seen that all of our problems are solved. Someone is going to come, invest money and tell us what they want, and we would do it.

It took almost three weeks of discussions and meetings to come to the conclusion that the partner would not be able to help with the project. Meanwhile, Anna felt that the team had gotten stuck in a routine of not making any decisions and there were hardly any tasks in order to proceed with the development. For example, when the team had to make a workshop for university students as a part of their product testing and it took two whole weeks to plan. However, after

receiving feedback from one of the LAB mentors, the team reevaluated the plan and decided to have it redone:

> *I have said very openly that since I have designed three versions of this workshop, I can-not have more ideas. I need someone to take charge of it and I can help. And it has taken like a whole week to simply start deciding which exercises were going to be in the work-shop. ... It's constant on everything we have made: "we have to decide, we have to decide, we have to decide.*

It was at this point that Anna reached her lowest point in the program. She did not know how to motivate her teammates, how to push them to make a decision and at the same time she could not do anything on her own because then they would not learn:

> *If I don't allow them to fail, they cannot learn. So sometimes allowing them to fail means that things get delayed for a whole week or half a week. For me, it was waiting and wait-ing until they fail, in order to be able to do something.*

Anna began to understand that she was disappointed not so much with the team but with how the program was run. She did not agree with the teacher's role as a guide, who does not intervene in the teamwork. She knew why the program was organized that way, but she still felt that the students needed to be directed more:

> *I remember that our tutor said in a meeting that we should have this kind of timeline for the rest of the semester. And that we should draw it, and every time that we have a meeting and some things happen, we have to redraw it. He never came to check it if we had the timeline. And of course, we never did it. We just tried to do it and we had a paper with a line drawn and dates, but we have never written anything else… I guess that I have suf-fered because I know you noticed those things. And as I said, since I have been a teacher, I put myself in the role of teacher.*

The further the less work Anna had, the tasks were very small, and she was able to complete them in half of the day when her team thought it would take her a week:

> *The whole week for this? And what am I going to do for the rest of the week? Coming every day just to sit in front of the computer? So, that has created a lot of anxiety*

The presentation at Cycle 3 was the main moment when Anna could see the results of her team compared to others. In her opinion, over a six-week period, the project had degraded from being the best at Gate 2 to being the worst at Cycle 3. Anna was also frustrated by the fact that her

teammates seemed satisfied with the situation and did not make any reflections on the state of the project:

> *I have been constantly justifying them for things that I expected them to be better. And of course, I cannot blame them because it is me who has created the justification and has not told them 'Why don't you try to do better?'. But at the same time, I don't want to be the nanny of the team.*

The interview

> *So, why I am on medical leave now is because last week I had a lot of a pressing heartbeat. I had to go to the doctor and he said that I have just a lot of anxiety and I need to relax.*

Anna took a week of sick leave away from LAB, in order to step back and lower the level of stress caused by the studies. At the time of the interview, she was not sure what her team thought about her sudden leave, but she decided that after the week she would come back with a positive attitude, in spite of everything. Anna was also happy to see that the team was slowly proceeding with the project.

The last weeks of LAB Anna described to me in an email after the interview. She said that with the ending getting closer her motivation seemed to grow smaller and her team did not advance much: "After all, if you can't finish what you're doing, at least partially, there's not much enthusiasm left," she said. The workshop they had designed did not go well due to the lack of students and the insufficient data they had collected from their participants. The team had a couple of good ideas at the end, but they were impossible to put into practice before the final presentation.

Epilogue

At the final presentation, Anna's team received mixed feedback from the jury. They thought the team had a good idea, but some members of the jury pointed out problems, which Anna had foreseen weeks earlier. She was also disappointed because some of her teammates were unable to justify their reasoning in a clear way to answer the jury's questions:

> *At times it almost felt like this or that member of the team could just talk of the beautiful design of the application rather than the actual problem we wanted to solve. In that sense, I think that was one of the problems of our project precisely: we got blinded by the possibilities of how it would look like, instead of focusing on all the work behind the scenes.*

At the last meeting with the LAB master the team had to do some self-criticism during which Anna received some comments from her teammates about taking medical leave without a previous warning. Some teammates mentioned that Anna should have talked openly about her emotional state before leaving:

> *It was a bit painful for me. First, because of their lack of understanding about how psychological/emotional issues work or even about working rights. Second, and more importantly, because they had not been aware of my state before, even if I had showed signs of burnout. They only seemed to react when I disappeared from the LAB and they realized the actual workload of our project.*

Anna did not continue with the project after the LAB studies, but she did share with me her takeaways from the program ending her email it with the following words:

> *As an older person, I have had many more opportunities to live all these kinds of situations, and for my teammates was probably the first time. I am sure that they have learned a lot from the LAB period! I have myself too, and now that I am doing a new course, with expectations on my side and on the side of the teachers and colleagues, I am handling the stress and my own energy. The LAB was a shock therapy for me: I was thrown to the lions, but I survived with some scars and wounds, and I learned enough for the next time to face new lions.*

5.1.1 Postface: "I didn't find an identity inside the team."

Anna's story represents a unique case for the LAB program since unlike most of the other participants the LAB project was not a part of her studies, but rather an opportunity to improve her CV, find employment and avoid losing financial support from the Finnish government (KELA, n.d.). As discussed in the Research context section of this study, LAB studies are designed to create an environment that would include people of different disciplines, ages, and nationalities in order to achieve a cross-boundary experience during the studies. This explains the open application process in Oamk LABs, which made it possible for Anna to participate in the program. Despite the absence of strong requirements for participation in the studies, it becomes obvious from the story that while enrolled students indeed come from different countries and have different professional backgrounds, the age frame of the program is unintentionally limited to 18-25 years old students. This made Anna the oldest participant of the program with a ten-year age difference between her and the rest of the participants. At the beginning of the semester, being older than her first teammate led to Anna taking on most of the responsibility for the team's

achievements. However, after the first Gate, when her concept got eliminated, the age gap became one of the main causes of her highly-stressful cooperation with the new team.

