Organizational learning has been an interesting topic for researchers and practitioners for several years. Traditionally the focus within the organizational learning perspective has been on intra-organizational aspects. With intra the focal organization is in focus. This research takes the perspective further by study organizational learning where the context is intra or done in collaboration. One learning project, krAft, comprising individuals in management positions, is studied.

To understand the processes of inter-organizational learning, several questions have been asked. These include: How is information generated, interpreted and understood? How do participants agree on issues should be discussed or abandoned? And finally, what type of learning happens when the context is inter-organizational?

Learning is always a complex activity. If learning is going to take place it is necessary that the participants involved in the project are given the time and space to create trust among themselves. Only when trust is in place will there be possibilities to enter into fruitful discussions. Another issue of paramount important is the connection between theoretical discussion and the participants’ own problems.

This thesis attempts to understand learning in an inter-organizational learning project, focusing on enablers and obstacles of learning.

Helgi-Valur Fridriksson is a lecturer and researcher at Jönköping International Business School, mainly within the field of organization theory and management. His research interests lie primarily within supply chain management.
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HELGI-VALUR FRIDRIKSSON

Learning processes in an inter-organizational context

A study of krAft project
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Steinunn og Brimrún Tizeta loksins er þetta búið og þáð er ekki minnst ykkur að þakka. Ég veit ekki hvort lífið verður léttara hér eftir en ég skal gera mitt besta til að gera þáð minna erfitt með því að taka betri og meiri þátt í lífinu.

Ungur var eg fordum
för eg einn saman,
þá varð eg villur vega;
auðigur þáttunk,
er eg annan fann,
madur er mans gaman.

Hávamál
Abstract

The purpose of this thesis is to understand learning in an inter-organizational learning project, focusing on the enablers and obstacles of learning.

The study shows that traditionally research on organizational learning has focused on intra-organizational learning, paying attention to learning within focal organizations. Organizational learning today is more often done in inter-organizational contexts. Companies of today are increasing their collaboration activities by taking part in inter-organizational projects or temporary organizations. This study has highlighted the need for a better understanding of inter-organizational learning in those contexts. The thesis’s ambition is to develop further the concept of organizational learning where the context is inter-organizational. Theoretical focus is on behavioral and cognitive processes as collective development.

Through an intensive study of one learning project, krAft, the focus is on how information is generated, interpreted, and understood by the participants within the learning project, the agreement process, and what type of learning happens in an inter-organizational learning project? The Empirical parts are based on forty qualitative interviews and over 100 hours observation.

The results show that if organizational learning is going to happen there is a need to meet several times to be able to challenge old mental models and handle new and unknown information. The results also indicate that issues discussed in seminars need to be connected to participants’ own problems if learning is going to take place. This study indicates that if inter-organizational learning is going to take place trust among participants is vital.

Theoretically, this study has developed a framework to understand and analyze inter-organizational learning. The results strengthen the link between the necessities of connecting theoretical issues to practical understanding. They illustrated that that organizational learning in the context of a learning project or a temporary organization principally leads to mental changes rather than behavioral ones within the group.
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I. Introduction

This chapter discusses the research problem and states the purpose of the study. It starts with the theoretical perspective of the study then moves on to its empirical context. Thereafter it dwells on the purpose of the study and its research questions. The chapter ends with the disposition of the thesis.

A review of the literature of organizational learning shows that little research has been done on understanding processes when learning in inter-organizational context. Most often research on organizational learning has had its focus on the focal organizations; hence the need to deepen the theoretical and empirical discussion of organizational learning within an inter-organizational perspective.

Collaboration is widely used in today’s organizations and when organizations start to work with others, new types of practices are needed instead of those carried out previously (Wikström & Normann 1992; Powell, Koput and Smith-Doer 1996). Cyert and March (1992/1963) and March and Simon (1958) point out that focal companies could be understood as a coalition of different partners, collaborating and balancing each other. This view is similar to earlier organizational sociologists, who saw the firm as a system of cooperation, and socialization (Barnard 1968/1938). Those early organizational sociologists had their focus on the focal company and not on the inter-relations between firms (Stacey 2001). Today’s companies are constantly collaborating with other companies. One of the reasons why collaboration is so popular (or needed) is that no company possesses all the knowledge or know-how needed in today’s business environment. By collaborating a firm intends to acquire the knowledge and/or know-how necessary for successful business performance (Child 2001; Inkpen 1998; Khanna, Guliati and Nohira 1998; Powell et. al. 1996; Kogut & Zander 1992; Kogut 1988). Because collaboration is carried out as an inter-organizational activity, learning becomes a vital factor in determining a firm’s competitive edge.

I.1 The theoretical perspective of the study

This section clarifies the theoretical context of the study. The study’s title is: Learning processes in an inter-organizational context – A study of krAft project. The first part of the title says something about the interaction and the social dimension of inter-organizational learning. The second part of the title says

1 In chapter 4.2 the concept of krAft is discussed.
something about the empirical context, in which the social interaction takes place.

This dissertation’s theoretical focus is within the field of organizational learning. The empirical focus is on one a learning project, called krAft.

Studying individuals engaged in social relationships in inter-organizational projects raises the question of how to get to grips with the processes that involve learning in an inter-organizational context.

The study focuses on one krAft project, and how knowledge, communication, interpretation, etc, take place, develop and evolve during the life time of the project. The krAft project brought together participants from similar companies with the aim of helping them improve the performance of their businesses. They were selected to join the project because they were thought to be eager to further business opportunities in the future. On their part, the students believed they would learn something by taking part in the project.

The dissertation focuses on three research questions connected to five themes seen as important to a setting in which inter-organizational learning occurs. Some might question having the five themes lumped together. But it is worth noting here that this work is abductive in nature, in which theory and observation are shaped in an iterative process (Alvesson & Sköldberg 2000; Helenius 1990). The categorization of the five themes will be discussed in section 2.3.1.

The perspective taken in this study is that organizational learning can lead to concrete changes (behavioral) as well as mental changes (cognitive) with individuals and groups. According to Fiol & Lyles (1985) changes in behavior do not have to occur with any cognitive association progress. Similarly, understanding (cognitive learning) does not have to lead to behavioral changes. As Dixon (1998) Marton, Hounsell & Entwistle (2000) and Ramsden (1992) point out organizational learning can only happen in relation to other people, i.e. it is a collective achievement. How people learn has a strong connection to how they make sense out of new information (cf. Weick 1995). Information is only information until it has been interpreted, and this interpretation is done based on peoples own understanding and values.

1.1.1 Organizational learning as a behavioral and cognitive process

Learning is a complex phenomenon whether one adopts an individual or an organizational approach (Polito & Watson 2002; Bertholin Antal, Dierkes, Child and Nonaka 2001; Maier, Prange, and Rosentiel 2001; Gherhard & Nicolini 2001; Marton, Hounsell, and Entwistle 2000; Ramsden 1999; Easterby-Smith and Araujo 1997; Walsh & Huff 1997; Dodgson 1993).

2 See chapter two and three
Organizational learning literature reveals that scholars from various disciplines ranging from psychology, organizational theory, innovation management, strategic management, economics, organizational behavior, sociology, to political science have devised different learning models without any one of them being widely accepted across the discipline (Fiol & Lyles 1985; Dierkes et al. 2001).

Because scholars of organizational learning and knowledge have come from different backgrounds and have borrowed ideas from many areas of scientific inquiry, this field has been shaped by a wide range of thinking.

(Dierkes et. al. 2001:11)

Organizational learning is a growing academic field with researchers endeavoring to understand better. The impetus for researchers’ interest in organizational learning is the growing understanding and willingness from organizations to collaborate; i.e. work in strategic alliances, networks, or in projects (Fenton & Pettegrew 2000; Lundberg & Tell 1998; Christopher 1998; Womack, Daniel, and Roos 1990). Companies need to focus on what they know best (core competences) and let other companies do what they know best (outsource or collaborate) (Axelsson 1996; Hamel & Prahalad 1994).

There are only a few studies on learning in the context of collaboration between companies and most of them originate in the writings of scholars with an interest in collaboration and innovation (Powell, et al. 1996), such as shared conceptions (Müllern and Östergren 1995), marketing research literature (c.f. Baderschneider 2002; Simonin 1999), and global context literature (Macharzina, Oesterle & Brodel 2001; Child 2001; Lyles 2001; Lane 2001; Tsui-Auch 2001; Hedberg & Holmqvist; 2001).

Crossan and Cuattoes (1996) show a growing interest in organizational learning with the field attracting both scholars and practitioners. They mention that the number of studies on organizational learning in 1993 alone equalized the total number of studies written in the whole the 1980s. Ekman (2004) points to a profusion of academic contributions in the decades from 1970s to 2003.

The first question worth asking when discussing organizational learning is; what is learning? One thing is that the literature discussing organizational learning has traditionally differentiated between the behavioral approach and the cognitive approach (Backlund, Hanson and Thunborg 2001; Müllern & Östergren 1995). The behavioral literature focuses on how learning can increase an organization’s performance while cognitive theories focus on learning processes.

From the behavioral perspective it is indicated that what forms people’s behavior is their expectation about the consequences that specific behavior will have (Skinner 1973). If a person does something and the outcome is positive, then it is more likely that the behavior will be repeated. The problem is that
behavioral studies have focused on learning by individuals or by the population of organizations. They do not say much about learning by individual organizations (Starbuck and Hedberg, 2001). The behavioral approach is based on stimulus and response theory and is more focused on objective learning; Objective learning can also be characterized as surface learning (Nulden 1999; Leidner & Jarvanpaa 1995; Ramsden 1992, Senge 1990).

The cognitive learning theory does not have its main focus on behavioral outcomes. Learning according to this perspective is supposed to be a complex process of understanding and seeing patterns (Cole 1995; Sadler 1994; Senge 1990). As Senge (1990) points out it is not a process were something is copied and used but a process where information needs to be created. Cognitive learning happens because of a mental process. Huber (1991) explains that cognitive learning is more focused and implicit and organizations may not observe it happening in an overt or explicit manner, i.e. cognitive changes do not have to lead to behavioral changes. Researchers leaning on the cognitive approach want to understand changes in people’s cognitive maps and how these changes are aggregated and translated into the cognitive schema of the organization (Brown & Duguid 1991; Kim 1993; Nonaka 1993).

Organizational learning can initially be defined as a process where individuals experience new ways of doing or understanding things (cf. Argyris & Schön 1978; 1996), using language and dialog to change or modify their understanding (cf. Isacs 1999; Lave and Wenger 1991). If organizational learning is going to take place, knowledge needs to be shared and integrated within the group(s) (Toivianien 2003; Dixon 1998; Prange 1999; Kolb 1984). Mutual understanding is not to be confused with consensus. It could be defined as a change in the understanding of how others view the problem, i.e. understanding other’s point of view, i.e. “I see your point but I do not share your understanding”. The main premise of this thesis is that learning can occur as a consequence of reinforcement (behavioral). Learning can also happen without a change in behavior i.e. that is as a change of knowledge or mental map (cognitive).

There remains the problem of how to measure learning (Dixon 1998). One can never be sure if positive outcomes in companies or change of individual’s knowledge are due to the learning activity or something beyond it. The other problem is related to the meaning given to learning. Learning does not have to mean that things will be done better than if learning did not take place at all. But it means that things will be done or understood differently than before (Larsson & Lövstedt 2002; Child 2001).
1.1.2 Organizational learning as a collective development

It can be surmised from the previous discussion that organizational learning is a collective development where individuals in an organization experience new ways of doing or understanding things, where individuals use the language and dialogue to change or modify what they know, i.e. changing the cognitive map. Organizational learning is a process where knowledge is shared and integrated within groups because of mutual understanding. In the end groups may form new rules or routines that will be internationalized within organizations, (Crossan, Lane, & White 1999). Of course it should be understood that it is people who learn; organizations do learn but only in a metaphorical sense.

Organizational learning focuses on collective processes with an impact on organizations. Organizational learning it is not something that can be stopped at one given time, and no one can be sure when the process actually starts. By interacting with other people and/or the environment, something is to be learned all the time. It is individuals that learn and individuals can use the new understanding within their own domain, i.e. individually or within their organization. Organizational learning has come about only when organizations adopt the new knowledge. Learning takes place when organizations adopt new ways or methods of thinking and/or working.

It is not possible from a practical point of view to continuously change since that will make it extremely hard for companies to do anything. Stability is maintained by employing a short-term perspective. With a long-term perspective, organizational learning is the target of constant changes. People and organizations are in a constantly learning environment and, according to Herbert Simon’s (1976/1945) view, an organization can learn in two ways:

(a) by the learning of its members, or (b) by ingesting new members who have knowledge the organization didn’t previously have.

(Simon 1976/1945:125)

This perspective underscores that individuals in organizations are in need of creating a learning environment, and at the same time pinpoints external as well as internal sources for information gathering by referring to new members not stricken with the myopia inflicting in-group members. Senge (1990) says the continuity of learning can be described as:

“organizations where people continually expand their capacity to create the result they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together”

(Senge 1990:3)

Organizational learning occurs when organizational members interact actively with each other and with the environment and try to understand it within their
own mental maps (Granberg 1998; Dixon 1998). When there is a discrepancy in one’s understanding of others, there are two possible solutions; ignoring the new information that is not understood or trying to make sense out of it. Accordingly, learning is a continuous process of understanding and using existence and new knowledge in the daily work. Experience is important for knowledge to occur (Kolb 1984).

Learning is a continuous activity encompassing the whole organization. Individuals will approach every situation with their own knowledge or pre-understanding. It is not that hard to change one’s individual knowledge for example by training, but the other hand attitudes are harder to change. To change attitudes requires some change in an individual’s cognitive structure or feelings. To change one’s behavior is even harder, especially, if this requires new ways of thinking that are in total contrast to previous beliefs. The step from just changing one individual to changing a whole group is hard and can imply a change in organizational culture, traditions, norms, ideology, etc. (Hanson, 1988).

Factors which have to do with the ability of organizations to constantly learn new things are vital if organizations are going to survive in the future (Senge 1990). It is important to organize activities to gain or create new understanding. Organizations need to improve their skill(s) in order to improve everyday business and concepts or invent new things, (see for example Morgan 1986).

This could mean that individuals who work in projects or collaborate with others will have more comprehensive knowledge or skill than those who do not. When people of different levels whether from the same or two different organizations are together involved in some activity, they will continually brood over their own as well as others’ experiences and this will or at least should lead to better solutions (c.f. Wikström and Normann 1992; Sandberg & Targama 1998).

1.1.3 Learning as a socially constructed cognitive processes

Learning depends on an individual’s values and is an element of knowledge that an individual has about himself or the surrounding environment (Tolman, 1948). From the cognitive perspective (cf. Brooks 2003; Nulden 1999; Illeris 1999; Marshall 1998) the focus is on individual development. People construct and deconstruct constantly their thoughts and actions, but they also organize their memory to import, adapt, and store information. Cognitive structure or cognitive maps can lead to difficulty in changing attitudes and operating in ways that are not conventional (Backlund et al. 2001).

One way of connecting the cognitive perspective to the construction of a new way of doing or seeing things is to use Huber’s (1991) four constructions as a way to increase organizational learning: knowledge acquisition, information distribution, information interpretation, and organizational memory. What is
1. Introduction

important is that in an organizational context there is a need to go beyond the individual and look at the group process of getting or forming a shared cognition (Cannon-Bowers & Salas 2001). In an organizational setting there is a need to share common views both as a creation of knowledge and as an outcome of knowledge.

To understand how shared cognition is formed one has to bear in mind that it deals with organizational and environmental issues. It has to do with making sense of what is happening around us, i.e. internal as well as external issues (Illeris 1999). Learning, according to Weick’s (1995), definition of sensemaking, requires us to seek explanations and answer questions about how people see or react to different issues. Just by looking at organizational structures and organizational systems does not explain people’s mind. Accordingly, the source of sensemaking is people’s way of thinking about organizational strategies, change, dealing with plans or tasks, etc, connected to a complex set of understandings.

Learning is not something that just happens because data is collected or given by someone. Learning is created; its very existence is a construction, mostly because learning does not happen in vacuum. Knowledge is received and interpreted by people based on their own understanding (Berger & Luckmann 1979). We can never understand other people’s reality because we do not have full knowledge of other people’s understanding and we will use our own framework and understanding to describe what we see (Czarniawska 2004; Riessman 1993).

Organizational learning as a social construction has to do with agreement processes. When participating in an inter-organizational context it should be obvious that the members of the organization need to reach some kind of an agreement or a common understanding if they are going to be able to strive towards a common goal, or just to be able to carry out any work at all. It is not a question of individual learning but a question of collaborative learning, thus learning is socially constructed (Elias & Merriam 1995; Bruffee 1993; Berger & Luckman 1979). By using language, symbols and artifacts new understanding will be constructed and reconstructed.

1.2 Inter-organizational learning project

The krAft project on which this study is focused aims at foundry members and concentrates on non-routine processes to develop the participants’ performance. The idea is that developing the individuals’ performance will eventually lead to the development of the companies which these individuals come from.

Performance evaluation criteria are important to any project work. In this particular project the criteria were for the participants to develop and attain a better understanding of problems and possibilities, i.e. the focus was on
changing individual mental models, though it was hard to evaluate if this was actually accomplished.