As described in the story, Anna's background of job seeking, shaped her personal objectives for the program, which were different from her new teammates' goals. Since for the majority of participants participation in LAB is just a part of their studies, Anna felt that her teammates had lower expectations for the outcomes of the semester and thus took on different levels of responsibility for the project. This was aggravated by poor communication within the team. Attributing this to her low level of social skills, Anna herself acknowledged that the need to interact with others was a personal challenge during her studies. Following the advice of the LAB master the group had to learn together how to interact in an effective way.

One of the biggest problems for Anna during the semester appeared to be the question of her contribution to the project. Not only was it a complex procedure for the group to measure everyone's contribution, but also being from a linguistic background made Anna's role within the multidisciplinary environment of the team unclear. Anna felt that she did not have enough skills or discipline knowledge that would be valuable for the team. In addition, some of the tasks that she did take responsibility for later appeared to be useless in the project's development.

The lowest point of Anna's studies was caused by the ineffective decision-making process in the group which has slowed down the project progress by the end of the semester. Despite the fact that she wanted to push the process forward, she knew that this would not support a "learning by doing" environment for others, so she felt she had to suppress her opinion. This led to feelings of demotivation and an increase in anxiety, and gradually Anna went on medical leave for a week.

As is shown at the end of the story Anna believes that the LAB studies was a useful experience for her younger teammates to face real-life challenges of teamwork. Anna herself acknowledges that the program did help her to strengthen her communication skills within a team and better manage stress. However, the main trend of the story tends to focus on the challenges of cooperative working caused by the age difference, poor communication within the team and little guidance from the teacher.

5.2 Mark's story

Preface

Mark is an international student who came to participate in the LAB studies as a part of his Erasmus exchange program in Finland. He always knew he wanted to go abroad for one semester of studies and so he decided to do so in the fourth year of his bachelor's degree:

> *I always thought that is something I just need to do or want to experience. I always thought if I don't do that I will regret it for the rest of my life. Yeah, I think now I know why. Because, it's just such an experience and so much fun, but also the LAB and the studies. I'm really happy I did*

Mark knew a few people from his university who went for an exchange at Oulu University of Applied Sciences. They were satisfied with their experiences and recommended considering it as an option. Since Mark and his friends were business students, they decided to apply together for a semester of a business program at the Oulu University of Applied Sciences, but it turned out that they could not apply for that program because of the agreement between the universities. However, another option they had was participating in one of Oamk LABs programs. So, as soon as he submitted his documents Mark received an invitation for an interview:

> *I was at home and I put on a shirt that could be suitable. But I didn't know what to expect. I was in my room and I prepared what am I going to say. Is it some kind of like a thing I need to pass?*

The interviewer, who was a LAB master turned out to be nice very friendly, the interview was informal and the interviewer was easy to talk to. From that moment Mark felt good about his choice of program:

> *It was a fun talk and he responded saying that we had a very good talk and he will be happy to hear more from me and see me in the LAB.*

Start

At the beginning of his studies Mark, together with other students, was told to choose a project they would like to develop during the semester. The list included ten problems suggested by the LAB staff and five problems added by the students themselves during the selection process. Participants had to choose the top three problems by their interest without consulting with their

friends, based on their choice they were later divided into pairs to start working on the concept for the future project:

> *For example, if I got into the team with a friend from my country, it could have been fun, but I have been doing that for the last two years. So, maybe that could also be boring. I got in a team with a person I did not know. We are totally different, he/she is from the other side of the world, with another culture, habits, and communication ... I needed to think how am I going to communicate with him/her so that he/she would understand me and could communicate with me. But we figured it out and, in the end, I think we both learned from it. Because it is not something you do every day.*

When defining their primary idea for a project Mark felt for the first time the cultural differences between him and his teammate. Together they had to research a market of the existing competitors for their future project. Mark knew that this task was not an easy one, so he happily agreed when his teammates suggested that he/she could do research:

> *In my home country, when you need to do market research, it's like a report of six components or substitutes, different things you look at. They're really strict and tell us 'Don't say what you think, just say what you see, and what are the facts, and what did you find on the Internet. Read, put in sources.' All the things are very big.*

There was a list of complex questions that they had to answer in order to accomplish this assignment. Mark was surprised and impressed Marks was when his teammate has finished it after 10 minutes of work. Out of curiosity, Mark has asked to have a look at it:

> *There was a question like 'Are there competitors in the market?' for example, there is a market of lights and we had to find some competitors for lights. So, on the question 'Are there competitors?' he/she wrote down 'Not that I am aware of'. ... Yeah, I laughed at it and then I thought that maybe should not laugh, because I don't know how it is done in their region.*

Mark had always heard about cultural gaps in theory and from books but this time he had to confront that situation in real life. It was then that he realized how big the world truly was and that he needed to learn how to carefully navigate these differences and communicate about what was expected of them.

In addition to that Mark could also see that being from a tech-background his teammate was not enjoying doing the paperwork and the research. Mark felt bad but knew he could not do anything about it. This was a part of the project that needed to be done in order to continue with the

project. Despite those challenges, Mark felt very excited about the program. Everything was new to him and he looked forward to continuing with the project.

Gate 1

At first, Mark didn't know what to expect from the first presentation of the project and what the other teams would show. However, this day turned out to be one of the most memorable moments and best experiences for him at LAB. Mark enjoyed presenting, his team got great feedback, and passed through the Gate. He was really happy. The jury told them to better define the project and to leave out all the unnecessary features. So, that was the next step the team decided to do.