The project was complex in many ways. Many different actors were involved. They included two project leaders from the academia, two project consultants, participants from 12 foundries, and members from the Swedish Foundry Association. It needed to be organized in some way to thwart the risk of the project going asunder.

People often say that because the world is becoming more complex, new ways of organizing are important (Müllern & Elofsson 2006; Lundin & Steinthórsson 2003; Macheridis 2001; Packendorff 1995). Today’s organizations need to have their problems tackle and complex issues they face tackled quickly and professionally. But projects and traditional organizations behave differently when confronted with problems. The latter normally lack the kind of dynamics the former enjoy.

This krAft project is the empirical context of this study. But it seems somewhat wrong to describe it as a project according to the traditional definition of the term. According to the project management literature, projects are often highly independent and goal-oriented with regard to time, money and outcomes. Moreover, projects consist of individuals with members having different specialties (Lindkvist 2005). The krAft project is not a traditional project in that sense. It consists of individuals all having management positions in their companies. Their knowledge improves but not substantially. Another difference is that the project’s goals were not openly made clear at the start but they were to be developed in the course of its implementation. The project has been perceived as ongoing, temporary experiment to be developed in the course of time. Packendorff (1993) says that all organizations, at least from a philosophical point of view, always are temporary. Organizations are formed, they develop, stabilize, and then they disappear.

By focusing on the temporary aspect of organizations, we are forced to consider them as "becoming" rather than as merely "being". They cannot be regarded as stable and predictable systems or as self-controlled organism that always achieve a balance in their activities. There is a chaotic element in organizational activities, which can indeed be seen as multi-contextual and heavily dependent on the will and wishes of the stakeholders in question.

(Lundin & Steinthórsson 2003:247)

But there is one main difference between the temporary organization and the permanent organization. The temporary organization has a timeframe which the permanent organization does not at the least. To better understand the temporary organization as a phenomenon Packendorff’s (1995) discussion is blended with the social framework advanced by the Community of Practice (CoP) literature (cf. Lave and Wenger 1991; Wenger 1998). The krAft project
I. Introduction

does have inter-organizational learning as a theoretical framework and by connecting CoP to the discussion of the project implies that learning incorporates both a cognitive and socially situated dimensions. Temporary organizations are understood as a consequence of meeting in the constellation of inter-organizational context. Packendorff (1995) says that temporary organizations can be defined in a similar way to show projects are defined.

A temporary organization

- **is an organized (collective) course of action aimed at evoking a non-routine process and/or completing a non-routine product;**

- **has a predetermined point in time or time-related conditional state when the organization and/or its mission is collectively expected to cease to exist;**

- **has some kind of performance evaluation criteria;**

- **is so complex in terms of roles and number of roles that it requires conscious organizing efforts (i.e. not spontaneous self-organizing).**

(Packendorff 1995:327)

1.3 The purpose and research questions

The first chapter has touched upon some core arguments. To recapitulate, despite the existence of a number of studies in the field of organizational learning, focus on inter-organizational learning has not been sufficiently explored. Most studies within the field have focused on the focal company. In the focal company organizational learning is always influenced by the fact that there are formal structures in place. As companies are increasing their inter-organizational activities in temporary organizations, there is a need to explore and understand how learning happens within that context. This will be shedding light on thee enablers that make learning possible and the obstacles that hinder learning when the context is inter-organizational. It should be understood that learning methods in temporary organizations can be different from those of focal companies, i.e. there is a difference between intra-organizational learning and inter-organizational learning. Based on this discussion:

*The purpose of the study is on understanding learning in an inter-organizational learning project, focusing on the enablers and obstacles of learning.*
Achieving this purpose, it is hoped that the research will contribute to the literature of organizational learning.

Since organizational learning involves both behavioral and cognitive processes when discussing changes with individuals, it is important to understand aspects of how information is handled. It is clear that inter-organizational relationships are on the surge in today’s organizations. Collaboration of different parties has become more of a standard in business life than daily work alone. This highlights the need of understanding learning processes that lead to inter-organizational learning. In inter-organizational collaboration, learning methods used in focal organizations can be different because the learning activity is (or should be) more focused than in inter-organizational contexts. This complexity in inter-organizational learning situation – how information can lead to joint understanding (cognitive change) or action (behavioral change) – has formed the first research question

How is information generated, interpreted, and understood by the participants within one inter-organizational learning project?

Inter-organizational learning differs from individual learning since it has solely to do with collective change. Inter-organizational learning can never happen without discussions and dialogues. Only by interacting with others some kind of understanding of what others are saying will occur. The problem is that understanding will only come about in the light of people’s own frame of reference. A person has to make sense of information given before being able of express themselves if they agree or not. In inter-organizational learning, project participants will get a lot of information which they will sort out based on importance of their own understanding. Only when there is some kind of consensus, people can decide (agree) if the issues are important to focus on, continue discussing or having them dropped from their agenda. To understand how people agree on something and how that process looks like is the base that formed the second research question.

What does the agreement process look like in the inter-organizational learning project?

Even if it is hard to be sure if changes in inter-organizational project are due to some specific type of learning activity, it is important to understand the type of changes that happen during the life time of the inter-organizational project. Changes can be two-fold; behavioral and mental. Conclusions on the influence different learning activities have on changes within the inter-organizational learning project can be drawn only when an understanding of these changes takes place. This need has been in mind when formulating the last research question.
I. Introduction

What type of learning happens in an inter-organizational learning project?

1.3.1 Methodological and practical relevance

On a methodological level I have been interested in the different theoretical and empirical aspects to clarify the complexity of the reality practitioners face when involved in a temporary organization. This study pursues an abductive approach that guides the theoretical and empirical discussions of the subsequent chapters. Abduction is neither a pure empirical generalization like induction nor theoretical testing like deduction (Collins, 1985). This thesis’ methodological approach vacillates back and forth between theory and empirical discussion and the analysis of results (Alvesson and Sköldberg, 2000). On a practical level this study should help practitioners to better understand learning in an inter-organizational context. It should also help practitioners as well as professional teachers to understand some of the obstacles and enablers of learning in collaboration.

The research strategy has been focused on understanding processes that are connected to learning in temporary organization.

1.4 Dissertation outline

The thesis is composed of four major parts divided into seven chapters. It in fact follows the standard common in the writing of doctoral dissertations tackling the same field. Every chapter starts with an overview, describing its contents and structure. Figures and tables are there to help the reader to get a better understanding.

<table>
<thead>
<tr>
<th>Part I</th>
<th>Chapter 1:</th>
<th>Introduction, scientific positioning, ending with purpose and research questions.</th>
</tr>
</thead>
<tbody>
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<td>Part II</td>
<td>Chapter 2:</td>
<td>Research method</td>
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<td>Chapter 3:</td>
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<td>Part III</td>
<td>Chapter 4 – 6:</td>
<td>Case descriptions and case analysis</td>
</tr>
<tr>
<td>Part IV</td>
<td>Chapter 7:</td>
<td>Answering the aim and research questions Conclusions and implications</td>
</tr>
</tbody>
</table>

Figure 1: Disposition of chapters
2. Methodological approach

To be able to meet the purpose set for of this study the author has conducted an empirical and a theoretical investigation. The present chapter discusses the methodological choices that have been made to achieve this purpose.

The dissertation, as is the case with most research done in academia, starts with a research problem that hopefully can have both theoretical and practical implications. The research questions raised in this study are bound to be of interest to academia because more knowledge is needed to understand learning processes within the field of inter-organizational learning. It is also bound to be of interest to practitioners since they are currently very much involved in work within projects, networks or temporary organizations. There is a need to better understand learning in inter-organizational settings to be able to make learning more effective or at least less ineffective.

Whatever one is going to do whether working with a task, solving a research problem or just solving a personal problem, the question is how this can be done effectively and in a trustworthy manner. As a researcher I wonder whether we are in a position to know how to study a problem or whether we are in a position to grasp the problem. There is not one single research to solve the problem. But at the outset, one needs to decide if the problem could be solved by using qualitative or quantitative approach (Arbnor & Bjerke 1997). This study leans heavily towards an interpretive approach, striving to understand learning in a temporary organization via a longitudinal method.

Miles and Hubermans (1994) discuss several characteristics that differentiate qualitative and quantitative studies. Qualitative research is used when there is a need to explore and understand people’s beliefs, experiences, attitudes, behavior and interactions. It focuses on descriptions instead of numerical data, i.e. qualitative research studies things in their natural settings. It is important to make sense of phenomena in terms of the meanings people bring to them. Quantitative research is based on numerical data and wants to describe and even explain a connection or prove a hypothesis. Most often it is a question of being able to generalize a sample to a population.

I have no intention to create a new theory of organizational learning or learning in general, i.e. to brake away from any accepted paradigm and start a new one (cf. Kuhn, 1992); instead this study should be seen as a contribution to the field of organizational learning. The ambition is to generate new knowledge within a field which has been little studied. My main design is based on participant observation and interviews.

This study is based on an abductive method that relies on reasoning supported by empirical and theoretical investigation (Alvesson & Sköldberg, 2000; Lincoln & Cuba 1985 Enerothen 1984). With abduction as a main
approach one can form a conception or idea of the phenomenon from observation, theoretical and empirical work as well as the researcher’s own knowledge (Johansson Lindfors 1989). Abductive method has little bearing on inductive or deductive reasoning (Arbnor & Bjerke 1997). According to Arbnor and Bjerke, abduction occurs when researcher vacillates back and forth between theory and empirical data in order to draw some conclusions.

At the outset I lacked a clear vision of the type of theoretical model to pursue apart from some basic understanding about organizational learning as a discipline. But once I began my empirical investigations in earnest the theoretical framework began evolving. My observations and interviews furnished several interesting empirical tools which I have used a guide for the theoretical module of learning as a phenomenon. Theory and practice as exercised in my empirical investigation have been used interchangeably for a proper understanding of the learning process. In other words the method adopted in pursuing the targets of this research can better be described as theorizing (cf. Achtenhagen, Melin, Müllern, Ericsson 2002a; Achtenhagen, Melin, Müllern 2002b, about the discussion of strategy and strategizing, and Bengtsson, Müllern, Söderholm, Wåhlin 2007, about organization and organizing). By theorizing I emphasize an ongoing improvement of theory. Thus, the theoretical framework is merely based on interviews or observations that were done. It is influenced by and constructed in meetings with participants in the temporary organization, and the selection of the framework in its turn has had its impact on the way the empirical data have been gathered.

Davis (1997) argues that the research methodology should respond to the research problem and theory base and that the chosen method should guide knowledge creation. Some scholars argue that combining qualitative and quantitative methods could be useful to get a better understanding about a problem (Bryman & Cramer 2001; Davies, Chun, Vinas da Silva and Robert 2001; Repstad 1993; Helenius 1990). I did not see this as a fruitful way of doing this research, because of its explorative nature and focus on understanding learning in temporary organization. Whatever method is chosen it will have an influence on how the study is to be done and what answers are to come out of the research. Scientists use method as a means to solve a problem and/or produce new knowledge about a phenomenon (Ödman 1991). The means or tools that will be chosen must be relevant to the problem the scientist is trying to solve. It is an impossible assignment to give some predetermined model of how an empirical problem should be solved or approached in the best manners; it is the research question and the context that will act as a guiding star to the researcher. When one method has been chosen it usually implies that other methods are discarded. That is not true as the same problem or phenomenon can be approached using different methods. Therefore, it is important that scientists are aware of this delimitation, when conclusions are drawn from the research (Hellevik 1987). In this dissertation, a longitudinal study has been selected because there was a need to have a case that could
provide rich and deep information about learning in a learning project. Of course it is always the scientist that makes a subjective choice regarding the theoretical framework and how the empirical material is approached, and it is the scientist together with those who are studied that construct the reality that is described (Weick 1995; Berger & Luckmann 1979).

I will end this section by a terse discussion of the three questions how, why, what and where which Yin (1984) raises with regard to formulas that rely on ongoing theorizing. The first question, how, has been found interesting because it has enabled an understanding of ways possible to study organizational learning processes and the accompanying methodological problem. The second question, why, dwells on whether it was really necessary to conduct a study like this. As pointed out in chapter one there is a knowledge gap in understanding organizational learning process... Answering the last question, what, has helped in understanding the phenomenon through the need of access to a group of people coming from different organizations interested in studying learning in a temporary organizational context.

This chapter will first discuss methodological considerations and direction. Then it discusses the design of the study followed by the collection of the empirical material. It concludes with a discussion of the analysis of the empirical material, deliberating about the five themes (categories) arrived at through abductive work. Finally, the chapter discusses the trustworthiness of the study.

2.1 Methodological considerations and direction

This study is based on organizational learning theory and its empirical base is an inter-organizational one. It is inter-organizational in two senses. Firstly, because it constitutes of four different parties; representatives from the Swedish foundry association, project leaders coming from the university, consultants, and the participating companies. Secondly, it can be seen as inter-organizational because it is a temporary organization (project) with a definitive timeframe, comprising representatives from the participating companies building up some kind of an organization of its own. Its temporariness is evidenced by the urge not to force anyone of the participants to adopt a specific method. The krAft project management group’s intention, as made clear earlier, is to bring about consciousness among the participants.

By inter the unit of analysis is a project called krAft that has been studied for almost two years. But as can be understood, the word inter is somewhat problematic. It is not one organization that has been in focus but many all...

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1 See chapter 4.3, "Description of the PPD project"
connected in a learning project. Participants from those organizations have been attending seminars and forums, (see chapter four) and in the course time this inter-organizational project developed into an apparently temporary organization. In reality the temporary organizations did not constitute one single unit that can be separated from its context. All participants involved in this study are members of different organizational systems. Their companies, as well as knowledge systems are different as well as their cultural contexts. This is not only observed by the reality of the project itself but is also discernible through the inter connection between the project and its members’ own subjective reality, i.e. their own domain or organizations. The actors get involved in learning when participating in seminars and in forums, but they form their attitudes on the basis of what actually happens and the seminars and forums help them to integrate that into their own context. It is important to comprehend why a certain thing is more or less important to their grasp of learning. This means that the context of the temporary organization and the participating companies are intimately related. . The temporary organization is not a closed system; it is an open system, obtaining different kinds of recourses in the form of data and information from actors involved in the temporary organization, and from external actors or influences. Because of this open system approach, it has been hard to make a clear definition of natural boundaries. Still members from different organizations can see issues differently and interpret those issues differently together and in connection to their own context. Broadly speaking the focus of this study is inter-organizational but in some sense awareness is made of the fact that the project could actually be studied as intra-organizational as well as temporary.

2.1.1 Introduction – The case

I had developed an interest in the perspective of inter-organizational learning but to study it in detail I first had to have access to a suitable case that could further my interest and lead me to some tangible results. As I began reading the literature, I wondered whether a krAft project would be appropriate to meet my interest. Examining the philosophy of the krAft project, in general, and this project, in particular, I found that it could provide me with the necessary tools to investigate this very interesting phenomenon of inter-organizational learning.

This particular krAft project started with 11 foundry companies, one of the companies comprised four different units, i.e. 14 in total. 14 companies attended the first seminar. Table 2.1., shows how and when the company actually attended the five seminars.
2. Methodological approach

Table 2.1: Companies in the KrAft project

<table>
<thead>
<tr>
<th>Company</th>
<th>Seminar 1</th>
<th>Seminar 2</th>
<th>Seminar 3</th>
<th>Seminar 4</th>
<th>Seminar 5</th>
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<tr>
<td>Alpha - Mother organization</td>
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<tr>
<td>Alpha - Production company A</td>
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<td>Alpha - Production company B</td>
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<td>Alpha - Production company C</td>
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<tr>
<td>Beta</td>
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<td>Gamma</td>
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<tr>
<td>Jota</td>
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<td>My</td>
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<tr>
<td>Delta</td>
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<td>Epsilon</td>
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<td>Eta</td>
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<td>Lambda</td>
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The participating companies had between 25 and 100 employees each; one of them initially participated in two seminars and then dropped out because of some personal reasons. Only five companies attended all the seminars. One of the companies only took part in the first seminar, and one only attended two times. Accordingly, eight companies were a part of the project, even if not all of them showed up regularly. The Participants in the KrAft project were people working in management positions within each company, (see exhaustive discussion in chapter four).

When choosing a case it should fit the problem that the research is dealing with (Repstad 1993). Accordingly, the case chosen was regarded as inter-organizational with the project slated to continue for a long time – minimum one year - so that it can suitable when examined from a longitudinal perspective. The project was not regarded as extreme in any way. It was seen as something of a traditional learning situation and because of that it was seen as a good case to better understand inter-organizational learning in the context of temporary organization.

It was important for the study that the project should include peers. Even if the participants were from different organizations, they needed to be able to feel some degree of communality towards each other. It was believed to be risky, on the part of organizers, if one or several participants would possess some kind of an advantage over the others. In this project this did not seem to be the case. As a result it was expected that the discussions would not be hindered by the fact that the participants were from different levels of the organization, i.e. workers and managers (cf. Dixon 1998).

All participants, companies and members of the KrAft management group have pseudonym names. This should not dent the integrity of the research since
it is not the names that are of interest, or the companies or participants. Of course this will limit the transparency of reading, but it is my hope that this will not make this dissertation less important or less trustworthy in the readers’ eyes.