After the first Gate, since some of the other projects were eliminated, a new person joined their team:

> *The structure they use here, I really like it actually. The way that you start in a very small group, just the two of you, and you need to prepare, and present, and then hopefully proceed to the next phase. I really like the idea that, if you work hard or if you do the right thing, then you proceed, and your group gets bigger, gets more resources ... I'm really positive about that. It also stimulates you. For example, when you have a nice subject and nice project you want to keep going the end and succeed.*

The integration of the new teammate was not too hard for the group. Like Mark, the new teammate was also from a European country, which made the cultural gap seem smaller. In addition, he/she was a design student - a specialist that the team was lacking. Mark felt that everything was coming together. The project started taking shape and the roles were becoming clearer. The design person took over visual tasks, the tech person took responsibility for the technical parts of the project that he/she enjoyed and Mark took the managing role.

While things with the project were falling into place, personally Mark had been facing challenges that forced him to consider leaving the program. When Mark heard that someone from the family back home got sick, he asked himself: 'What am I doing here?'. So, he decided to talk to the LAB master about the situation. During their conversation, Mark felt great support from his mentor, who said "Keep me updated on the situation… If you want to go home for a weekend or a week, just talk about it. We can arrange things; we have done this before. Feel free to talk to me, we can always figure things out":

It was a very nice conversation. You get a feeling that it doesn't matter what happens. It will be fine, and we will figure it out. I didn't need to go home after all. Things changed, and things are doing well now. But I learned a lot from this.

Gate 2

The project got through the second gate as well and one more person joined the team. However, this time the integration process did not play out so smoothly:

He/she had a completely different idea about our project. There was a lot of movement in the project group. He/she wanted to do, for example, things my other teammate was already doing. We needed to reform and formulate who is going to do what. It is a good way to learn how to overcome these situations. Because in reality, it is also true, teams change, partners change.

The teammates had roughly no knowledge about each other skills, interests, and preferences for the tasks they wanted to do. This was all exacerbated by poor communication within the team. Mark knew that because of the cultural background some people on his team were not much of 'talkers':

It was possible that I would not talk to someone the whole day… I am at my desk on my computer they walk in in the morning and if I don't say anything, they also wouldn't say anything. And then at 4 o'clock they just walk out.

As the weeks passed Mark felt that everyone started working separately on their own project within the team, rather than working as a team. Despite everyone's seeming effort and dedication, the project was hardly progressing forward due to the absence of any structure in their group. Mark felt that the team needed to take a break, sit down and talk:

Stop everyone. …We're going to write down what your skills are or what are the things that you want. Then we are going to reform all of the team roles, responsibilities … We're first going to structure our work and structure the team and from there on we're going to work.

However, before Mark had a chance to execute this idea the LAB master had called in a team to have a feedback session, which unexpectedly escalates into a 'psychological talk'. During the session, Mark got into an argument with the new member of the team. It seemed that he/she had something on their mind but avoided sharing with the group and just kept rolling their eyes. Mark got really frustrated. He felt that this was unfair and said:

I don't care if you don't like my eyes, or my shoes, or my behavior, or whatever. Just tell me and we can talk about it. Then we can find a solution or work on it. Just, please, talk to me. Everyone needs to say, now is a moment to say what's on your mind.

Mark was really pleased that the discussion happened under supervision and he realized that at certain moments their tutor became a mediator between the teammates:

Normally I would have said that we can figure it out ourselves. But it was important that he was there, I think. And at the moment when stress was getting high, he was like 'Calm down, guys'... I don't know what it is about our LAB master, but I like him, the way how he talks and how he inspires people. ... Everyone just said what they thought, and he was controlling the situation.

The conversation turned out to be a difficult experience for the group. There were a lot of arguments, but finally, everyone started talking and shared what they have been wanting to say. After the conversation, the team decided that they would all go home early, have a good sleep and start the next day on a new page. From then on, Mark felt that there was a big improvement in the workflow. Everyone finally started working as a team, and not as a group of individuals. This experience has also helped the teammates to clearly defined roles in the project with Mark becoming the project manager:

That was nice to experience, because it's not always black-and-white, that someone is a researcher or a tester, or someone also has experience with the design. Because we didn't know each other for a long time, we needed to get to know what others competencies are and what they like. That was a good experience that we needed to figure it out and how we did figure it out.

The interview

At the time of the interview, Mark and his team were steadily progressing with the project. He enjoyed the problem that they were solving, but already then Mark knew he would not continue working on the project after the end of the program.

During our conversation, Mark also shared with me that despite the fact that he was used to working in group-projects from his previous studies, he still had a big takeaway from the LAB program:

When you work in a project with four people in my home country, everyone has the same culture, same background, same studies. So, it's more easy to know what you can expect from someone else. You don't need to push the communication to stay on the right track,

because people are already there. That's way more easy. Also, when you work here on a project teams change. People join the team, but sometimes also leave it for whatever reason possible. So, you need to be flexible, you need to adapt to the situation. I think that's different from what I do at home. Plus, you need to talk in English.

Epilogue

The last weeks of studies in LAB went smoothly according to Mark. After the talk with the supervisor "*the team chemistry changed in a positive way*". The new level of communication and collaboration allowed them to create a prototype of the product they were working on. Before the final gate Mark had his last meeting with his tutor to do the evaluation of the semester. They discuss the learning outcomes and the positive sides and the things that skills that still needed an improvement. In his Last email to me Mark has briefly summarized his experience in the program:

I had a wonderful time in Oulu at Oulu University of Applied Sciences. It was a fun, informative and challenging period. I would do It all over again.

5.2.1 Postface: "Just, please, talk to me."

Mark is a third-year business student who enrolled in LAB as a part of his exchange studies through the Erasmus program. This made him, along with many other exchange students, experience a similar educational process of coming to a foreign country for a limited time to work on the project, receiving his credits by the end of the program and then returning home in order to continue his studies.