2.1.2 Research design

This study is based on empirical material gathered during almost two years. It is a learning project which started in September 2003 and ended in June 2005. The first seminar started in March 2004. The empirical sampling was mainly conducted in the form of observations and interviews. To be able to understand the process I attended all seminars and two out of four forums. I also observed some field visits done by the project tutors, (see detail description in chapter four).

Studying a phenomenon for such a long period, it was necessary and positive to be able to focus on different kinds of pattern that developed during the project. I did see this learning project as a possibility to better understand the learning processes within a temporary organization. Individual learning was not the focus but rather the inter-organizational learning process that developed during the time of the project.

Another positive factor was that this project was a constellation of different companies and actors that all had their own frame of references that would contribute to new insights or joint understanding. All of those involved in the temporary organization, i.e. the companies’ representatives, held management positions in their companies and that was seen as a possibility to discuss issues in ways that would certainly differ if the representatives had been blue collar workers or mixed of both. The krAft management group, i.e. the teachers from the university, the two consultants and the representative from the Swedish foundry association formed an integral team albeit ostensibly different.

According to Merriam (1994), a case study should be used when scientists want to get a deeper understanding of one specific situation, when it is important to understand how the study object interprets a situation in a given context and the focus is on process more than result. This study’s main research method hinges mainly on the unit of analysis, which is temporary organization, as well as interviews and observations. Case studies are often used when little is known about the research area and the phenomenon is complex in its nature. This is the case here; there was a need to understand and explore the process of learning in an inter-organizational setting and this is a single case study (Ghauri & Gronhaug 2002, Eisenhardt 1989, Yin 1984). The delimitation of the case is in line with Stakes (2001) definition that its boundaries are well defined, and constitutes a system of interacting people.

It is worth to note that a case study can involve qualitative data, quantitative data or a combination of both (Yin, 1984). Therefore a case study can be regarded as more or less positivistic, interpretive or critical. It depends on the kind of philosophical assumptions the researcher has (Mayer 1997). Because I
am trying to make an understanding of a phenomenon, my view meets that of Berger and Luckmann (1979) who write:

\[
\text{Social order is not part of the 'nature of things' and it cannot be derived from the 'laws of nature'. Social order exists only as a product of human activity.}
\]

(Berger & Luckmann 1979:70)

An in-depth case study requires the researcher to spend a great deal of time in the field, observing and discussing different issues with the research object (Nordqvist 2005; Hall 2003; Melin 1977). That is what I did. I have spent a great deal of time in the field, observing and interviewing to be able to understand the process in different ways. I did not focus on one issue but worked with theory and empirical material simultaneously without fixed questions or frames of reference.

Yin (1984), and Stake (1995) point out that by using case study, a researcher will have the possibility to understand complex issues, i.e. adding something to what is already known from previous studies. Case study means that one or few cases are studied intensively and from different angels (Yin 1984; Johansson Lindfors 1989). By using one case I have been able to conduct a contextual analysis of several events and conditions, focusing on the relationship between them. This would be in line with what Yin (1984) says when he states that case study research method is:

\[
\text{an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used.}
\]

(Yin 1984:23)

I’m going to do a qualitative study, using one case as my empirical setting. It is a process where I have had a dialogue with different objects, where I talked with theories, people or just myself, until I felt that saturation was reached – an abductive analytical approach.

The research process has been like building something from Lego blocks (cf. Ödman 1991). There were different fragments or pieces that needed to be put together, to create the whole (my subjective whole). I chose to focus on learning within a project as my empirical sampling. What developed during my research journey were different pieces of information, communication, collective interpretation and networking which helped me gain a better understanding of the learning processes in a given context, i.e. the temporary organization, and the circumstances around it.

A qualitative approach has been preferred to a quantitative one because the latter is built upon the belief that we can find an objective truth out there (Brewerton & Millward 2001; Arnbor & Bjerke 1997; Silverman 1993; Burrell
& Morgan 1979). For positivists truth can be quantified and measured in a specific way. But as several scholars have pointed out, when dealing with questions of complex social relations, as in my study, which is based upon a thinking process, positivistic approaches have been found less meaningful when it comes to studies requiring an understanding of social relationships and how these relationships evolve and develop (Arbnor & Bjerke 1997; Merriam 1994; Repstad 1993). The standpoint taken here is that a positivistic approach would not have been a good way of doing this research and my view is in line with Morgan and Smircich (1980), who write:

In particular, methods derived from the natural sciences have come to be seen as increasingly unsatisfactory as a basis for social research, and systematic attention has been devoted to a search for effective alternatives,

(p. 491)

My interests are within the process perspective or process literature. I am more interested in the organizing or strategizing perspective (cf. Achtenhagen et al. 2002a; 2002b). I have been interested in understanding inter-organizational learning in a temporary organization and hopefully my understanding and description are going to contribute to a better understanding of the process of organizational learning.

2.1.3 My role as a researcher

It is important to all those doing research to clarify where they stand as researchers in connection with the overall aim of their studies. This helps other researchers to pass judgment on the trustworthiness of the work that has been done, connected to their own frames of reference.

The overall aim of this study was discussed in chapter one. It has been pointed out that the researcher’s own value and pre-understanding will, in some sense, influence the result of the study. Stemming from the constructivist view I see this as relevant to me as well as other scientists. Stake (1995) discusses this point, especially regarding qualitative studies:

Qualitative case study is highly personal research. Persons studied are studied in depth. Researchers are encouraged to include their own personal perspective in the interpretation. The way the case and the researcher interact is presumed unique and not necessarily reproducible for other cases and researchers. The quality and utility of the research is not based on its reproducibility but on whether or not the meanings generated by the researcher or the reader are valued. This personal valuing of the work is expected.

(Stake 1995:135)
2. Methodological approach

The thing that I had to clarify in the beginning of the research process was the question of how to conduct this study. Should I take an active or inactive role as an observer? I agree with Repstad (1993) that it is important to find some kind of a balance between the researcher and the study object. If the researcher will take the role of a passive bystander, the objects may feel insecure and influence the study accordingly. Being too active will (or can) lead to some kind of an action research (Rönnerman 2004; Costello 2003). I have tried to strike a balance between the two extremes.

I was viewed as full member of the project by the participants. I took part in almost all meetings and conducted interviews with the participants during the breaks. I participated in the entertaining activities in the evening. This could of course be seen as problematic, if we believed objectivity is actually an option. Therefore, participant observation has been a pillar in the empirical analysis of this research (Arbnor & Bjerke 1997).

From time to time the project leaders asked whether I could follow the meetings and the discussion. While I wanted to be seen as a part of the project at the same time I wanted to keep some distance. On my part I could achieve this by providing theoretically based answers i.e. instead of just saying what I believe, use was made of theoretical arguments, but of course this was a subjective way tackling the problem. The same method was pursued when interviewing the participants in. But it was that I had made a contributed to the process. I was not been a fly on the wall, keeping quiet and just listening. One rule that I did follow as a guiding star was to be quiet unless I was asked about something. In this way I did not contribute to the process with anything else than issues that the participants were thinking of first. I could not see this as a problem; on the contrary I saw it as one of the strengths of doing a research like this. The members involved in this project did not see me as an outsider, or as a draining parasite. I was seen as one of the gang present at every meeting contributing with comment, discussing during breaks and so on.

Of course I had informed the participants, tutors, project leaders and the participant from the Swedish foundry Association that I was an academic. If this had a negative or positive impact I could not tell. It could have an influenced what was said during the discussions and how it was said. The only thing that I could certify was that this was never mentioned as a problem when discussing or interviewing different people. My understanding was that if this was a problem, a discrepancy would have surfaced during some of the interviews, but this never happened.

I see myself as having a subjective view of the world (Burell & Morgon 1979) and I see myself as having a social constructive view where I believe that reality is constructed by of humans (Berger and Luckmann 1979), and this view reflects how I describe the phenomena that I am observing as my own social construction of reality. We can never objectively understand other people’s reality because we do not have full knowledge of other people’s understanding, and we are bound to use our own framework and understanding to describe
what we see. I do not see, or believe that the world is a form of a concrete structure, where A leads to B and C. My view is holistic (Helenius 1990) and I am interested in understanding those phenomena which I have been studying. I am interested in meanings and interpretations not testing hypotheses. I believe that human beings can be seen autonomous with free mind.

I have been trying to get firsthand knowledge about the learning project which I have been studying by being a part of it – as a member not as an invisible bystander. As I needed to be as close as possible in order to understand the study object and also to understand the phenomena in its context, I can say that my view is subjective (Arbnor & Bjerke 1997; Burell & Morgan 1979).

2.2 Approaching the field

Two methods, interviews and observations, have been pursued to understand and analyze the project. Regarding observation there have been seminars, forums, management meetings, and observation when the project tutors met with companies. Regarding observations, around 119 hours were conducted. Regarding interviews, 40 interviews were conducted.

I focused on the whole when observing, the project leaders, the invited teachers, the agenda and discussions between participants. To better understand how the participants understood what actually happened during the project, interviews were conducted.

2.2.1 Collection of material

There are two main techniques of how material can be collected in scientific work (Arbnor & Bjerke 1997); secondary information (material previously collected), and primary information (new data). This study relies on primary information. Primary information can be collected in three ways (Arbnor and & Bjerke 1997); direct observation, interviews, or by doing experiment. This study almost solely relies on observation and interviews.

<table>
<thead>
<tr>
<th>Observer’s interaction with observants is</th>
<th>Observant’s knowledge of being observed is:</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Low</td>
<td>Low</td>
</tr>
</tbody>
</table>

| High Observing with participation         | Participative observation                    |
| Low Observing without participation       | Complete observation                          |

Figure 2.1 Types of direct observation (Arbnor & Bjerke 1997:225)
The observer’s knowledge of what has been observed is good but interaction between the researcher and those observed is rather poor. It is worth mentioning that one of the project leaders presented me to the participants in a way that did not make them feel I was an outsider. I was presented as a member of this project and not much space was given to question if I was going to join or not. They regarded me as one of the group even if I was sitting down, quiet, during the meetings. As Baker (1994) points out participant observation in social researcher is a good method to choose if the researcher wants to be where the action is. That has been the case here, by attending meetings, interviewing and reading documentation I have been in the action the whole time, not as a bystander but rather as a quiet observing member.

I had no understanding of the foundry business when the research process started. When the participants discussed specific technical issues I must admit that I did find it hard to follow. As the time went by my knowledge increased and so my understanding of what was discussed. I don’t believe that my lack of understanding in the beginning had any negative influence. This research does not focus on some specific technical issues. The focus has instead been more on how and why the participants discussed their problems and the way they collaborated to have them solved.

Regarding the interviews, several techniques could be chosen to collect information (Arbnor & Bjerke 1997); personal interview, telephone interview, mail questionnaire, or maybe group questionnaire. I decided to conduct personal interviews with the participants for several reasons. Firstly, the strategy was to conduct interviews with what could be called a low degree of standardization, (nonstructural interviews). Secondly, I needed to let the participants’ subjective meanings develop during the interviews by asking additional questions. By this I mean that during interviews the questions needed to be constructed in a way that would fit into the context of just that interview, and that interviewer. Thirdly, I did not believe that the participants would be as open as I wanted them to be if I resorted to mail or telephone conversation, rather than sitting face-to-face with them for some time.

**Observation**

By observing different activities connected to this learning project it was important to see what actually happened within the temporary organization. The reason why observation was chosen was to capture the real processes in the temporary organization instead of only focusing on the participants’ own interpretation of how they interpreted the process. Another reason was to help me formulate questions that had a direct relation to what I interpreted as important during the observations.

It is important before starting an observation to reflect on the ethical aspects that are necessary in every research (Einarsson & Hammar Cirac, 2002). In the first meeting I informed the participants about my research and no one raised any question that could be understood as negative about my presence. The
participants were told that their names as well as their company names would be anonymous. This was done to make the participants more relaxed during observations and interviews.

Because the purpose of the study is to understand learning in temporary organization, low degree of structure regarding observation was chosen (Einarsson & Hammar Chirac 2002). I was keen to get as much information as possible without direct focus on theoretically fixed models. The only thing that can be seen as a guide was the purpose and the research questions that were stated in the first chapter.

Forums and seminars were often characterized by typical learning situations where the participants sat down and listened to different speakers. In seminars they also worked with different assignments in smaller groups which I did not listen to. I did not want to jeopardize an open discussion in the group-work by being present there as an observer. In seminars as well as forums I was just one of the 'gang' during breaks, sometimes listening if the participants were having any discussion regarding the project but participating if the discussion was in a general manner. My interpretation is that I was regarded as one of them though lacking knowledge of foundry business. My strategy was to keep a distance in connection to subjects that could be related to seminars where I listened and tried to be quiet. When discussions were more casual I took part as anyone else.

I only took part in two forums, the second and the forth, but got a briefing of what went on from one of the project leaders. All companies were represented in all forums except Jota, My and Lambda, which dropped out from the krAft project (see table 2.1). All krAft management meetings were observed and I followed the tutors to four companies to better understand the process they were involved in. Personally I felt no mistrust but the fact that I as well as the project leaders were working were academics could have somewhat influenced my standing in the eyes of the participants, tutors and the representative from the Swedish foundry. This was never discussed explicitly and there was never a hint that this was actually the case.

During my observation I used paper or laptop to take down notes to document who said what to who. By the end of the working day, I made some additional notes based on my interpretation of what I believed had happened. During the observation, the notes taken down were rather detailed due to the use of the computer. My participation in the seminars could have been seen as disturbing, but luckily that was not the case. Never was I asked to leave the room because of some discussion. I took part in all seminars and the activities in the evening, eating and mingling and drinking beer, tea or coffee.

**Interviews**

The interviews were used to get a better understanding of how the participants interpreted what had happened and what they regarded as important or less important. When conducting the interviews a semi-structured technique was used. The focus was on flexibility and freedom of thought. Three interviews
2. Methodological approach

were conduced with participants during the project. One interview was conducted after seminar one and two, one interview after seminar three and one after the last seminar. All interviews were tape-recorded and transcribed and took from one to two hours to conduct. As pointed out the interviews were semi-structured and could be described as qualitative (Kvale 1997) where the focus was on how the participants understood the process and what they believed that they had brought back to their own organization. In all interviews I had five guiding overall questions: 1) How do you experience the discussion in the group, 2) did you experience some kind of commonality within the group, 3) how did you experience the last meeting(s), 4) did you start any new processes due to the project, 5) and if there has been any contacts with other participants in-between meetings. This would tantamount to what Bryman & Cramer (2001) describes as the focused interview. I asked specific questions regarding situations related to the temporary organization that could help me understand learning processes in the learning project. Based on respondents’ answers new questions were asked to have a better grasp of the participants own understanding.

In the beginning of my research I had only a vague understanding of what I was looking for but during the empirical and thought the theoretical framework I got a better understanding of what was interesting. In the second and the third interview I had a standardized focus, i.e. the five questions, but I needed to focus more on what the interviewee had said previously. But the overall focus did not change, it only got clearer.

To be able to better understand learning in temporary organization, it was clear that knowledge generation was an important part. The participants got information from several sources; internal and external. Communication was

<table>
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<tr>
<th>First interview</th>
<th>Second interview</th>
<th>Third interview</th>
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<td>July 2004</td>
<td>December 2004</td>
<td>June 2005</td>
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<tr>
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In Table 2.2, it can be seen when and which companies were visited.
also important to understand, both within their own organization as well as seminars or with someone else.

It was easy to get access to the participants. I could call them by phone and ask if and when I could come to visit. It was never a question of if I was welcome; only a question finding time that was regarded suitable to us all. In total I carried out 40 interviews, but several informal interviews were also conducted during the seminars with the participants, project leaders and project tutors. The interviews lasted between one and three ours. During the first and second interviews I only wanted to meet one participant but said that those who were participating from the company could of course be present. In the first round nine interviews were conducted with only one person, and three with two. During the second round eleven interviews were conducted with only one person and one with two. In the last round I decided to try to let all participants from each company to attend. This was done because it was not always the same participant that had been present at every activity during the project. The plan was to let the participants discuss together, support and add information together to get richer information. All the companies, except one, had more than one participant present. The single one participant representing one of the companies had attended all activities.

By the end of the project I had interviewed the project leader, the project tutors, and the representative from the Swedish foundry association. These interviews were also semi-structured and the interviewees were all asked to account for how they experienced the process, from the beginning until the end. Those interviews took one and a half to two and a half hours each.

### 2.2.2 Describing the empirical material

In chapter four and five the krAft project is presented. Chapter four starts with a presentation of krAft. Chapter four should provide an increased understanding of the context in which the learning project occurs. Nylén (2005) says that there are several possibilities to account for the empirical material. The first has to do with which voice is heard, the researcher, those who are interviewed, free-standing social reality or objective facts. As previously mentioned, I hold a social constructive view and as a result it is my interpretation that is presented. When something is directly quoted, it is to support my interpretation of the situation and not to be seen as an objective fact.

Chapter four gives the reader an overall view of the whole process. The chapter starts with presenting the krAft concept, i.e. its philosophy. The description of the project follows. The description is structured in the way the project was conducted, from its start till the end, i.e. chronological description. The chapter ends with a discussion of what I have called “disturbance of the peace”. During the krAft project it became clear that the krAft management group did not share the same understanding of how to conduct the project, and
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how it should have been conducted from the beginning. The reason of why this is discussed is the misunderstanding or maybe mistrust that did lead to what could be described as a somewhat negative climate which had a huge influence on the process.