Thanks to his educational background Mark was not new neither to the project-based learning nor to the teamwork. However, the LAB semester had still provided him with a new learning experience of working in the groups with an international and multidisciplinary environment. Right from the beginning, Mark has faced a cultural and professional gap between him and his first teammate by having different expectations of how certain tasks should be accomplished. Already then, he knew he had to communicate carefully in order to reach effective cooperation. When his team's concept got passed the first Gate, Mark's motivation increased. Not only this meant that the team was on the right track, but also a new student has joined the team and filled the role that the group was lacking in order to continue with the project. To Mark, such a dynamic arrangement of cooperative learning resembled the real working life, where people constantly join and leave the working places.

While organizing a working process with one and then two people have not been a big issue, after the second Gate when the third teammate joined the cooperation level has declined. The majority of his group had a completely different cultural background and poor interpersonal skills. So, despite the fact that Mark had strong social skills it was yet a challenge for him to build a good level of communication. This has led to an unclear division of tasks and roles within the team and gradually had a negative influence on the progress of the project.

At the lowest point of the group's cooperation, a team meeting with the LAB master was a helpful solution. Under the tutor's supervision, all of the members of the team had finally shared their opinions and expectations from the project. As described in the story, this has later helped the team reorganize the distribution of work in the group and have stable project progress during the last weeks of the LAB semester.

Mark's story presents a case of a positive learning experience with the LAB learning program, with a big focus on overcoming the communication challenges in order to reach effective co-operative learning in a multidisciplinary and international environment.

6 Discussion

This chapter reviews aspects of the LAB studies that emerged in the Findings through the theoretical lens of cooperative learning, presented in the second chapter of this study. In addition, it discusses the limitations of the research, questions of validity and reliability and provides conclusions from the conducted research.

6.1 Cooperative learning as a part of LAB experience

This study has looked at the experiences of two students enrolled in the same cohort of the Oamk LABs program in order to answer following research question: "How do different participants experience the LAB studio learning model?" The answer to this is presented in a form of two stories placed in the Findings section of the paper. The stories reveal two unique journeys reflecting various opinions on the learning model. Those opinions are shaped by personal and professional background of the participants, as well as the unique circumstances under each participant has studied for the semester. However, despite those differences both stories have covered different aspects of cooperative learning during their LAB studies. Thus, the second research question was formed: "How do participants experience cooperative learning as a part of LAB studio learning model?" The answer to this question is presented in the following section.

Among many aspects of the LAB studio learning model the highlight of the narratives created during this study appeared to be different challenges related to learning in groups. The themes presented below do not directly refer to the five elements of cooperative learning (Johnson & Johnson, 2008, 2009), but are rather guided by the narrative data (Kim, 2016; Creswell, 2013). However, I provide a short summary of the way both narratives fit within Johnson and Johnson's framework of cooperative learning at the end of this section is a form of a table (see Table 4). The table is not aimed to compare the narratives nor to generalize the collected data, but rather to reflect on the unique connection of every journey to cooperative learning, taking into account the different backgrounds of participants.

Communication issues

Both of the stories heavily focus on issues of communication within the teams that resulted in problematic cooperation with their groups. In Anna's narrative, we find multiple occasions depicting the problems of cooperation with other participants caused by her lack of previous experience working within a group, and as Anna mentioned herself her poor interpersonal skills:

> *And of course, in the team, there has been a big problem of communication, and I myself I have to be blamed for it because I don't know how to maybe come and communicate with another person. But since in many cases we are working alone and we think that because we're sitting in the same area, we are transferring information to one another. … So indeed, teamwork is teamwork and not working alone in a team.*

In Mark's narrative, we see similar challenges, however, with the focus shifting to other members of the group who were "*not much of talkers*". Based on the fact that Mark enjoyed giving public presentations and had previous experience of working project-based learning in groups, it is natural to imagine him as a socially confident person. Mark attributed cultural differences between him and his teammates to their poor interpersonal skills. He blamed this for the complications in their work process after Gate 2.

> *It was possible that I would not talk to someone the whole day… I am at my desk on my computer they walk in in the morning and if I don't say anything, they also wouldn't say anything. And then at 4 o'clock they just walk out.*

These two cases support the notion that the appropriate use of social skills as a basic element of cooperative learning presented by Johnson and Johnson (2008; 2009). According to the researchers, solid interpersonal and small group skills promote better relationships among the members of the group and positively contribute to the group's performance. "Especially when groups function on a long-term basis and engage in complex, free exploratory activities over a prolonged period, the interpersonal and small group skills of the members may greatly influence the level of members' achievement and productivity" (Johnson & Johnson, 2008, p.24).

In order to build strong cooperation within the team, members have to familiarize themselves well with each other, reach a sufficient level of trust, communicate their opinions openly, provide support to each other and reach the agreements in a constructive way (Johnson et al., 2007; Johnson & Johnson, 2008, 2009). Not meeting some of those requirements has been described in both of the stories. In Mark's narrative, it is shown that poor knowledge of each other's skills, interests, and preferences made it difficult for the participants to distribute tasks and roles

among the group when the final team was formed. In addition, at the beginning of the team meeting with LAB master, some of his participants had not been sharing their opinions openly and with trust leading to Mark's frustration:

> *I don't care if you don't like my eyes, or my shoes, or my behavior, or whatever. Just tell me and we can talk about it. Then we can find a solution or work on it. Just, please, talk to me.*

While the inability to resolve conflict constructively appeared in Anna's experience when her group was signing the team agreement after Gate 2. Not only did the participants fail to agree on one way to measure everyone's contribution to the project, but Anna restrained herself from sharing her opinion openly and continued the discussion. Moreover, Anna felt this way during the whole semester, starting at the moment she was advised by the LAB master to take less control over the group work and allow other students to "learn by failing".