In chapter five focus is on those topics that were found to be of interest during the research process; generating knowledge, communication, integration of knowledge into organizational context, interpreting information through collaboration, the power to change, and the collective process (networks). Those issues have been developing during my work; theoretical and empirical. It was by examining the empirical material through a theoretical discussion that it became clear that those issues were important for a better understanding of the process of learning in what Johansson Lindfors (1989) calls ‘intersubjectivity’ – interpretation in collaboration between the researcher and the research object.

The descriptions in chapter five are relatively detailed and that should allow the reader to make his or her own interpretations or/and to judge my findings at the end of this thesis. Another reason for having a broad description is the belief that both academicians and practitioners appreciated such details.

2.3 Understanding the empirical material

The empirical material consists of 119 hours of observation and 40 interviews. The process has been iterative (Alvesson & Sköldberg 2000; Arbnor & Bjerke 1997; Kvale 1997; Packer & Addison 1989; Radnitzky 1970). I have read through the empirical and theoretical material several times looking for ideas or interpretations to better understand the learning processes within the temporary organization. This moment between the empirical material and theory has provided an understanding of those issues that the theoretical and empirical chapters are built on. An example of how this could be undertaken in a concrete situation is when reading through my notes. From my own observations I could detect some interesting phenomenon that triggered in-depth literature studies that gave me an idea of what I needed to focus on when observing or when interviewing. Afterwards I needed to read through all the material again to go back to theory until I found that saturation was reached. Important to the analysis has been the interpretation of content, meanings and importance of learning processes.

When observing I came across several interesting perspectives. I saw some interesting questions raised by the lecturers or the members of the temporary organization when observing meetings, but to understand how learning came about, it was important to interview the participants to understand how they interpreted the situation and what they saw as significant. It was something of a dialogue where I as an interviewer and those who are interviewed came up with new meanings during the interview (Kvale 1997).
After the interviews and observations I came up with five themes that could help me understand learning processes in a temporary organization (see 2.3.1). To understand if those perspectives that I came up could be seen as relevant I asked all the members involved in the process to read and comment on the material presented in chapter four and five. My plan was to find out if the members of this project could recognize themselves in my description of the process. No one had any counter opinion about what was written or how it was written – i.e. they could recognize themselves and the process in the text.

2.3.1 Categorization of the material

Eisenhardt (1989) says that to be able to conduct rich analyses of the empirical material a researcher should choose different analytical angels.

*The case study is a research strategy which focuses on understanding dynamics present within a single setting.*

Eisenhardt 1989:534

By focusing on different angels, a researcher can find new categorizations that can be used to better understand the material. As Eisenhardt (1989) points out the categorizations can be found in the research problem, existing theories or from the empirical material.

During my time as a professional purchaser I came across different situations when starting up a new relationship, conducting an old relationship or just developing a relationship. In these relationships I was interested in understanding how it was possible to learn from different partners within the relationship about issues that were regarded of interest to be able to conduct joint businesses. This was my first initial understanding; how can we learn from others in an inter-organizational relationship. As a starting point to this understanding I believed that a power discussion was an important part. Power relations are often if not always an important part in purchasing situations.

Two theoretical models which I came across in the beginning have been important to my initial understanding. Firstly, it was the model by Kolb (1984), and secondly the learning model by Dixon (1998). Kolb’s (1984) mode of individual learning cycle, expressed as a four-stage cycle of learning, takes immediate or concrete experience as a basis for observations and reflections. Dixon’s (1998) model of organizational learning starts with widespread generation of information leading to integration of new information. Next the model shows is how collective interpretation is determined by the authority charged with providing the meaning or explanation.

Focusing on those two theoretical frameworks and connecting them to my own practical understanding, two theoretical frameworks started to take form as
2. Methodological approach

my main theoretical perspective. Firstly, organizational learning is a process. It is something that happens all the time and is a consequence of actions taken in different time. Secondly, the theoretical understanding is that learning is a socially constructed cognitive process.

After observing two seminars I met representatives from the companies with these two theoretical frameworks in mind; how the process was and how participants developed during this process. During the first interview trying to elicit information on what was discussed and how it conducted in the seminars, the tentative model started to take shape. All interviews were semi-structured. I started by asking everyone why they participated, what happened during the two seminars the participants had attended. I wanted to understand if there had been any collaboration with others, (project leaders, consultants and other participants) that was due to the project. Those five themes developed when I read through the material after the first interview with all participants from the companies. It was obvious that then the participants started to create new understanding by being a part of this learning project. Instead of focusing on operational issues as the most important they started to mention implicit or explicit organizational issues, like leadership, strategies, etc. as something that was important to their companies if they were going to survive in the future. This understanding helped me form the first theme; Knowledge creation and learning.

Even if there was not an explicit discrepancy in the participants’ answers during the first interview regarding how they interpreted what happened in seminar one and two, some differences could be seen. Those companies that had been participating in another krAft project earlier, Alpha and Delta, mentioned explicitly that they had started to better understand the issues raised in earlier projects. Another important issue was that interpreting what was said and discussed in seminars, forum and the social activities in the evening was a requisite for new understanding. At least I felt that interpretation and communication in a learning situation was an important issue when taking part in an inter-organizational learning project, turning this into my second theme.

The third theme, temporary organization as a learning arena, was maybe the hardest one to come up with. I started up with the understanding that my research was about inter-organizational learning. In the beginning of my process I had been studying the framework of Lave and Wenger (1991) as a way to understand and describe how groups of individuals share the same interest, values and/or aims. During the interviews, it became clear that ‘inter’ was somewhat problematic. It was problematic because it was not clear how to define the group. The group could be seen as the whole group comprising representatives from the companies, two consultants, two project leaders, and one representative from the Swedish foundry organization. It could also been seen as a group by only looking at the representatives from the companies. I saw this more as a theoretical problem than an empirical one. This problem would have stronger repercussions if the group was being seen as ‘inter’ or ‘intra’. I did
not want to focus on learning confined to the project leaders, consultants nor the representatives from the Swedish foundry association. True, they were involved in the process but their role was pedagogic and supportive. Another problem was that by looking at traditional project literature the social dimension are more or less overlooked. When empirically trying to understand the phenomena, it was obvious that this was not a traditional organization and it was not a traditional project. Then I came across literature discussing this problem, for instance Packendorff (1995) and Ekstedt, Lundin, Söderholm and Wirdenius (1999). It was like a traditional project with predetermined point of time but it was temporary because of the non-routine processes. From these scholars’ viewpoint this project could be categorized as a temporary organization. It was at this time (after the third interview) that it became clear to me that Lave and Wenger’s (1991) framework of the temporary organization could be used for the understanding and analyzing inter-organizational relationship.

The fourth theme, agreement process in inter-organizational context, was rather clear from the start of my research process. In a project like this, consisting of different people where the project focus was not all that clear from the beginning, the participants and the project manager needed to agree on what should be handled or not handled during the learning project. Before entering the empirical field I had been studying agreement as a cognitive phenomena and agreement as a part of power discussion. In the first seminar and in my first interview with the participants it came clear to me that agreement as a phenomenon within a learning project like this was an important theme.

In the first seminar it was obvious that there was some mistrust between those people leading the project, i.e. the krAft project management group. The consultants wanted to solve problems without taking the problem to a more abstract level. The project leaders from the academia wanted to have a detailed but deeper discussion, letting the participants to examine the problem from different points of view. Through this it became clear to me that the members of the management group played an active role in what was going to be discussed and how it was going to be discussed, i.e. a power related issue.

When reflecting on the first interview with the participants, it was obvious that their process of deciding what issues were to be discussed and what issues should be left out was more about a social cognitive process than power relationship. The participants did see themselves as equals. No company had any power over another company. Because this was an inter-organizational learning project not an individual learning project some kind of agreement about issues important to all the participants was needed.

The answer to my question how participants in an inter-organizational project decide (i.e. agree) on related issues became clearer during the first seminar, and it even better understood during the first interview.
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The last theme, outcomes of learning, was formed initially as a theoretical problem. All learning will and should lead to some kind of a change (Prange, 1999). Looking at theories discussing changes because of learning is not that simple. It is problematic to isolate the learning factors from other factors within people’s environment (Dixon, 1998), i.e. people are learning all the time. During the second interview it became clear to me that changes could be seen as changes of mental models within the participants’ minds (cognitive), or as a change of action in participants companies (behavioral). The participants had entered this krAft project believing that they would be able to send their employees to different specialized education to strengthen the operational work within their companies. During the second interview it became clear that the participants had come to the understanding that the problem they were facing was due to the fact that they themselves lack competence in organizational matters.

2.3.2 The analysis

In the theory chapter five themes were developed in an abductive process; knowledge creation and learning, interpretation and communication in a learning situation, Temporary organization as a learning arena, agreement process in inter-organizational context, and change as a consequence of learning. Based on those five themes, a tentative model is formed in the end of chapter three. When writing the empirical chapter, an attempt has been made to follow the same structure theory chapter as well. Based on the abductive process, both chapters were written more or less at the same time.

In chapter six the model formed in chapter three, is used to analyze learning processes in the temporary organization. I am interested to see if the model could be used to understand inter-organizational learning in temporary organizations. This chapter can be said to be empirically driven. By re-reading and analyzing the empirical material new understanding about the model came about and the model was re-written and improved.

In the end, chapter seven, I focus on the purpose of the study and its research questions in relation to the learning model in chapter six.

Concentrating on the whole has been an important aspect when analyzing the material, regardless if it has been about theoretical or empirical analysis. In the analysis my understanding has been that the parts can not be understood separately, only in relation to the whole. To understand learning in temporary organizations the focus has also been on relations between the parts and their relations to the environment. Throughout the whole analysis I have been open to revise models and thoughts based on new understanding or findings, both in theory and in the empirical material.
2.4 Trustworthiness of the study

An often cited criticism is that a case study does not offer reliability or the possibility of generalizing. The criticism is based on that such studies rely on one or a limited number of cases, rendering generalization difficult. This study has no ambition to be generalized to a population; it would be hard to even decide what the population should be. This study leans more on Lincoln and Cuba’s (1985) view that reality is subjective and therefore the focus is on understanding and not predicting.

This study has one case, a contemporary phenomenon which is studied during its life time in a specific context.

When one is studying a case it is necessary to identify the case, i.e. the question is what a case is. Stake defines case as follows:

“In social science and human services, the case has working parts; it is purposive; it often has a self. It is an integrating system”,

(Stake 2001:436).

One case has been studied; the unit of analysis in my study is one inter-organizational project or the temporary organization. This focus did actually give me a wide range of cases to choose from when I started to look for a suitable case to study. The most important criterion was that it had to be projects that could be theoretically seen as an inter-organizational organization, and I needed to be able to follow the case during its real time. This research interest in understanding inter-organizational relationship was a fundamental criterion. I needed to follow the project under its life time to be able to interpret what actually happens during the life time of the project.

There are several advantages when using case method in management studies. It offers richness and depth in information which is not often possible by using normative methods (Eisenhardt 1989). By using case study the researcher has the opportunity to observe a complex set of situations which will give qualitative analysis the chance and the possibility to understand complex issues. Mintzberg (1979) points out that we need richness not rigorousness in studying organizational problems.

“We uncover all kinds of relationships in our ‘hard’ data, but it is only through the use of this ‘soft’ data that we are able to ‘explain’ them, and explanation is, of course, the purpose of research”,

(Mintzberg 1979:587).

This is an important point; this study has not been trying to find the truth about organizational learning. The interest has been to contribute to the understanding of the phenomenon; explaining and understanding better the learning processes in a learning project. Therefore using soft data is more
suitable to this research than using hard data, and I can say that I agree in fully with Mintzberg’s statement above that we need to understand complex phenomena by conducting soft data in inter-personal relations.

Numagami (1998) points out that the quality of research done with qualitative methods is based on the researchers’ social and conceptual skills. Of course I see this as important but it is hard for me to judge objectively if I have these skills. Therefore I will let the reader judge if I do have those skills and to what degree. To help the reader to come to a satisfied conclusion, a rich description of the case is provided in chapters four and five. This would be in line with Czarniawska (2001), who questions the discussion of validity and reliability (see also Lincoln and Cuba’s (1985) discussion about generalization), saying that it is always about trustworthiness instead of validity and it is the reader who is to judge the generalization of the work done by others. This is important when conducting qualitative research in order to capture the big picture of the process of organizational learning within inter-organizational project.

But the question of validity and reliability always looms almost in any piece of research. Validity is defined as absence of systematic fault, or a test to find out if what is measured is actually measured. Reliability has to do with which grade a measurement procedure will produce similar outcomes if the study would be repeated (Baker 1994). Yin (1984) says that four tests can be used to establish the quality of social research. They are: construct validity, internal validity, external validity and reliability. He means that these tests are as important for qualitative studies as quantitative ones:

Construct validity; establishing correct operational measures for the concepts being studied. Internal validity (for explanatory or causal studies only, and not for descriptive or exploratory studies): establishing a causal relationship, whereby certain conditions are shown to lead to other conditions, as distinguished from spurious relationship. External validity, establishing the domain to which a study’s findings can be generalized. Reliability; demonstrating that the operations of a study – such as the data collection procedures can be repeated, with the same results.

(Yin 1984:33).

Merriam (1994), talks about internal validity in the form of how well the results from a study actually stem from reality, i.e. constructed reality. She means that to secure that the researcher has obtained the internal validity; the researcher needs to use six fundamental strategies. The first strategy is about using triangulations, with the researcher using complementary methods or other scientists to secure the material. The next strategy is the need for what Merriam calls participatory control by letting the participants give some feedback to the material. The third strategy is to observe under longer time or replicate the
observation some time later. The forth strategy is horizontal examination and critique, where fellow-workers read and discuss the result after it has been presented or published. The fifth strategy is that the participants will be involved in the total research process. The sixth and last strategy is where the researcher describes his underlying assumptions, conception of the world, and theoretical standpoints explicitly.

I see Merriam's discussion as suitable to understand the internal validity in my study. Yin could of course have been used but he focuses more on quantitative research while Merriam bends toward qualitative studies. I see Merriam's six strategies as a guiding light when judging the quality (internal validity) of this dissertation. I have been using triangulation, in the form of theoretical understanding, participatory controls by letting the participants read and judge the material. After finalizing chapter four and five, they were sent out to all the participants and the members of the krAft project management group to read and to give comment. They were asked to comment if they interpreted the learning project similar to what I did. No one had any other understanding than I did. All believed that the text expressed what actually happened. I have been using horizontal examination and critique by letting other scientists read and discuss my material, and my underlying assumptions and theoretical standpoints have been discussed in this chapter. This examination has been conducted throughout the whole research process. This is in line with Lincoln and Cuba's (1985) argument that if the scientist knows the reality that is going to be studied then there would be no research problem. They mean that there are three types of truth; inter-subjectivity, practical usefulness and trustworthiness. This supports what Merriam (1994) says when talking about internal validity.

Regarding external validity, which has to do with how the result from one study can be generalized to another within another situation, it can be said that in qualitative studies generalization can be hard, if not impossible (Arbnor & Bjerke 1997; Merriam 1994; Lincoln and Cuba 1985). And as has been pointed out earlier in this chapter, case studies can not be generalized to any given empirical population but they can contribute to a theoretical generalization (Yin 1984). I believe that by describing explicitly my basic standpoints, my results can be used to better understand learning processes and could, accordingly, be used in studying organizational learning situations.

Regarding reliability (Yin 1984; Baker 1994), I don’t believe that it is possible to replicate the study I have conducted. I have been studying one learning project which has been unique and has only been found in a given context and the discussions in the seminars, or the interviews that I have been conducting could never be done again with the same people in the context that the participants found themselves in when this study was carried out.

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2.5 Research strategy a concluding discussion

This is an intertwined complex process that involves doing an empirical research and at the same time reading and deepening the theoretical understanding to be able to come up with a trustworthy empirical analysis. Writing a thesis is and will always be a subjective action. I have a subjective view of the world and believe that the world is socially constructed. This has been the main premise in my research. It was I who chose the issues by interpreting what was said when reading theories, interviewing and observing. It was I who decided what was interesting when observing. It was I who decided what scholars were of interest when choosing the theoretical framework. By focusing on those issues which I have chosen and the choice made does not mean that the choices left out could not have been as interesting, culturally or strategically, etc. Writing a thesis or whatever one is writing is always a subjective matter, regardless if one is engaged in a qualitative or quantitative research.

In this chapter it has been stated that reliability is hard if not impossible to obtain in a study like this. Trustworthiness is based on those internal validity criteria discussed. By giving a rich description of the cases, the reader(s) should be able to come up with an idea if this is good or bad research.

This dissertation has not as its aim to come up with a grand theory of inter-organizational learning. It should be seen as a contribution to the theories in organizational learning, and should be valuable in practical learning situations.

In the next chapter I will account for my theoretical framework. Then in the next two chapters the empirical study will be presented.
3. Theory

3.1 Introduction

This chapter focuses on themes seen as important for a better understanding of the processes of learning (see discussion in 2.2.1 about categorization).

This chapter discusses Organizational learning as knowledge creation; Interpretation and communication in a learning situation; temporary organization as a learning arena; agreement process in inter-organizational context; and change as a consequence of being a member of a learning project. These themes are important in order to understand the process of learning. As mentioned in 2.3.1 the themes did not just pop up from nothing. They did actually come about as a part of the abductive analytical process with strong connection to the research questions.

The first research question is: How is information generated, interpreted, and understood by the participants within the inter-organizational learning project? And it connects to the first two themes, organizational learning as a knowledge and interpretation and communication in a learning situation. In an inter-organizational project a lot of information will flow. The problem is that information is only data until it is interpreted and understood. Some information will have to be rejected and some other information will be accepted.

The second research question is: What does the agreement process look like in the inter-organizational learning project? As it is inter-organizational learning that is in focus in this study it is about what the participants actually agree upon as important issues to discuss. While the first research question focuses on the individual, the second research question highlights collective understanding. Accordingly, the third theme was to understand the agreement process within inter-organizational context.

The third research question is: What type of learning happens in an inter-organizational learning project. This research question is connected to the last theme, the outcome of learning. It is important to understand what actually happens as a consequence of the learning activities in the temporary organization.

One theme not explicitly mentioned in the research questions is related to temporary organizations as a learning arena. This theme is important as it is the overall empirical focus of this thesis. As explained earlier the project under discussion is of temporary organizational character rather than regular.
In the end of this chapter a tentative model of the process of learning in temporary organization is formed. The model constitutes the theoretical bases for the analysis of the empirical material.

3.2 Organizational learning as a knowledge creation

Knowledge is a complex phenomenon. We can make sense of knowledge by looking at knowledge in relation to data and information (Hislop 2005, Davenport & Prusak 1998). Data are then seen as raw numbers, images, words, sounds, etc., something that can be observed and is tangible. Information has to do with how data is arranged in a meaningful pattern. Knowledge emerges from the application, analysis, and productive use of data and information. Nonaka and Taceuchi (1995) say that the difference between information and knowledge has to do with beliefs, commitment, and action, and it is about meaning. Accordingly, knowledge is contextual and relational. This means that that knowledge is a construct of people while interacting in a social context. Knowledge will then have an impact on people’s behaviors, perceptions, and cognitions (Berger & Luckmann 1979). Knowledge is, according to Davenport and Prusak (1998), the type of information that is combined with experience, interpretation and reflection, i.e. relational and in a specific context.

And knowledge generation is not only about gathering data and information but about how data and information are interpreted and understood. Individuals learn all the time because there is always a stimulus in the form of data and information (reference) but there is still the question of what people learn (Larsson, 2004)?

Before answering the questions one needs to find out whether knowledge itself exists in organizations? Knowledge can be found in individual brains or their bodies, between individuals, expressed in dialogue, and as routines or as symbols (Ortenblad 2001:129). It is only through individuals that knowledge can be made understandable (Argyris & Schön 1978; Davenport et al. 1998; Holsapple and Joshi 2000). When individuals begin a discussion, some issues are only data or information but by interpreting the data and making sense out of the information it can be said that knowledge has formed. It is not organizations that learn; individuals are the ones who learn and are the agents of how the organizations learn (Argyris & Schön 1978).

But individual members frequently serve as agents of changes in organizational theory-in-use which run counter to organizational entropy. They act on their images and on their shared maps with expectations of patterned outcomes, which their subsequent experience confirms or disconfirms. When there is a mismatch of
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outcome to expectation (error), members may respond by modifying their images, maps, and activities so as to bring expectations and outcomes back into line. They detect an error in organizational theory-in-use, and they correct it.

(Argyris and Schön 1978:18)

Huber (1991) takes this discussion further when defining organizational learning as:

An entity learns if, through its processing of information, the range of its potential behaviors is changed … let us assume that an organization learns if any of its units acquires knowledge that it recognizes as potentially useful to the organization.

(Huber 1991:89)

Huber’s (1991) says that learning involves four processes; knowledge acquisition, information distribution, information interpretation, and organizational memory. The main argument is that acquiring knowledge information needs to be distributed and interpreted. Only then can knowledge be stored to be used later, and it becomes a structural capital (Edvinsson & Malone 1998). Those four constructs and processes Huber regards as integrally linked to organizational learning. We can see strong similarities between Senge’s (1990) way of handling learning organizations and Huber’s way of describing the process of organizational learning. We can also see a strong relationship to the discussion of single-loop and double-loop learning and the need to brake away from single-loop thinking to be more of a double-loop organization (Argyris & Schön 1978; 1996). We can also see a strong connection to knowledge management literature discussing the distribution of knowledge within the organization (Nonaka 1993; Nonaka and Takeuchi 1995; Winter 1987)

Argyris and Schön (1978) hold that the way individuals approach problems is very much to detect and correct errors, (single-loop learning). A single loop learning perspective will add to the knowledge-base or specific competence or even routines but it will not change the fundamental nature of activities that are done within organizations (Dodgson 1993). Senge (1990) calls this phenomenon adaptive learning and Fiol and Lyles (1985) talk about lower-level learning. Double-loop learning deals with error detection and correction as well as the questioning and modification of existing norms, procedures, and objectives. Dodgson (1993) says that within double loop learning organizations will change their knowledge base or competences because of new understanding. Senge (1990) calls this generative learning and Fiol and Lyles talk about higher-level learning. The way individuals within companies approach problems is fundamental. It says something of how critical individuals are when coming across a problem that is unknown to them. It is important to create
learning systems that encourage and motivate openness in interpreting information. This information can be something that is generated within the organization (exploitation) or that is generated from the outside (exploration) (Argyris & Schön 1978; 1996; March 1991). It can also be said that the difference between single-loop and double-loop learning is the difference between learning and adaptation (Fiol & Lyles 1985). Double-loop learning has to do with the ability to develop insights, knowledge in relation to actions in the past. Single-loop learning is the ability to make some adjustments because of change, external or internal. It can not be said that one is better than the other, both perspectives are needed (Ellström 2001); it is the situation that determines what kind of an action should be taken. As Ellström points out it is impossible to always question the underlying premises, then "nothing" would happen within the organization.

Individuals relate new information to some previous understanding or situations to be able to make sense out of it, i.e. transform it into knowledge. It is only when individuals have appropriated a new understanding or learned something that they are able to transfer this new knowledge into organizational knowledge. Kolb’s (1984) individual learning cycle is a good example of this. Kolb defines four principal stages of how individuals learn. According to Kolb (1984), the process can start in any stage of the learning cycle. We can begin with concrete experience that will take place when a person experiences something new by consciously or subconsciously seeking new information about some issues or phenomena. The next stage is reflective observation which has to do with stepping back from the task and analyzing its implications. The third step is abstract conceptualization which involves interpreting events that have been noticed and understanding the relationship among them. The final step has to do with active experimentation, and has to do with testing new abstract model(s) developed in previous stages. Accordingly, people learn at their best when they are able to reflect their own experience and previous understanding. Looking at learning in this way the focus is not only on how information is distributed, but on individuals own skill as well as the contextual factors that interpret it into something meaningful connected to the assigned task. Maybe the most interesting idea of Kolb’s (1984) model is that individuals need to generate space and time to be able to take time to reflect about their own actions (cf. Schön 1983; Dixon 1998).

Connected to the four-stage learning are four learning styles and as Kolb (1984) says knowing learners learning style can help to understand why and how they will act in some way or another. Those four styles are: diverging based on feelings and observation, assimilating which is characterized by logical approach, converging where the learner seeks practical solutions, and lastly accommodating which is based on intuition. It is important to understand that people learn all the time. It is a continuous process where there is a clear connection between what people do and what and how individuals learn (cf. Schön 1983; Dixon 1998; Lave & Wenger 1991; Wenger 1998; Kolb 1984).
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has often been pointed out that it is necessary to see learning as continuous processes that last through individuals' whole life (cf. Senge 1990). It is also possible to understand lifelong learning as something that needs to be done recurrently by taking part in courses or different learning situations, i.e. on-the-job-training (Moxness 1990).

The discussion above shows that if learning is going to take place, there is a need for some interest and “right” contextual factors (cf. Ramsten 1992; Schön, 1983; Marton et al. 1988). Learning does not just happen in a vacuum, something has to make the individual motivated to learn. Learning is based on people’s previous experience, and it is those previous experiences that help people make sense out of new information, i.e. it has to do with cognition or peoples, mental maps (Hellgren & Löwstedt 1997).

But how does learning happen, how does new understanding come about, and what are the forces that can be seen as drivers towards learning? Bandura (1986), points out that human action can be explained as a three-folded behavior, cognitive and environmental factors, interacting and influenced by each other. In some sense behavior will be imitated and used in different situations but those behaviors will only be reproduced if they are rewarded. Cognitive theories focus on the mental processes that are behind behavior. Changes are the outcome that can be observed and these observed changes are used as an indicator of what actually happens within peoples’ heads. Walsh (1995) says that individuals can approach information processing in two ways, top-down or theory-driven:

_In the former case, the cognitive structures generated from experience affect individuals’ abilities to attend to, encode, and make inferences about new information; in the latter case, the information itself shapes individuals’ response to it (no doubt including the development of amended knowledge structures to be used later in the top-down fashion)._ (Walsh 1995:281)

Hodgkinson (2001) calls the theory-driven process activity bottom-up processing. He says that individuals use both processes but it is the situation that decides what and how much will be used of each of them. What can be understood from the discussion of bottom-up or top-down processing is the fact that it has to do with our thinking. How do we understand the reality around us? Berger and Luckmann (1979) see the society as a social construction, where peoples’ thinking and acting is the creator. They ask themselves the question of how subjective meanings are transformed into objective reality. Individuals are socialized into existing social realities which they see as objective or true.

Accordingly, creating knowledge by individual is a complex phenomenon of several factors, such as culture, individual preferences, and environment (see discussion above). One factor alone is not enough to create knowledge or bring
about its understanding. A holistic view is needed. Learning is always interaction, interaction with history (culture) or other people, i.e. learning is a collective process in some way or another.

Learning is inseparable from everyday work (Senge 1990). Lifelong learning is something that company managers need to adopt if they are going to have their company survive in the future. We do not need to look far to understand that business environment is not something that is regarded as stable today. It has been pointed out by several scholars that organizations in today's turbulent environment need more than ever to focus on learning as a continuous process of everyday life (Pawlowsky 2001; Hedberg & Wolff, 2001). It means that learning needs to be an integrated part of every company's strategic agenda (Wikström & Normann 1992, Edgren 1990; Peter & Watermans 1983). Organizational climate is actually the psychological conditions that exist in the social environment, i.e. if the climate is open and stimulated, it can increase the organizational members' involvement in their organization. But if the climate is closed then the climate will be characterized by closeness and likely to inhibit learning (Wikström & Normann 1992; Hall 1990)

To say that learning is always a collective process is something problematic. Learning in a group is not only the sum of individual learning, it is something else (Argyris & Schön 1978; Fiol & Lyles 1985). Popper and Lipshitz (1998) point out that there is a need to differentiate between individual and organizational learning and show the link between those two. They suggest that we need to see organizational learning as learning in organizations, and learning by organizations, to better understand the mechanism of organizational learning. What they mean is that learning in organizations will happen at the individual level while learning by organizations will happen at collective level and is based on organizational processes. Learning in organizations and learning by organizations can be explained as organizational learning mechanism where organizational learning mechanism is defined as:

(i)nstitutionalized structural and procedural arrangements that allow organizations to systematically collect, analyze, store, disseminate, and use information relevant to the performance of the organization and its members.

(Popper and Lipshitz 1998:170)

Popper and Lipshitz (1998) see organizational learning mechanism as two-folded; structural and cultural and if learning organizations are going to be built it needs to involve both structural and cultural change. Change must be within the organization and its members; members need to have “elbow room” to be able to change what they regard as necessary.

Research on individual learning processes has a long tradition in psychology (Maier et al., 2001). To be able to understand learning in collaboration it is important to realize that learning has its roots in individuals, and it often ends with individuals (Florén 2005; Kim 1993; Kolb 1984; Argyris & Schön 1978).
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In this study this is something fundamental; individual learning is the foundation of organizational learning. Every organization is a construct of its members’ own representation or image of what Argyris (1999) and Argyris & Schön (1978), calls theory-in-use. No individual in an organization has all the facts in hand; knowledge is always incomplete and need to be seen in the relation to other members in the organization. Several empirical studies have shown the relationship between organizational learning and individual learning (Nonaka & Takeuchi, 1995 Kim, 1993; Argyris & Schön 1978; March and Olsen 1975):

*Organizational theory-in-use, continually constructed through individual inquiry, is encoded in private images and in public maps. These are the media of organizational learning.*

(Argyris and Schön 1978:16pp)

Learning can take place in different parts of the organization, the individual, the group, and organizational itself. By having a cognitive view individuals are seen as the critical factor if learning is going to be distributed to different levels within the organization. Cannon-Bower & Salas (2001) call this a shared cognition. Accordingly, learning happens all the time; first at individual level and then at group level and lastly at an organizational level. This is a continuous process, and a story that never ends (Senge 1990).

Learning is dyadic in the sense that organizations need to adapt very quickly to new and unknown situations which they had no idea of before and they need also to utilize the competence that is represented within the organization cf. Holmqvist’s (1999) discussion of exploration and exploitation). But how is this to be done? Learning does not happen in emptiness, it happens in relation to people’ own frame of reference and the context it is presented in. Individuals need to be able to connect new situations to issues that are familiar to them (Döös, Wilhelmson & Backlund 2001; Ramsden 2000). Accordingly, learning is action connected to experience, interaction and communication. This view differentiates learning in practice from that of learning in classroom. Mattsson (1995) points out that learning does not have to mean new understanding or knowledge. It is possible to talk about two sorts of learning, learning that generates new knowledge and reproductive learning. The reproductive learning does not generate new knowledge and it is more in line with single-loop learning and reproductive learning can be seen as double-loop learning. Contextual factors are important. When companies are having more of reproductive learning, not much space is given to communication, interaction and interpretation. Members of an organization learn one way of doing things, i.e. à la Taylor’s scientific management method. While generative learning focuses more on communication, interaction, and interpretation, questioning gives frameworks, with the aim of building something new and hopefully better. Both types, Mattsson (1995) maintains, are important but he adds that reproductive learning is overrepresented within industrial firms.
Gathering information from external or internal sources should be the responsibility of all members of the organization irrespective if we are looking at inter-organizational relationship or intra-organizational relationship (Dixon 1998). It is not enough to only gather information. If the information is going to lead to knowledge expansion, then individuals need to make their meaning structures visible and accessible to others within the group or organization. Dixon’s reasoning is that there is a paradox in organizational learning. It is only through its individuals that an organization can learn, but organizations create systematically some kind of constrains that prevent their individuals from learning (cf. Argyris & Schön 1978). So organizations need to configure systems to move information across organizational boundaries, and there is a need to have an infrastructure to support system-level dialogue. It is also important to disseminate decision-making for speed and flexibility. Dixon mentions that it would be good if some kind of a measurement could be found that could actually measure if an organization has actually learned something, positive or negative, but she points out this is not possible because it is hard to understand the relationships of different variables.

Learning in collaboration has its focus on action and reflection and is contextual. It is a process with no beginning and no end. Individuals get information, interpret this information, share it and new understanding will evolve. This gives the individual new tools, (mental models) of gathering information, interpreting it, and sharing it, etc. But what is needed to understand is the reflection process and the action coming out of it.

Learning happens in specific contexts, and it is about how individuals understand and act on the specific task that they are confronted with. One way to understand this is to look at Donald Schön’s (1983) idea on the use of reflection to understand how professionals do actually act in specific situations. The main theme of Schön’s research is that professionals know more than they can put into words. (cf. Polanyi’s oft-quoted statement, “we can know more than we can tell” (in Smith, 2003)). When professionals come across challenges in their work, they rely less on formulas learned in schools, and rely more on improvisation in their own practice.

(...) the practitioner allows himself to experience surprise, puzzlement, or confusion in a situation which he finds uncertain or unique. He reflects on the phenomenon before him, and on the prior understanding which have been implicit in his behavior. He carries out an experiment which serves to generate both a new understanding of the phenomenon and a change in the situation.

(Schön 1983:68).

Ellström (2001) holds a similar view but points to the need to seeing learning as categorized by four levels. On the lowest level is what could be characterized as routine work. It is a good way to solve problems that are known to us, as we
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understand them, cf. single-loop learning. The second level is action based on rules. We know how to handle things because of the rules in the situation. The third level is action based on knowledge, and the fourth is what he calls reflective action. The first two levels can be dangerous because of the non-reflection in the situation. Hedberg and Wolff (2001) show that too often that companies base their new strategies on old frameworks, i.e. old successes. This attitude will lead to non-learning. But as Ellström (2001) points out that it is not possible to continuously reflect upon what one is doing because then individuals would not accomplish anything, and that would not be appreciated by the owner of the company or by its stakeholders. But according to Schön (1983), much of our action is based on tacit knowledge (cf. Nonaka & Takeuchi 1995), without the possibility of describing what we actually know. Schön’s (1983) point is that different professionals like architects, teachers, or psychotherapists use tacit knowledge. Tacit knowledge is hard to exemplify and is hard to teach, but it is there no matter what. It is only through action that tacit knowledge can be learned. This knowing-in-action is basic to how to act in a situation; it is reflection-in-action. What is seen as a critique of Schön (1983) is his view that reflection in action can help students to learn, but his examples show that it is actually the teacher who learns the most. By telling someone else how something should be done, the teacher is in a much better position to learn more. Maybe a critique is not a suitable word but it is important for the person who reflects to learn the most and by reflecting together with others within the focal organization or in inter-organizational setting is the name of the game.