Expectations gap

The issue of communication was closely associated with the notion of expectations in both stories. Coming from long-term unemployment, Anna started her studies in the LAB with an aim of improving her CV, avoiding the loss of financial support from the Finnish government and possibly finding future employment (KELA, n.d.). While for many other students, including my second research participant Mark, the LAB semester was only a part of their degree or exchange program. As a result, from the beginning of the program, Anna had set high expectations from the project, more so than other students of the program:

> *It was that kind of projecting into the future work, that the project could bring. Which, once again, I think was coming from unemployment.*

As shown in Anna's story, this created a lot of pressure in the competitive LAB environment with other teams, where negative interdependence is supported by the elimination process at first and second Gates of the LAB semester:

> *I had super high expectations, that I have to do better everywhere. Also because of being unemployed for so long, I have to show myself and everyone that I can do it, that my diplomas are worth it, and all these kinds of things. So, I was putting a lot of pressure on myself, I was very demanding.*

However, similarly, Anna's high expectations were an obstacle to her cooperation with the second team. Johnson and Johnson (2008, 2009) suggest that positive interdependence between

the members of the group is one element of cooperative learning. It can be incorporated in the educational process through different combinations of goal interdependence, means interdependence and boundary interdependence. The first refers to the group having a shared goal and reward. The second, to the group having shared resources, where the actions of one person directly influence the actions of another person. The third, to the group sharing a common identity and enemy (Johnson et al., 2007; Johnson & Johnson, 2008, 2009). Positive goal interdependence alone contributes to better group performance. However, resource interdependence alone, causes a decrease in productivity (Ortiz et al., 1996). This was proven to be true in Anna's narrative. Her personal goal, shaped by job seeking experience, had unintentionally separated her from her teammates who had a shared primary goal of completing their studies:

> *I am at least ten years ahead of these kids. So, my idea of responsibility is much stronger than the one that they may have. They feel that they have responsibility for the project, and they have to study.*

Multidisciplinary and international environment

Anna and Mark mentioned working in teams with international exchange students and people from different professional fields. This refers to two crucial features that distinguish the LAB learning model from other studio-based models, the multidisciplinary and international environment (Heikkinen, 2014, 2018).

Cultural differences did not have a strong influence on Anna's experience of the LAB studies. The only exception is the fact that the international environment of the program was created by exchange students, who stayed for a limited time in Finland and were considerably younger than Anna. As discussed above, this has led to expectations gap between Anna and the rest of the students. Mark's narrative, on the other hand, describes the international environment as a significant part of his learning outcomes from the program. Mark describes, the cultural gap formed different expectations of how certain tasks should be accomplished at the beginning of the semester and later became, in his opinion, one of the causes for the poor communication level in his group.

Multidisciplinary environment, however, had a bigger coverage in both narratives. Anna thoroughly elaborated on the fact that the clear roles of other team members left no space for a person of linguistic background in the group. This resulted in Anna's team members assigning her all of the undesirable tasks:

On many occasions, I had a feeling that I was the lady for everything. We divided tasks and the last one is for Anna. Because nobody knows how to do it, or nobody wants it. So as such, it's not a problem, because as I said I like working. ... But my role was very vague, very blur. So, I felt as part of the team, but at the same time I didn't find an identity inside the team.

Positive interdependence in cooperative learning has been shown to increase an individual's productivity, since they know that action of other members depends on their efforts. However, this also works in the opposite direction, leading to the decrease of an individual's investment when they do not feel that are able to provide a unique contribution to the team (Johnson et al., 2007; Johnson & Johnson 2008, 2009). The latter case is well illustrated in the process of measuring everyone's contribution when defining ownership over the project in the LAB team agreement in Anna's narrative. The approach her team used undervalued many of Anna's efforts, including the time she worked while being home on sick leave. This later became one cause for demotivation and anxiety Anna experienced.

Mark's narrative also discussed the multidisciplinary setting of the program. At first, he mentioned it in a positive light, when team got passed the first Gate and a graphic designer joined the team. A person with new skills gave them the resources to continue the project development, and maintained a good combination of goals and means interdependence within the group (Johnson et al., 2007; Johnson & Johnson 2008, 2009). The situation changed, however, when the fourth participant, who had a technical background joined the group. As described in Mark's narrative, when the final team was formed, the roles and tasks began to overlap. This, in combination with poor communication within the team, led to a decrease in productivity. This refers to the challenges of resource interdependence of the team (Ortiz et al., 1996). "The more complex the teamwork procedures, the more members have to attend to teamwork and the less time they have to attend to taskwork. Once the team-work procedures are mastered, however, members concentrate on taskwork and outperform individuals working alone" (Johnson & Johnson, 2008, p.22). Similar outcomes have been illustrated at the end of Mark's story showing that the "*team chemistry changed in a positive way*" after the team had resolved the problem of insufficient communication. Mark has also mentioned that dealing with people of different professional fields was a big part of LAB learning outcomes, despite having a lot of previous experience with cooperative learning:

When you work in a project with four people in my home country, everyone has the same culture, same background, same studies. So, it's more easy to know what you can expect

from someone else. You don't need to push the communication to stay on the right track, because people are already there. That's way more easy. Also when you work here on a project teams change. People join the team, but sometimes also leave it for whatever reason possible. So, you need to be flexible, you need to adapt to the situation.