Organizations as well as individuals accumulate knowledge based on different kinds of information and data, and that will lead to change in norms, values, aims, strategies and cultures, individually and on an organizational level (Schön 1983; Ellström 2001). It is important to create, obtain, develop and spread different types of knowledge (Wikström & Normann 1992).

3.2.1 Summary of knowledge creation and learning

To understand organizational learning it is important to understand that knowledge is formed by different stimuli. Stimuli could be understood as an individual knowledge, as organizational knowledge or as external knowledge that will be presented in form of data and information that need to be interpreted by actors within a given context. Organizational learning is about joint understanding. Every individual has some knowledge and some understanding, but no one has all the knowledge or all the understanding. Different actors, organizational factors, cultures or environmental factors will contribute to organizational knowledge in the form of data and information. Such organizational knowledge leads to the formation of new joint understanding. Understanding what kind of learning actually takes places is very much based on how new stimuli are to be treated (cf. single-loop and double-loop learning).
3.3 Interpretation and communication in a learning situation

As explained above there is a difference in individual and organizational learning. The main difference (Dixon 1998) is how different kinds of meaning structures in organizations are to be found. Dixon (1998) identifies three types, private, accessible and collective meaning structures. If actors within the organization are going to be able to interpret “something” then this “something” needs to be discussed explicitly because organizational learning happens in meetings with others (Ekman 2004). As Dixon (1998) points out; some meaning structures in organizations are private because of certain reasons, political or logistical. But the more information members hold as private, the less learning opportunities there will be. The consequence of holding meanings private will not lead to any joint understanding. It is in dialogues that meanings are created, not changed but constructed together with other members of the organization (Ohlsson 1996, Wilhelmson 1998; Bjerlöv 1999). The point here is that if meanings are constructed commonly then it can be said that organizational learning has happened. The collective meaning structure that can be found in organizations, like norms, strategies, and assumptions, is the companies’ history.

Accordingly, communication is fundamental to learning (Habermas 1990). It is by discussing and understanding each other that members of an organization can actually do something together. Organizational learning assumes that members of the organization can develop collective structures (Neck & Manz 1994), group culture (Weick 1995), meaning structures (Dixon 1998), or structural dimensions (Ohlsson 1996). The point is that if meanings are going to be constructed commonly then it can be said that there is a collective learning, i.e. organizational learning has taken place.

To make this happen it is important to allow for space and time in organizations in order to facilitate learning. Dixon (1998) says that hallways discussions are ways to make meanings accessible. According to Dixon are hallways:

\[(\ldots) \text{as the term is used here, are intentional system wide processes organizations employ to facilitate the construction of collective meaning. There are wide varieties of processes that can serve this function. Dialogue groups, network meetings, town halls; \textit{whole system in the room} processes (\ldots)\]\n
(Dixon 1998:50).

Accordingly, organizational learning is a collective process that starts with someone in the organization. By discussing with others, a joint understanding can/will arise. It is important that all the members (i.e. relevant members) of
the organization are given fair opportunity to discuss problems related to their work. Söderström (1996) presents a similar view when discussing the social psychological explanation model. According to his view, the way to increase knowledge is through dialectical interaction between individuals and their environment. There are important actors that will together influence the rest of the members of the organization and as a result change occurs in individuals’ cognitive maps (Leonard-Barton 1995). But even if the influence is often from strong actors within the organization, all organizational members are responsible for learning and organizations need to be organized in a way that encourages learning, not only as a one way deal. Learning should be a constant way of thinking by all the members. Leonard-Barton (1995) argues that knowledge creation, as an outcome of discussion, is as important as managing the finances in organizations (cf. Steward 1997 or Edvinsson & Malone 1998 for more discussion about the intellectual capital).

3.3.1 Interpretation, learning and cognition

Over the last two decades there has been an explosion of interest in understanding the concept of cognition, and there has been a wide range of theories explaining the concept (Cannon-Bowers & Salas 2001; Hodgkinson 2001; Walsh 1995). Cognitive theories developed as a consequence of the weakness of behaviorist theories to explain or conceptualize how individuals develop understanding or autonomy. It has been the need to be able to explain better learning processes instead of seeing learning as stimulus-response and behavioral change. Behaviorism is based on observable change in behavior and it is believed that behavioral patterns must be repeated until it becomes automatic (Maier, Prange & Rosential 2001).

Learning is seen as a dynamic process (Crossan, Lane & White 1999), and it can be said that one of the central challenges to every organization is strategic renewal (Hamel & Prahalad 1994) to be able to survive in the future. The challenge is to handle “old” knowledge, (exploitation), as well as new knowledge, (exploration) in some kind of a balance. Based on Crossan et al. (1999), three levels of how organizations learn can be discussed, individual, group and organizational. Within each level there are several processes that bind together those structures. Crossan et al. call those processes intuiting, interpreting, integrating and institutionalizing. Intuiting and interpreting occur at individual level, interpreting and integrating occur at group level and integrating and institutionalizing occur at the organizational level. They define the four I’s as they call them as follows (Crossan et al. 1999:525):

- Intuiting is the preconscious recognition of the pattern and/or possibilities inherent in a personal stream of experience. This process can affect the intuitive individual’s actions, but it only
affects others when they attempt to (inter)act with that individual.

- Interpreting is the explaining, through words and/or action, of an insight or idea to one’s self and to others. This process goes from the preverbal to the verbal, resulting in the development of language.

- Integrating is the process of developing shared understanding among individuals and of taking coordinated action through mutual adjustment. Dialogue and joint action are crucial to the development of shared understanding. This process will initially be ad hoc and informal, but if the coordinated action taking is recurring and significant it will be institutionalized.

- Institutionalizing is the process of ensuring that routinized actions occur. Tasks are defined, actions specified, and organizational mechanisms put in place to ensure that certain actions occur. Institutionalizing is the process of embedding learning that has occurred by individuals and groups into the organization, and it includes systems, structures, procedures, and strategy.

What can be understood from this discussion is that there is a need to explicitly discuss issues if kind joint understanding is going to take place within groups and organizations (cf. Dixon 1998).

Cannon-Bowers and Salas (2001) also discuss cognition but there is more about how and what is shared. They ask four questions in a bid to understand what it means to share cognition. First they ask what is shared. Then they ask what does shared mean? Third they wonder how shared should be measured, and lastly they wonder about what outcomes can be expected that shared cognition will affect. Cannon-Bowers and Salas show that shared cognition is needed to explain and understand team performance, and to understand the interaction between individuals. By understanding shared cognition better we can better understand and predict effectiveness of a team.

Cannon-Bowers and Salas (2001) start to discuss what must be shared and pinpoint four types of issues that need to be shared to be able to talk about shared cognition that is task-specific knowledge, which is rooted into some kind of a shared understanding of how to conduct some specific tasks. This type of knowledge, they say, can be done without communication and can only be used in tasks that are similar. It is task-related knowledge which means that team members need to have common knowledge about more general task, like how to work together with quality issues, etc. Performance is maximized when teammates understand knowledge better and focus on the need to understand each other – their preferences, strengths, weaknesses and tendencies. It is important to know and (re)use each other’s competences in the best way. The
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The last point mentioned is shared attitudes/beliefs that pinpoint the need of similarity in a team if the team is going to be able to function.

Then Cannon-Bowers and Salas (2001) ask what 'shared' means. They come up with four types of what needs to be shared if we are going to be able to talk about shared cognition. For example does it include the disparate knowledge we have about things and nonetheless we still understand even without knowing each other’s competence the way a nurse and surgeon need to understand each other. Next, they mention that similar or identical knowledge means that some individuals need to have similar or in some case identical knowledge about some common issues to be able to draw common interpretation and they cite the relation between captain and a co-pilot. The third type is compatible or complementary with every member of the having some specific knowledge about their special issues and together the teammates’ shared knowledge will lead to some kind of complementary understanding or knowledge, i.e. R&D project groups. The fourth type is distributed knowledge which has it focus on how effectively knowledge is distributed among members.

Cannon-Bowers and Salas (2001) want to understand how shared cognition can be measured. They propose two ways; first by evaluating the structure of team members’ knowledge and second by evaluating the content of team member’s knowledge. Even if this could be measured, it is in no way easy. In the words of Cannon-Bowers and Salas two individuals agreeing on something could actually be wrong in some or all of the aspects that are involved.

The question that is asked by Cannon-Bowers and Salas concerns outcomes that could be affected by shared cognition. Three perspectives are raised about this topic. First, they have found several trends in the literature that shared cognition will lead to better questioning due to better organizational performance. Second, it is stated that shared cognition will lead to better team processes, which will/can in turn lead to better task performance. Lastly the outcome is seen as more generic based on motivational factors like, cohesion, trust, morale, collective efficacy and satisfaction with the team.

Even if this model by Cannon-Bowers and Salas (2001) has its drawbacks – they raise a lot of questions without answering them – it is a conceptual model of cognition, and it can be used to better understand how cognition comes about and how to comprehend the interpretive process of learning in groups.

Another important issue concerning how to understand how organizations treat discussions and interpretations is to understand how individuals in organizations are encouraged or hindered when using their cognitive schemes. Single-loop and double-loop learning discussion, (Argyris & Schön 1978; 1996) has a strong relationship to the cognitive perspective. Single-loop is the capacity to discover and correct failure i.e. lower-level of learning. Double-loop learning occurs when errors are detected and corrected in addition to questioning and modification of existing norms, procedures, and objectives. Argyris & Schön (1978; 1996) say that individuals are hindered to use double-loop learning due to cognitive schemes to be found in organizations.
Accordingly, there are some determined ways of how individuals solve problems, called theories of action. Two sets of theory in action can be discussed; espoused theory of action and theory in use. Accordingly, espoused theory of action comprises individuals’ beliefs, attitudes, and values, while theory in use is actually what people do. What is problematic, according to Argyris and Schön (1978; 1996), is that there is a mismatch between what individuals believe and what they actually do.

Argyris & Schön (1996) say that there are two models of theory-in-use, Model I and Model II. The difference between those two models is that they inform different kinds of action, which in turn will lead to different kind of learning. It is when individuals are embarrassed or threatened by something that theory-in-use model I is used. Theory-in-use model II seeks to alter views in order to base them on the most complete and applicable information feasible, and to build a situation people can become internally dedicated to. Model I stresses individual control and winning is in focus, i.e. egocentric motives. One should not express feelings or use rational argument. Model II stresses that everyone should actually be involved and decide what should be done or not to be done. It is a win-win situation, and emotions should be in place. Model II emphasizes the cognitive intellectual aspects of action. Model II is built up by three variables; valid information, free and well informed choices, and inner commitment or engagement (Argyris & Schön 1978; 1996; Argyris 1999). Learning is a process of knowledge creation based on one’s experience of how this creation should happen. Sometimes cognitive maps have taught individuals to solve an assignment in collaboration with others, focusing on a win-win process (model II) and sometimes individuals have learned by experience that there is a stronger need to defend oneself and therefore individualistic action is to be preferred, (model I). As Klimecki & Hermann (1998) point out openness and interaction within groups are the prerequisite to changing a complex social system:

(...) change in complex social systems is not so much the result of conscious design, but rather emerges out of the actions and interactions of the organization members.

(Klimecki & Hermann 1998:525).

Accordingly, learning happens as a dialogue aimed at changing cognitive structures (Dixon, 1998). When all parties in organizations take part in the discussions, change can happen. Today’s learning is based on different premises than learning before. A first premise is that there are many answers to one problem and there are many ways to reach a goal, and there are many different ways of defining a problem, based on who defines it. If there is going to be a learning environment within an organization, then there is a need to understand that people solve problems, based on their and others’ knowledge. Learning is to be found in the dialogue between people, connected to the context they are in, and, as Dixon (1998) says, it needs to be intentional, and
have a strong relationship to success and failure of change effort (Ford & Ford, 1995). The question is how to approach the environment? Do we think that we can change it or are we like slaves forced to follow the rules of the environment (cf. de Witt & Mayer 1998).

Dixon points out that we need to see learning as synonymous with interpretation, analysis, and synthesis. Learning is not something that one could believe is there from the beginning; learning must be a part of the work, as a process. It is a verb not a noun. Organizations need to be conscious of the need of continuously thinking and acting as a learning organization. Accordingly, learning is the construction and reconstruction of meanings and it is a dynamic process. This is in line with Achtenhagen et al (2002a), Achtenhagen et al (2002b), and Bengtsson, et al. (2007) who stress that the process of continuous change is of more interest than just looking at one specific time moment; the focus should be on organizing instead of the common view which is organization. Dixon’s definition of organizational learning pinpoints the holistic approach of interaction in the whole:

\[
\text{(Dixon 1998:6)}
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Dixon’s definition shows that the process of learning needs to be conducted at all levels from individual to the system. The definition says something about the continuous thinking and that it needs to satisfy more than just the learner. It is about how we as individuals make sense of the world in collective settings. The main focus is on the constructionist’s view of cognition, and our understanding is always subjective, and can never be objective because of our own references.

Integrating new, local information into organizational context is important to understand if there is a common understanding of how this information is interpreted into common knowledge. Berger & Luckmann (1979) call this process a construction of reality. Individuals can only understand the information they face within the context they are working and by the history they are coming from. According to Dixon (1998), it is too common in companies to keep information locked and not available to other departments and individuals. It is important to construct a common language and culture of free communication within organizations to help information flow between individuals and departments. What could be understood from Dixon’s (1998) discussion is that members of an organization should be more eager to give information than holding it back, i.e. by using different kinds of jointly used databases or forums for discussions and debate.

But getting information and making sense out are two different things. When collectively interpreting information it is not a question of having a consensus view, it is more about understanding each other, i.e. being able to see others’ point of view (Dixon 1998). No one in an organization has all the
answers, but together members of an organization can and will come to an understanding about what is discussed at any given time. Sometimes individuals need to take others perspective to be able to understand what they mean. Granberg and Ohlsson (2000) agree and say that it seems to be rarer that work today is adapted to only one person’s knowledge.

3.3.2 Summary of interpretation and communication in a learning situation

There are several conditions that need to be fulfilled if individuals are going to be able to interpret information together. Continuous learning is important if members of an organization are going to be able to move the company work forward, as well as increasing their own competence. If an organization is going to work as a collective, freedom, equality, and respect are important factors. Hierarchy needs to be broken and more democratic principles be adopted, i.e. all members are important and regardless of rank or status they all need to participate. Members of an organization need to have an open mind and respect others’ competence and ought to confirm others’ personal competence even when disagreeing with them. It is important to explicitly point out one’s own position. By explicitly pointing out what one means can be said to have two sides; first to be open and clear of what you mean and second whoever teaches will learn twice. Last but not least members need to be able to change position when convincing data and rationale are offered by others.

Dialogue is more important than monologue if there is going to be a joint understanding. In all organizations there are individuals and groups. Within every organization communities or groups can be spotted. People form alliances, i.e. in-groups and out-groups. This is an important understanding of organization i.e. within every organization there are several different communities of learners that need to create a forum or organization that is able to have a discussion or dialogue that can create shared meaning or understanding of different issues. Schein (1988) and Isaacs (1999) discuss the importance of the dialogue in collective learning. As Isaacs points out dialogue is a unique form of conversation with the potential to improve collective inquiry processes. If companies are going to get something done, coordinated actions are needed among the collectives to be able to change. Both Isaacs and Schein differentiate between dialogue and discussion, in the same way as Dixon (1998) does. Dialogue is a way to express meaning and make thoughts accessible to others, while discussion is more characterized of conviction. According to Argyris and Schö̈n (1978), dialogue is for Isaacs (1993) something of triple-loop learning (Meta learning). It is important to explicitly say what you think if you are going to have a creative dialogue with your co-worker. By focusing on the dialogue the focus is on the organization as a knowledge system.

To add to the model it is not enough to only get information from different sources. Information needs to be discussed openly in the form of interactions
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and dialogues. Only then can information be collective knowledge within the context which it is supposed to be in.

3.4 Temporary organization as a learning arena

Today we know that organizations use temporary organizational forms or project organizations more today any time before. It seems that there is a need to break away from the permanent organization to be able to handle a variety of problems that the focal organization is not able to tackle (Müllern & Elofsson 2006; Macheridis, 2001; Packendorff 1995; Bakka & Fivelsdal 1983). Why has there been such an increase of the discussion nowadays of this new form of organizing? Ekstedt et al (1999) point out that the discussion of project in academia is actually a new phenomenon. It has been said that because of the change in the international environment (Christensen & Kreiner 1991), we are seeing new type of organizations instead of bureaucratic organizations. Increased work is done in project organizations or temporary organizational forms. Work that has been done within traditional industries is declining in favor of other types of organizations (Ekstedt, et al. 1999). Organizations of today are characterized by more complexity in production, more flexibility, and teamwork with a surge in temporary projects focusing on customer satisfaction.

Ekstedt et al. (1999) see organizations as located along two dimensions which they call action renewal and knowledge renewal. (Fig. 3.1)

Using Ekstedt et al.’s (1999) definition above, the temporary organization that is studied in this dissertation is characterized by discontinuous action and generation and phase-out of knowledge. Accordingly, the focus of the analysis will be on how well generation and phase-out of knowledge as a discontinuous action are to be seen. Packendorff (1995) describes a project as something unique only done once with a clear timeframe specially regarding date of delivery, taking into account at least two goals: the use of resources and quality, and a set of complex and interdependent activities. This would be inline with Ekstedt’s et al. definition that:

(*) a project is a major and significant undertaking or task to be fulfilled within a limited time and with given set of resources

(Ekstedt et al. 1999:55).
Traditionally the project discussion has been built up by normative aspects, and has mostly been seen as a tool used by consultants and engineers. It has to do with how a project is planned, what kind of control is used while working with the project and the evaluation of the project in the end (Packendorff 1995). Even if there is no common definition there is a common understanding regarding four important factors that can describe a project (Macheridis 2001). These are, goal, predetermined end date and date of delivery, predetermined budget or direction of resources, and the temporary but fixed nature of the project. As this dissertation is more interested in processes connected to human factors and not to mapping different stages in the project, I find it necessary to focus on theories other than on those that could be characterized as traditional project theories.

A project can be undertaken by clear thought strategy but it can also be started because the reasons are unclear, where the focus is more on the process than on outcome. Lundin and Söderholm (1995) say that to understand a temporary organization (Lundin and Söderholm use the word temporary organizations instead of project organizations and I will be using both terms interchangeably in describing and the krAft project which is both a temporary organization characterized and a permanent organization since it shares the four characteristics of time, task, team and transition. In temporary organizations, time is regarded as scarce, linear and valuable; some kind of organizing is

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**Figure 3.1: Combining type of action and knowledge process phase. (Ekstedt et al (1999:192)).**

![Diagram showing the relationship between action and knowledge phases](image)
needed to handle time. What is seen as important in the discussion is that task is connected to social processes; the project formulation and definition is done by interaction between people. An important part in the process is to decide that the definition if the task is to be repetitive or unique. Team is the third basic concept in Lundin and Söderholms framework. Temporary organizations are designed by people and around people. Two things are actually important, the relation within the team and the relation between the team and the environment. The latter called transition by Lundin and Söderholm (1995) entails that temporary organizations need to accomplish something, actual or something that is viewed as possible or wanted.

The word project is well rooted in our organization discourse to the extent that a glance at the literature may give the impression that its meaning has become crystal clear. But this is the subject of debate. Projects can be very different from each other; they can be everything from the building of a small factory to the building a pyramid which took decades to complete. It can be a group of people in an PR firm trying to come up with a name for a new candy; it can be a project within R&D department or between R&D departments working with an unknown or known problem, or it can be a learning project. It can be a project within one organization with the aim to renew the organizational structure. Projects can be well defined from the project owners but they can also be differently formulated. This means that a project can be undertaken by clear and well thought through strategy but it can also focus on the process of doing something instead of focusing on the outcome (Ekstedt et al. 1999; Lundin and Söderholm 1995). A project can be conducted by one person, several persons within one company and it can also be conducted in inter-organizational relationship divided into many subprojects, etc. It can be said that a project is somewhat a social construction (Berger & Luckmann 1979), made by interaction between individuals, organizations and society (Wenger 1998). It is defined as a one-time task and it can be both unique and repetitive. A project can be recognized by at least four phases; the definitions phase, the planning phase, the carry-out phase, and the evaluation phase A project can be recognized by clear definitions of what resources should be used, for instance; people, time etc., and then the project is something that has a relation to the focal organization in the form of people, resources, goals etc. The difference between an inter-organizational project and intra-organizational one is the role of management; i.e. who does decide and why or why not. An inter-organizational project is collaboration between parties and is not necessarily owned by one of the members of the project.

The temporary organization investigated in this study is not a traditional project or organization. This temporary organization deals with knowledge work. Leaning about a traditional project, Wenger (1998) says, differs from Community of practice (CoP). Wenger’s point is that CoP includes actors sharing some similar specialization(s) and job functions. It can be said then that CoP differs from traditional project since it has the character of a learning
community (Lave & Wenger 1991; Brown & Duguid 1991). According to CoP, practice is an important factor when understanding how and what learning happens within the group. Based on this understanding of the difference between CoP and a project, the framework of CoP is going to be used to better understand learning in temporary organizations. As the temporary organization can be seen as CoP where learning merely comprises in practice.

3.4.1 Learning and group processes situated in practice

It is important to understand the project as a form of social community (cf. Wenger 1998; Lave & Wenger 1991), comprising people sharing the same interest, values, and/or aims. Accordingly, it is not the normative aspects that this dissertation is keen to understand. It is the process of learning where the context is inter-organizational, and social in nature.

Lave and Wenger (1991) are the first to come up with the concept to describe how groups of individuals share the same interest, values and/or aims, and collaborate. Through their concept of situated learning and legitimate peripheral participation with apprenticeship, they put forward a different view of learning that just supplemented the cognitive approach. What they want to see is learning from a different perspective.

The notion of situated learning now appears to be a transitory concept, a bridge, between a view according to which cognitive processes (and thus learning) are primary, generative phenomena, and learning is one of its characteristics. There is a significant contrast between a theory of learning in which practice (in a narrow, replicatives sense) is subsumed within processes of learning and one in which learning is taken to be an integral aspect of practice (in a historical, generative sense). In our view, learning is not merely situated in practice – as if it were some independently reifiable process that just happened to be located somewhere; learning is an integral part of generative social practice in the lived-in-world.

(Lave & Wenger 1991:34f)

What Lave and Wenger (1991) say, like many other scientists, is that there is a lack of studies focusing on learning as situated and contextual phenomena (Karlsson 2004; Engeström 1999; Lave & Wenger 1991). The Community of practice concept is interesting for several reasons. Firstly, because research within organizational studies shows that there are constantly formed groups of people within organizations to exchange information or knowledge, accomplish a task or something else (cf temporary organizations). Secondly, because research on group work has not been focusing on inter-relationship, the focus
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has been on intra-relations within one focal company. Thirdly, it is interesting because learning is seen in the context of our lived experience when participating in a community within our practice. Nothing comes out of nothing; individuals are bound by their history, their practice and the learning context.

Teigland (2003) shares this view. She points out that even if networks or different types of collaboration have been growing in interest within practice and scholars, there is still a limited understanding of them. In her dissertation Teigland (2003) develops CoP and calls it network of practices and she defines network of practice as:

A set of individuals connected together through social relationship that emerge as individuals interact on task-related matters when conducting their work.

(Teigland 2003:12).

This definition focuses on understanding how groups of people develop and come to some agreement(s) of understanding and how groups conduct their group-work. First the social relationships are important which can be conducted by face-to-face relations, but they can also be formed by interaction via IT technology. In inter-organizational projects or in relationships the interaction will not take place because of general interest but it begins because projects are supposed to achieve some specific tasks, such as improving customer relationship, improving a product, looking at quality issues etc. But it can be said that those who will join the project do have some kind of interest in getting the work done or maybe only as a mean in their carrier.

Brown and Duguid (1991) help us understand why individuals become members of community of practice by focusing on three perspectives. That is done through narration, collaboration, and social construction. It is through narration of stories that individuals within a group make sense of what Brown and Duguid call non-canonical or unknown situations. Orr (1991) shows this phenomenon in an ethnographic study of Xerox service personnel. Even if there are handbooks and rules that the technicians are supposed to use in their work, she finds that the technicians use informal systems in their way of trying to solve the problem. Suchman (1987) and Orr (1991) show that even if a firm tries to map some kind of rules in handbooks, handbooks are not used because many situations which people meet in their daily work are unique never seen before, and individuals need to understand the problem in the current situation and not only by reading abstract solutions from handbooks. The second one, collaboration, is the fact that understanding a problem is never an individual process but a collective one. Brown and Duguid's (1991) notion here is that learning is bound to take place. The third perspective, social construction, has to do with the fact that no one individual has all the knowledge and will have to get information from others in the group to be able to solve a problem. By discussing different aspects they will construct their own reality.
Mulholland, Zdadhal, Domingue & Hatal (2000) agree with Brown and Duguid (1991) and say that organizational learning is first and foremost conducted within a CoP as a collaborative activity based on history and the context that it happens within:

(... organizational learning primarily occurs within a community of practice. (...) Secondly, organizational learning occurs in collaborative activity, which requires an appropriate collaborative structure. (...) A third common feature of organizational learning is the reuse and reworking of past experience and solutions”.

(p. 337-8).

Organizational learning is often different from how we regard traditional learning when training employees by traditional methods, and learning should be done through practice, just as much as in traditional learning forums. It could be understood that to teach individuals something new, both theory as well as practice are necessary (Mulholland et al. 2000). There is no difference if learning occurs in the order of theory-then practice or practice-then theory, but both will have to be used if learning is going to take place with the focus placed on learning by doing.

According to the Communities of Practice (CoP), learning takes place continuously in spontaneous groups of people (McDermont & Snyder 2002; Wenger 1998; Lave & Wenger, 1991). The CoP is a set of relations between people and activities. They have a time dimension and exist more or less in relation with other tangential and overlapping CoP. In these communities “old” members will teach newcomers. The social dimension has a strong connection in this approach. Every member starts as a peripheral member, but will only be a full or “good” member if he learns the ground rules of the CoP, i.e. he will become socialized. Lave and Wenger (1991) see CoP as one of the most important sources for the creation of knowledge within groups.

People who share the same interests or knowledge can build their own CoP. They thus become a group of people who believe that they have something to gain by sharing information. A CoP is not separated into divisions or positions and there is no clear organization. Those who share the same interest in some way can a form CoP, which can be formed spontaneously. These communities can be very hard to define in the sense of traditional organization (Wenger 1998). Learning will be in this way something of a collective process because people interact with other individuals who are on the same wavelength and that is why learning can and will take place.

Wenger (1998) says that the CoP is the company’s most comprehensive and dynamic knowledge resource and that they are the foundation of the organization’s capacity to know and learn. Wenger (1998) calls his theory “social theory of learning”. Learning is caught in the middle of two axes. The vertical axis focuses on social structures and situated experience. The horizontal
3. Theory

axis has to do with practice and identity. Four additional diagonal axes are then added to this but these are not as extreme as the other two ones.

![Diagram: Refined intersection of intellectual traditions (Wenger 1998:14).]

**Figure 3.2: Refined intersection of intellectual traditions (Wenger 1998:14).**

Community of Practice, according to Wenger (1998), explains something of a social interplay that is necessary to learning and that is what Wenger (1998) calls social theory of learning. CoP includes four elements, community, practice, meaning, and identity. A social theory must:

(i)nTEGRATE THE COMPONENTS NECESSARY TO CHARACTERIZE SOCIAL PARTICIPATION AS A PROCESS OF LEARNING AND OF KNOWING.

(Wenger 1998:5)

What Wenger (1998) point is that learning is a conceptional framework in the form of social process to those who are participating in it.

According to Wenger (1998), people are members of several different communities that give one social commonality. Communities, for example, include family but they could also be people that meet for a drink every Friday afternoon after work. The focus in this perspective is placed on the informal belonging within organizations. Within communities participants have different roles; some are core members (old-timers), while others are new (peripheral participants). But nothing is fixed over time. Members change roles during the life time of the community or during their time as members of a community. What decides the position is how active the member is. Wenger (1998) defines positions as:
a way of talking about the social configuration in which our enterprises are defined as worth pursuing and our participation is recognizable as competence.

(1998:5)

All individuals are unique with their own experience and self, and it is through discussions and participation in community that individuals learn to change and form their identity which constantly changes when taking part in discussions. By learning from others, and teaching others, a feeling of commonality will rise and there will be a sense of belonging:

It is through discussions and negotiations the community agrees on what issue or agenda should be followed. The context changes and reshapes because new members attend and old members leave. It is through discussions that the community shapes some historical and dynamic framework which members can act upon. By communicating the members of the community will learn that

all communication is like art. It may fairly be said, therefore, that any social arrangement that remains vitally social, or vitally shared, is educative to those who participate in it. Only when it becomes cast in a mold and runs in a routine way does it lose its educative power.

(Dewey 1916:1)

Meanings are not something that is within the individual or something that is going to be found somewhere out there. Meanings shape and reshape in dynamic relations between individuals in a given context (Wenger, 1998).

Wenger (1998) says that members of CoP are in the mode of constantly negotiating the meaning of their organization. Negotiation occurs primarily through the convergence of two processes, reification and participation. The idea of reification is about how members of a community treat abstract concepts as object. Wenger (1998) points out that the process of reification does provide a shortcut of communication to direct the negotiation of meaning. Participation has to do with being active in a community. Participation shapes our experiences as well as those communities we are members of. It is a complex process of acting, speaking, thinking, and feeling.

An important issue with Wenger is the duality between participation and reification. Both cannot be seen separated from each other. They are distinct and complementary. Individuals need participation to produce, interpret, and use reification as

a way of talking about our (changing) ability – individually and collectively – to experience our life and the world as meaningful.

(Wenger 1998:5)
3. Theory

Learning happens as old-timers integrate with new-comers. It is in this meeting between old and new that new knowledge will evolve. Organizations are characterized by shared repertoire, mutual engagement, and joint enterprise. An organization is filled with different procedures, rules, aims, and visions that people within different communities will adopt according to what fits their own context and interest. Accordingly, it must be some freedom within every organization to interpret and act upon organizational rules and regulations (Wenger 1998) as

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a \text{way of talking about the shared historical and social resources,}
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\text{frameworks, and perspective that can sustain mutual engagement in}
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\[
\text{action,}
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Communities of practice are communities of informal networks of people who have similar work-assignment (Steward 1997; Wenger 1998; Lave & Wenger 1991). People can change information, and learning within the community will increase. Teigland (2003) takes this further by discussing the change in knowledge creation and knowledge sharing within and between organizations. She sees the CoP in the similar framework of Steward and Lave and Wenger but she concludes that there are other types of practices forming today. She talks about intra-organizational distributed network of practices, intra-organizational electronic network of practices, inter-organizational distributed network of practices, and inter-organizational electronic network of practices. She points out that knowledge management systems have been focusing traditionally on the distribution of knowledge within the organization (intra-organizational) but her study empirically shows that individuals need to go outside the focal organization to increase their knowledge; i.e. get new insights.

A community of practice is about the ways in which people naturally work and jointly take part. Communities of practice are groups of people who share similar goals and interests. In tracking down these goals and interests, they employ common practices, work with the same tools and communicate in a common language. Through such common activity, they come to hold similar beliefs and value systems. Even if Wenger (1998) and Lave and Wenger (1991) see Communities of Practice as informal networks of people and that communities of practice could not be seen as a project team or as temporary organization, the idea of the phenomenon can be used to better understand those phenomena. When people meet with each other they will probably build some kind of a network of practices (sub-groups) where similar goals and interests evolve and are shared by members if work is going to be successful. And another thing is that the members of the project belong to different communities and as Teigland (2003) shows members will go outside the group or the focal organization to get information which is unknown to the individual. This argument is important to understand how the group will come to a conclusion of a specific matter in a specific context. Project groups are also
made up of people who need to communicate and share their meanings if they are going to have something done. The group will also create some kind of shared identity, or create some communalities or consensus around issues or meanings. Because of this the CoP can make us understand project better than not adding the social dimension to it.

Katzenbach and Smith’s (1993) discussion of teams falls within the same perspective. They see teams as a group of people with a common goal, interdependent work, and joint responsibility for results. Teams are responsible for certain products and services connected with common goals and specific results, but team-work can lead to isolation and team myopia (McDermott 1999). McDermott says that to overcome the problem of isolation within the team, team members will share and gather knowledge from different communities of practice to be able to manage tasks within the team. By using the framework of the CoP with team discussion or project, better understanding of how something develops or does not develop is more discernible.

3.4.2 Summary of temporary organizations as a learning arena

The discussion above shows that the concept of practice and communities is an important factor to understand learning in temporary organizations. The project or the organization should be defined from the beginning but the result or the outcome will be built on how well the members will discuss explicitly each other’s understanding connected to their practice and the context it happens in.

But we cannot get a clear understanding of how inter-organizational grouping develops without having an understanding of the social dimension. People contribute with their own knowledge, listening and learning from others within the group. It is a social interplay connected to individuals, social and environmental factors.

Accordingly, temporary organizations are forming all the time. Those temporary organizations are supposed to conduct something, in a fixed time frame. The interplay and the context are important when understanding the process of knowledge sharing that will lead to some kind of learning.

3.5 Agreement process in inter-organizational context

When individuals come together some kind of an agreement or contract is needed if anything is going to be done. In temporary organizations, or projects comprising members from different organizations, the no one with the obvious
authority leads the group. Agreement is needed if joint understanding is going to be reached. Individuals that come into this context with their own frame of reference and understanding of problems and solutions that are not the same problems and solutions as others have within the group, express the need to agree on what issues should be in focus (cf. Tomicic 2001; Dewey 1997/1910).