Table 4. Johnson & Johnson's (2008, 2009) framework for basic elements of cooperative learning in participants' narratives

Anna	Mark
Positive interdependence	
Due to the long-term unemployment expected the LAB experience assist in a process of job-seeking. Thus, had a personal goal, stronger then the shared goal of the team while being in the means interdependence with the rest of the members.	Like the rest of the group, participated in the LAB program as a part of his exchange studies. Thus, had the same expectations with other members leading to strong positive goal and means interdependence.
Promotive interaction	
Due to the age difference did not take perspective of her first teammate into account, and took over the control for the project. In the second team felt restrained to share her opinion and force other members of the team for better decision-making due to the 'learning by failing' policy. In addition, low level of communication in the group led to poor exchange of information, resources and materials within the group.	Some of the team members did not act in a trusting and trustworthy way, which was reveled during the team meeting with the LAB master. However, after resolving the communication issues, the team was able to provide efficient support and assistance to each other.
Individual accountability and personal responsibility	
Did not feel that she could contribute to the multidisciplinary environment of the group with her professional background. Team's approach of defining member's contribution to the group work caused a devaluation of her efforts.	Noticed first teammate, who was from technical background not being motivated to work on the concept development stage of the project. However, this issue has self-resolved as the project passed through Gates and continued further development.
Use of social skills	
Poor interpersonal skills, due to little previous group work experience, as well as big age difference that was an obstacle in communication.	Had strong social skill, but struggled to maintain communication with teammates from different cultural background.
Group processing	
Regular group processing is a part of the LAB studies. However, there was little control from the LAB master, thus some of the group processing tools were not maintained. In addition, Anna felt constantly restrained to share her opinion in order to allow the rest of the team learn.	Regular group processing is a part of the LAB studies. However, the effective processing was reached only when team learned about each other's skills, preferences and expectations.

6.2 Limitations of the study

This study is exposed to potential limitations related to the chosen methodology and research process. Studies done under the narrative research methodology have always been subject to criticism, due to the strong positivistic views still present in modern research (Kim, 2016, p.20). Those include accusing narrative research of "immaturity", "narcissism" or the fact that researchers who use the given methodology are "so taken up by the process, enjoying the doing of it, that they are not much interested in characterizing it inquiry abstractly" (Conle, 2000, cited in Kim, 2016, p.21). I myself have been confronted multiple times by my peers from different professional fields about the objectives of my exploratory study and the justification of using narrative inquiry as the guiding methodology for my research. People have suggested that it is an insufficient way of contributing to the knowledge on the studied matter. Some skepticism towards the methodological approach also refers to the reasoning behind the choice of participants for the research and the question of why someone's story is more worthy than the other's (Kim, 2016, p.21).

In addition, to that the limited time frames caused by being a foreign non-EU student in Finland placed constraining circumstances on my research process. This includes a small sample of participants for the study, data mainly comprised of narrative interviews with the participants and possibly insufficient analysis of the data to uncover the studied learning model. A sufficient sample for the study is also a complex question, where narrative researchers did not reach a consensus (Kim, 2016, p.160). Due to the on-going development of the methodology and its experimental nature, the number of participants can start with one. At the same time, in order to sufficiently uncover the complexity of participants' identity, a researcher needs to collect an extensive amount of data in various forms (Creswell, 2013). Which is why Kim (2016) advises researchers using narrative inquiry to be flexible and realistic. The combination of the sample size and the collected data, has to be sufficient in order to reach saturation, meaning that "depth as well as the breadth of the information has been achieved" (Kim, 2016, p.161). Following this advice, the given study focused on two stories of the participants that, I believe, sufficiently discuss aspects of the LAB studio learning model and cooperative learning. If saturation was not achieved, "it simply means that the phenomenon has not yet fully explore rather than findings are invalid" (O'Reilly & Parker, 2012, cited in Kim, 2016, p.162).

Some criticism may also be related to the fact that the data collected from the interviews may have not been interpreted accurately due to English being a foreign language for both the participants, as well as the researcher. However, as described in the Data analysis section participants had an active role in co-editing the stories during my data analysis. In addition, during our post-interview email conversations I have ensured the reliability of my research by verifying with participants that the stories pose truthful information and accurately reflect their perceptions, worldview, and opinions.

6.3 Conclusions

In April 2019, it was announced that the Oamk LABs programs would be downsized and eventually shut down (Autio, 2019). This, however, does not imply the end of the LAB learning model's development. As discussed in the Research context, many advantages of the model have been the reason for the establishment of the LABnet all over the world and, perhaps, will still be considered by other educational institutions in future. Thus, there is a need for continuous research involving this phenomenon.

Guided by the narrative inquiry methodology this study looked at students' perspectives on the LAB studio learning model. The findings are presented in a form of stories created in collaboration with two students enrolled in one cohort of the Oamk LABs program. Unlike other qualitative methodologies, narrative inquiry allows research participants to direct the research interest, rather than be guided by a predefined theory (Clandinin & Conelly 2002, p.40). This has also been true for the given study. The LAB studio learning model is a complex pedagogical system that is comprised of many features, including project-based learning, reflection-in-action, studio-space, learning by practice etc (Heikkinen, 2014). However, the narratives analysed in this study were mainly focused on the challenges of cooperative learning, including communication issues, expectations gap, as well as complications caused by the multidisciplinary and international environment.

The issue of communication within the groups was caused mainly by the poor interpersonal skills of some of the participants, either by little previous experience of working in groups or by the different cultural backgrounds of participants. Considering the diverse environment of the learning community in the program, varying levels of participants' interpersonal skills is natural. This suggests that additional training for social and communication skills could be provided in addition to the independent teamwork.

In addition, it has been shown that the guidance on the improvement of communication in teams have been provided by the LABs master during the team meetings. However, while Mark's team was able to resolve the communication issue and continue to the end of the studies on a positive tone, in Anna's case it has not been sufficient. Moreover, the LAB master's advice for Anna to allow other students to commit mistakes only aggravated the situation and gradually led to the increase of her anxiety. Therefore, when organizing the learning process in the LAB studies, team guidance on communication should be provided on the basis of equity rather than equality. Where instead of the same level of guidance, teams receive support according to their needs.

As shown in the findings, an expectations gap between participants could pose a big obstacle in the process of cooperation with others. In Anna's case, expectations from the project development shaped by her previous professional background, as well as her job-seeking status. While for the rest of the participants including Mark, the project was solemnly a required part of their studies. In addition, it was harder for Anna to find a common platform for cooperation due to the age difference, unlike for Mark, who fit within the age of most of the students in the program. While students of different cultural and professional backgrounds did create the multidisciplinary and international environment, the age frame of the program is unintentionally limited to 18-25 years old students. This implies, that if LAB programs are open to enrolling professionals for retraining or unemployed specialists, the staff should consider a stronger collaboration with local employment offices.

Lastly, despite the many advantages a multidisciplinary environment it has been shown to decrease participants productivity when they do not feel that their contribution is valuable for the group. In the case of LAB projects, many students felt comfortable filling the roles that are traditional for projects development (i.e. IT professional, business specialist, graphic designer). However, participants from disciplines that do not directly relate to project development, as it was in Anna's case, could receive insignificant tasks and lose their identity within the team. Thus, in order to maintain everyone's equal involvement in the studies, it is important for the LAB staff to provide stronger support to those participant's whose professional background do not directly relate to project development.

Taking into account the objectives of the chosen methodology and the small sample size of the participants, the findings of the research should not be generalized. However, the LAB studies are based on the diversity of the learning community. Thus, every case should be considered as

significant for the further development of the LAB studio learning model. These two cases disclose individual perceptions that could, perhaps, add to the existing knowledge on the matter and help avoid the negative consequences for some of the students.

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Appendix 1

Chronological structure of the LAB semester
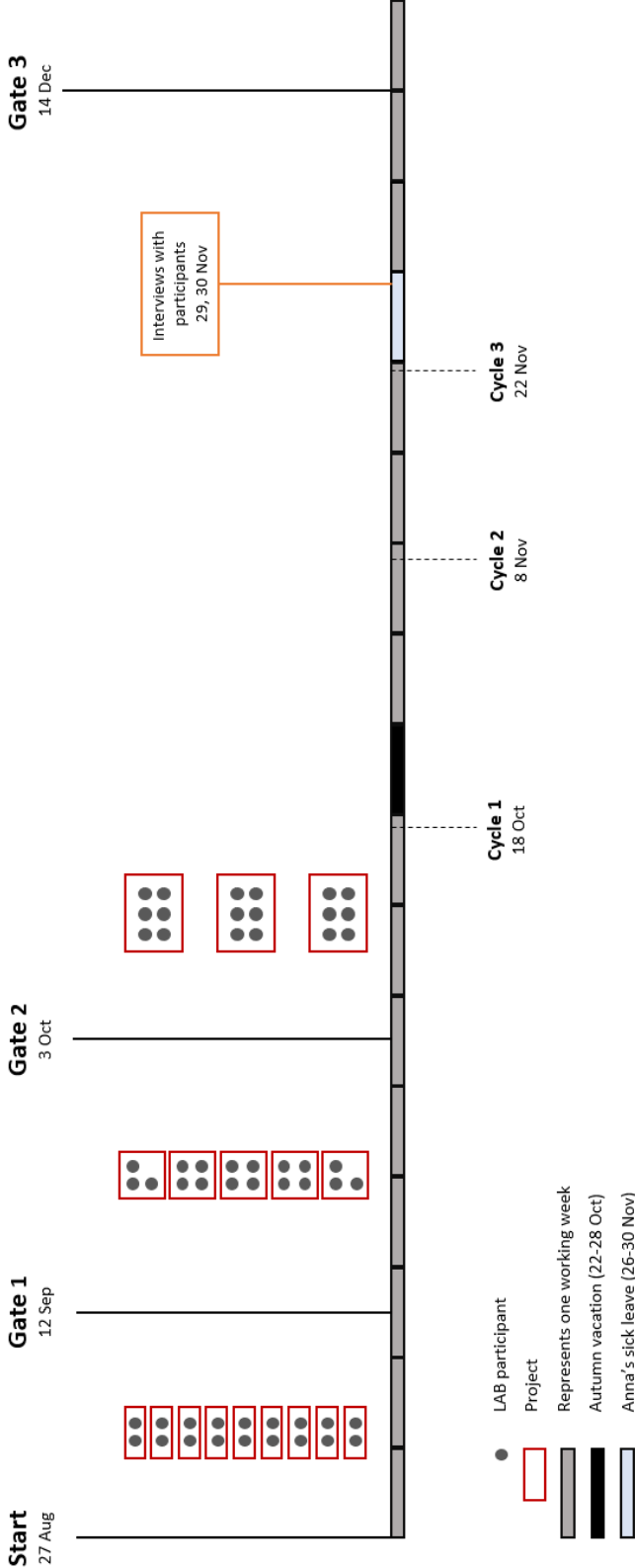
Appendix 2

LAB TEAM AGREEMENT

This LAB TEAM AGREEMENT (LTA) is by and between the individuals and entities whom are team members of the LAB team titled [Name of the Team] (later: Team) and Oulun Ammattikorkeakoulu Oy (later Oamk).

The objective of this Agreement is:
  A. To describe the distribution of ownership over the work of the team which is agreed and signed by the team members;
  B. To define the rules for transferring ownership when the amount of team members increases;
  C. To define the rules for transferring ownership if a member leaves the team; and
  D. To define the rules for transferring Intellectual Property Rights (IPR) from Oamk to the team members after Gate 3.
  E. To agree on the confidentiality.

1. The distribution of ownership of the team's work is as follows:

WHEREAS, the parties have agreed to promote the good conduct of the team and to avoid difficulties that might result from the passing of ownership to outsiders, it is desirable to make this Agreement concerning the conduct of the team and restrictions upon the transfer of ownership over shared work.

The ownership of the team's work is as follows:

Name	Membership %
	100 %

THEREFORE, in consideration of the agreement herein made to one another, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

2. The rules for transferring ownership if a new member enters the team

The team may add new members before Gate 2 or during the LAB at any time.

    A. After Gate 1, all new members must demonstrate through their work that they should be considered as new members in this agreement.
    B. The team must participate in a discussion facilitated by a LAB staff member during which time this LTA will be updated and signed before proceeding to the Gate 2.
    C. After Gate 2, all new members must demonstrate through their work that they should be considered as new members in this agreement.
    D. The Team must participate in a discussion facilitated by a LAB staff member where this LTA will be updated and signed at latest 6 weeks after Gate 2.

3. The rules for transferring ownership if a member leaves the team

Any member leaving the Team will immediately forfeit their ownership over the shared work and is not eligible to receive compensation of any kind. If a team member leaves the team, the team shall immediately update and sign a revised LTA.

4. Transferring Intellectual Property Rights from Oamk Oy to the team

Once the LAB program is finished, and if the Team wishes to continue their work as an independent Team or incorporated business according to Finnish Law, Oamk is willing to transfer the Intellectual Property Rights to the team members as follows:
    a) Oamk and the Team or incorporated business create a separate agreement for transferring IPR on the last day of the LAB;
    b) Oamk transfers the IPR without any rights for compensation whatsoever;
    c) The ownership of the IPR will be transferred based on the latest distribution of the ownership in the LTA if the receiving party is a Team; or
    d) The ownership of the IPR will be transferred to an incorporated business owned by the team members if they present a legal documentation.

5. Termination

This Agreement shall terminate and all rights and obligations hereunder shall cease upon the happening of any one of the following events:

    A. A new Agreement is completed and signed by the Team;
    B. The voluntary or involuntary dissolution of the Team by Oamk;
    C. By a written Agreement signed by all team members to terminate this Agreement.

6. CONFIDENTIALITY

The Parties agree on the confidentiality as follows:

In the case of receiving business or trade secrets from the company or organization, with whom the LAB Team is co-operating, all Parties agree neither to utilize nor to disclose any kind of confidential information to third parties.

IN WITNESS WHEREOF, the parties hereto have executed this LAB Team Agreement on the date set out below.

7. Signatures

This Agreement has been executed as ___ identical copies, with one (1) given to each Party.

[Name of the Team]

In Oulu, DD/MM/YYYY

_____ Team member

_____ Team member

_____ Team member

_____ Team member

_____ Team member

_____ Team member

_____ Team member

_____ Team member

Oulun Ammattikorkeakoulu Oy

_____ LAB Master

Appendix 3

Interview Phases

1. Description of my research and methodology:

"Life history researchers Good son and Gill (2011) advise that it is crucial for us to share our research intentions and our methodology with the participants, sharing the importance of the narrative inquiry methodology and our research purpose helps our participants understand and be aware of the value of their own voice and the importance of sharing their own experiences and stories" (Kim, 2016, p.167)

2.   Provide a pre-interview research consent form.

3.   Ask to draw schematically their journey in LAB

4.   Narrative phase:

Themes	Questions
LAB experience	Tell me how did you get into (end up in) LAB? Tell me about your journey in the LAB? How would you describe your LAB experience? What happened at the first gate and after it? What happened at the second gate and after it?
Previous educational experiences	How did experience in LAB is different from your previous educational experience? Did you have any similar learning experiences?
Most important learning experiences	What is the most memorable event that happened to you during LAB? How did you feel about it? Tell me about your 'ups' and 'downs' during the experience in LAB What did you learn? Were there any new things that you have learned? What knowledge did you deepen during this experience? What are the most important lessons you learned from this experience? How did you learn that?
Group work	Tell me about your journey of creating a team? When were the worst time and the best time for your team? What is your relationship like in the team? What strategies do you use for team building? What is your role in the team?
Motivation	When did you feel most and least motivated to work and study? Do you feel more confident now than at the beginning?

Future plans	And what about the future?
	What are your plans after the study?
	Have you been planning on your own project since participating in LAB

5. Clarifying questions

Can you give me an example?
What made you think that?
You said… what happened here?
You mentioned… How did that make you feel?
Could you explain why this happened?

Appendix 4

Line given to the participants during the interview in order to support their narrative

Appendix 5

CONSENT FORM FOR PARTICIPATION
IN A RESEARCH STUDY FOR MASTER'S THESES

Description of the research
This research is for my thesis in the master's degree in "Education and Globalization" program at the University of Oulu. The purpose of the research is to learn about individual learning experiences of students participating in the LAB learning model using narrative inquiry methodology.

Your participation
Your participation will involve an interview with the researcher about your experience of being enrolled in EduLAB at Oulu University of Applied Sciences. The narrative created as a result of the data analysis will include researcher's interpretation of the discussion and direct quotes from the interview. You may choose to actively participate in the story creation. The researcher will be in contact with you during the writing process to ensure that the story reflects your opinion.

Voluntary participation
Your participation in this research study is voluntary. You may choose not to participate and you may withdraw your consent to participate at any time. You will not be penalized in any way should you decide not to participate or to withdraw from this study.

Risks and discomforts
There are no known risks associated with this research. Your identity, personality, and opinions will be respected and confidential in the research.

Confidentiality
The information collected and recorded during the interview will remain confidential and no information that identifies you will be made publicly available. Your name will be replaced with a pseudonym, other possible identifiers will be changed as well.

Data storage and protection
Collected data will be stored and protected under the password by the researcher. It will only be shared with people related to the research process, such as first and second supervisors. Collected data will not be used for any other purposes apart from the possible further research.

Contact information
If you have any questions or concerns about this study or if any problems arise, please contact me via following email:
Viera Karam - vierakaram@gmail.com

Consent
I have read this consent form and have been given the opportunity to ask questions. I give my consent to participate in this study and use data collected during my interview in the research.

Participant's name:_____

Participant's email:_____

Participant's signature:_____   Date:_____

Researcher's name: Viera Karam

Researcher's signature:_____   Date:_____

A copy of this consent will be given to you and to the researcher.