It is important to look at agreement in a micro perspective instead of macro perspective. This means that individuals are in focus as well as the process that leads to some kind of joint understanding about problems or issues that are tackled. This would be in line with what Johnsson, Melin & Whittington (2003) say about studies in strategy:

*With the application of social construction and socio-cognition perspective, process research has demonstrated the potential to capture micro aspects of strategic actions made by human beings*


### 3.5.1 Agreement as cognitive and social phenomena

Child and Rodrigues (2003) point out that social identity is an important issue for organizational learning, and they see at least two factors that are of importance; nationality and occupation. They say that organizations can have identity as well as individuals, because both of them are unique and they are independent of each other. The problem, raised by Child and Rodrigues (2003) is how to cope with the situation when heterogeneous individuals are coming together in projects that are composed by people coming from different organizations, i.e. inter-organizational. As can be understood, this can also happen within groups that are having the same nationality because the culture in one organization can be totally different from another. In this way “two or more corporate nationalities” will meet and will have to interact despite differences (c.f. Wikström and Normann 1992; Normann 1991; Hansson 1988; Schein 1988; Deal and Kennedy 1983).

If a project is going to accomplish something, some kind of an agreement is needed to be reached, and that could be seen as a cognitive process and that process will take place within a given social context, i.e. it is a social phenomenon, based on contextual factors (cf. Wenger 1998 or Lave and Wenger 1991). Organizational learning in this sense can be regarded when joint understanding has developed. By meeting and interacting members will jointly agree on some of the issues that are important to discuss continuously. By agreeing on what should be on the agenda new round of meetings and

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4 “Social identity is defined as that part of the individuals’ self-concept which derives from their knowledge of their membership of a social group (or groups) together with the value and emotional significance of the membership” (Tajfel 1982:24). Tajfel’s point is that behaviors are not always a result of individual preferences except social context in intra-group relations matter.
interaction will take place which can lead to joint understanding. Child and Rodrigues (2003) point out that:

*Mixed identity teams can offer a rich mix of expertise, experience, and perspective to the learning process, but for this potential to be realized conditions of trust must prevail both within the team and in its relationship to management.*


Bengtsson et al (2007) point out that even if the discussion of agreement seems to be a constant struggle of negotiations to agree upon, it does not have to be the case. Agreement can also bee seen as something that is already agreed upon (March and Olson, 1989). Bengtsson et al come up with a typology of agreement; regulative agreements, cognitive agreements, moral agreements and imaginative agreements, as “tools to discuss and understand the basic building-blocks of agreements” (Bengtsson et al 2007:130). Bengtsson et al’s argument centers on the focal organization not on inter-organizational aspects. In their study, they say that an agreement is a mutual commitment between two or more individuals to follow the agreed upon matter. According to this definition, even if members of a group do not change their underlying beliefs, they can agree upon something or agree to act upon something of a behavioral and not necessarily cognitive character. In focal organizations this does not have to be a problem but in inter-organizational relationship it can be problematic as members can leave the organization much more easily than employees can leave their employer. This is supported by Tomicic (2001) as she points out that agreement in a management team does not necessarily require consensus or change in the belief system. It is a social phenomenon.

Much of the literature within the field of social psychology which focuses on social influences is concerned with how power is exercised by a person or a group in an attempt to influence behavior. This kind of influence is more interested in behavioral change than in changing attitudes (Worchel, Cooper & Goethals 1991). According to this perspective, agreement does not result in a change in cognition but just acceptance of getting the work done; it could be seen as some kind of commitment. But the behavioral perspective is only one side of the coin. The other side several studies point out that there is a relationship between task schema congruence and performance, and many scholars discusses the value of the shared cognition (Cannon-Bowers and Salas 2001; Mathieu, Heffner, Goodwin, Salas & Cannon-Bowers 2000; Cannon-Bowers, Salas & Converse. 1993).

Schein (1988) says that if groups are going to work effectively or are going to come to some agreement, some kind of consensus is needed. Even if there is a difference between Tomicic and Schein, there are similarities as well. Tomicic focuses her study on how management teams work where every member is of the same rank, except the CEO who will probably have a great impact on the agenda. The management team is in the same company, where the company’s
3. Theory

overall goals are already accepted by the members. The agreement process then could be viewed as a political process where different coalitions and groupings within the group are a matter of facts. So it could be seen as a coalition process. Schein on the other hand focuses on internal structure of the hierarchical organization and the relations between different levels. It could also be understood as a process of coalitions and a political process. The similarity between Tomicic and Schein lies within the fact that both of them discuss intra-organizational relationships.

Shared cognition is the underlying aspect of agreement and is a social activity which has the main function of creating common understanding of reality. Accordingly, not much attention has been given to the social process (Tomicic 2001) which has a strong connection to the cognitions process (Canon-Bowers and Salas 2001). Dewey’s (1997/1910) knowledge parameters only focus on task-specific and task related issues without discussing those parameters that have more to do with humans and social factors, which Cannon-Bowers and Salas (2001) discuss.

Weick (1995) points out that individuals become part of the environment they are acting in, on enactment. It is an object of making sense or seeking structure. Sensemaking, according to Weick (1995), is a social and a cognitive process which can be understood as a factor that never starts because people respond reactively to new information. It is a loop. It is a question of how new information fits into “old” knowledge.

An important aspect is the way we form our attitudes when interacting with others. Granberg (1998) says that what is central for a cognitive process is a strong correlation to individual tasks which individuals identify, and how those tasks are interpreted and identification of action in that specific situation. Granberg’s point is that the cognitive process is an active process looking for possibilities and hindrance.

Campione (2002) shows that if research collaboration is going to be a success trust between parties is vital. Five areas should be in focus if collaboration is going to function. The contract should be defined where for example responsibility, terms, management rights, ownership etc. are explicitly brought up. The project that is chosen should be understood by all parties as the right project. Cultural differences should be respected. Only those things that are needed within the project should be asked for. Last but not least Campione points out that those parties within every project should know what they want. What Campione (2002) is trying to exemplify is to take into account both explicit facts about the project as well as also understand the social factors which will be involved when people meet in new organizational forms, such as projects, or ad-hoc organizations.

After this short discussion about agreement as a social and cognitive process, two main things could be seen as important. Early theories almost overlook cognitive and social factors, emphasizing mainly behavioral change, (cf. the discussion about learning where earlier theories did not focus on cognition but
rather the focus was on behavioral aspects). More recently attention has been shifting to better understand the whole, and as a result cognitive approaches have assumed the same degree of significance as the behavioral ones. But to bringing cognitive and approach behavioral approaches together is not enough. We need to understand the context and practice (cf. Lave & Wenger 1991; Wenger 1998). Agreement can be both behavioral which will not change underlying attributes, and social cognitive, which will have an impact on people’s schemata or conceptual maps (cf. McCaskey 1998). If agreement is only based on a behavioral perspective, then there is a risk that the outcome will not be as good as if there has been a change in one’s mind. The reason could be that people may not believe in what they are doing and as a result they might change their cognitive understanding.

3.5.2 Agreement as a Political and Power struggle

Many take part in political discussion in organizations, and Mintzberg (1983) notes in the preface to his book the importance of power in organizations:

Power in and around organizations is a subject which interests all kinds of scholars – management theorists, sociologists, political science, economists, lawyers, philosophers, anthropologist – not to mention the practitioners themselves who work in organizations.

(Mintzberg 1983:xv).

This is also noted by Hardy and Clegg (1996) who say that it is not strange that there is some confusion when trying to define power:

It is no wonder when we consider the many different voices that have spoken upon power.

(Hardy and Clegg 1996:636).

Power is often related to how one social actor can defeat conflict and get his will done Pfeffer (1981). Maybe the most quoted definition the literature is the one by Dahl in 1957 (in Pfeffer 1981) which sees power:

as a relation among social actors in which one social actor, A, can get another social actor, B, to do something that B would not otherwise have done.

(Dahl 1957 in Pfeffer, 1981:3).

Mintzberg (1983) tries to touch upon this matter from a management theory point of view and his definition of power is
3. Theory

_the capacity to effect (or affect) organizational outcomes._

(Mintzberg 1983:4).

Fiol, O’Connor & Aguinis (2001) uses similar definition and say at the same time that they are following other researchers in their definition which sees power as the “ability or potential to influence” (Fiol et al. 2001:224). As we can see from these few definitions, power discussions often focus on just one person, often within hierarchical organizations. But the question is then how it looks like within organizations which have no hierarchical structure and no individual within the organization with the formal authority to decide.

Mintzberg (1983) discusses two main influences on organization; those who are external to the organization and those that are internal in the organization. It is about how different coalitions influence power, and the power structure within the organization, i.e. in-groups and out-groups. Those who can be seen as external are the owner, associates, employee associations, different public groups and the board of directors. The internal groups that will or can have influence on the power structure are the CEO, operators, line managers, analysts of the techno structure, support staff, and the ideology of the organization. When individuals meet within a project all this influencer will have an impact on how members within in groups behave. What is problematic is that this will be done by all the members of the organizations as well as the project itself. This means that that the project is an organization by itself as well as every member being involved in their own organization.

In a classical study Pfeffer and Salancik (1974) discuss a political model of organizational decision making. They do this by analyzing the allocation of budget resources in one university. What is interesting is that they point out, empirically, that a decision does not depend only on bureaucratic criteria, and this is also the relative strength of different subunits that will have an impact on how the budget will be allocated. They see in their study that relative power is a significant factor when the budget is allocated between different subunits. Their study highlights the importance of understanding power relations within organizations. When discussing a business project, this could be an interesting observation; if there is a struggle, the struggle is probably not about the budget but about the outcome. How will different aspects be treated regarding who will get the most out of the project? An example could be when two or more companies work together on an R&D project, how do they deal with questions about license, etc?

Most of the discussion above has been on how to deal with different opinions, how to let someone do what you want him to do, or how to avoid conflict. According to Hardy and Clegg (1996) the study of power in management literature has actually mainly focused on the aspect of using power to defeat conflict situations. This would be in line with Pfeffer (1981) who writes:
From the definition of power, it is clear that political activity is activity which is undertaken to overcome some resistance or opposition. Without opposition or contest within the organization, there is neither the need nor the expectation that one would observe political activities.

(Pfeffer 1981:7)

Perhaps it is more natural to build up a structure that is known to us in line with what has been called isomorphism (DiMaggio & Power, 1983). Will the members choose a structure or coalition known to them or will they allow themselves to think in a new way, i.e. creatively (cf. deBono 1996)?

Every organization consists of individuals and groups of individuals and the actors have different aims and purposes in their work (Cyert & March 1992: 31). Some are more interested in climbing the hierarchy while others are more interested in having a good salary and a long holiday. The aim of the organization is to divide resources between these groups of people but that can create conflicts (Jacobsen & Thorsvik 2002; Cyert & March 1992). Even if that is important to understand the impact of coalitions and traditional coordination, Bengsson et al (2007) point out that these earlier explanations are unable to clarify situations in inter-organizational structure or work. Power situation is different in traditional inter-organizations than in these inter-organizational collaborative teambuilding. Then the question must be how new formations will interact. Are there going to be collaborations and between whom, and why? When is the group going to build some kind of alliances, and how is this alliance going to impact on learning?

Clearly power has more to do with the discussions within hierarchical organizations where other types of management or authority are needed besides those in project-based organizations. According to early theories, one way of getting power is to promote the organization and in turn the individuals in the organization will be endowed with legitimate power (Weber 1983), but this way of obtaining legitimate power is in ascendance nowadays because more and more work is outsourced (Pfeffer 1992). So how does this new organizational form impact on the power relationship? What will management look like in a heterogeneous inter-organizational project? Will the management require more loosely coupled form of management or will there be more of an integrated form of managerial issues?

Groups that are formed between organizations, i.e. in inter-organizational setting, are most likely heterogeneous, because the group includes different individuals, and that will most certainly lead to different meaning and understanding of things that will appear during the “life” of the group. In a group within one focal organization it could be accepted that there are specific norms and rules (culture) which specify what must be done or must not be done, and roles or formal structures, held by different individuals will specify who should do what (Worchel et al. 1991).
3. Theory

In a heterogeneous group that works within two or more organizations the goal may be specified, but who should do what within the group, could be even more diffused. Influences of behavior are often made by one person on another, but influences are also exercised in groups. Conformity results from the difference between the ways the individuals think or act and the ways the group pressures them to think or act (Moscovici 1985).

In all groups there will be some kind of a conflict but the question is if the conflict is functional or dysfunctional (cf. see Månsson 1991 for an overview of functionalism). As Durkheim (1978) says even if something has a function it does not mean that it can be seen as positive, like the right of inheritance, which he would like to get abolished. In the same way it is not certain that dysfunctions are not needed. According to my understanding, functional (roles that are accepted) can lead to conflict if someone questions given values, in the absence of conflict performance will be low. If the conflict is very high then performance can also be low. Accordingly, conflict should be optimal in some sense and then the performance should be optimal (Robbins & Coulter, 2002; Hatch, 1997). This is supported by Senge (1990), who states:

> Contrary to popular myth, great teams are not characterized by an absence of conflict. On the contrary, in my experience, one of the most reliable indicators of a team that is continually learning is the visible conflict of ideas. In a great team conflict becomes productive.

(Senge 1990:249).

It is important, as the theory indicates, for conflict to be there in all situations if something is going to be done. It is a political and power struggle that needs to be understood or described. Agreement does not have to lead to change within individuals’ cognitive understanding when conducted within an organization. What is interesting is to better understand the process of agreement within team work as a prerequisite to joint understanding.

3.5.3 Summary of agreement process in inter-organizational context

To understand the learning process, there is a need to study the group member’s way of discussing different issues, and their way of agreeing on issues to discuss. It is a need to understand the constellation of the project members, in what way they are different from one other. There are difficulties in this but there are several factors that have an influence on individual values (Reece & Brandt 1990), and these different values can give us some indication of why people behave in a certain way. A few individual factors with influence include, among other things, education, religion and perception, social class, friends etc. which are important to examine in order to understand how and why individuals behave in a certain way.
The next question has to do with how conflict is resolved. Do the team members compromise, are they trying to work so that all members are treated equally within the group, do they resolve the conflict by only “taking care” of their own individual interests, or do they solve the conflict by placing another member’s needs above their own? This is vital for understanding if permanent learning is to take place. If one person dictates the outcome, it is uncertain if learning will take place. The other members will do as told but they will not reflect upon the solution of this new problem, example of single-loop learning (Argyris & Schön 1978), where the members fix the problem but do not reflect upon it. On the other hand if the individuals reflect upon information and take action by that reflection, change in their cognitive map will occur. That could be seen as some kind of a double-loop learning (Argyris & Schön 1978).

Agreement is a form of learning and can be seen as a social process where individuals will create their own context in interaction with others. By interacting, new knowledge will take form and because the group is constituted differently, members should be able to tackle problems more differently than they would have done if they were on their own. It is not possible to make any evaluation if the solution will be better or worse for the outcome as the only point is to do the thing differently (cf. Dixon 1998, discussion of measuring outcome of learning). This process of creating the environment is a political process where there are different forms of groups, some that are already formed, maybe in an earlier relationship or some that will be formed as the group starts to work together. Another thing is that the members belong to different communities of practice or networks of practice and that will have an impact on knowledge creation as well as knowledge sharing.

3.6 Outcomes of learning

Scholars for many years (cf. Argyris & Schön 1978, 1996; Senge 1990; Dixon 1998) have been interested to see if and how learning will contribute to something new, i.e. some change within the existing business. Argyris & Schön (1978) start their influential book Organizational learning: A theory of action perspective, with an anecdote about failure:

Several years ago the top management of a multibillion dollar corporation decided that Product X was a failure and should be disbanded. The losses involved exceeded one hundred million dollars. At least five people knew that the Product X was a failure six years before the decision was taken to stop producing it.

(Argyris and Schön 1978:1).

Argyris and Schön want to understand why production had actually continued for so long without rethinking why it was a failure:

Several years ago the top management of a multibillion dollar corporation decided that Product X was a failure and should be disbanded. The losses involved exceeded one hundred million dollars. At least five people knew that the Product X was a failure six years before the decision was taken to stop producing it.

(Argyris and Schön 1978:1).
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Difficulties with and barriers to organizational learning arose as it became clear that the original decision (and hence the planning and problem solving that led to the decision) was wrong. Questioning the original decisions violated a set of nested organizational norms. The first norm was that policies and objectives, especially those that top management was excited about, should not be confronted openly. The second norm was that bad news in memos to the top had to be offset by good news.

(Argyris and Schön 1978:3).

It is obvious that something within the organization hindered change and new thinking. Through their main model of organizational learning (single-loop, double-loop and deuteroun-learning), Argyris and Schön want to help managers improve their way of tackling problems.

Even if scholars and practitioners have a rather heterogeneous view of what organizational learning is, or should be they are unanimous on at least one thing: all learning leads to some kind of a change (cf. Prange, 1999). Accordingly, it is not only change that can be observed. Learning can be something of a change of understanding but due to different reasons no observable change in behavior will come about. The reason could be different organizational hindrance, or penalties exercised by the management that could lead to no change in action (cf. Argyris & Schön 1978; 1996; Argyris 1999). It could also be due to difficulties of changing people’s cognitive understanding (Backlund et al. 2001). But even if there is going to be learning, it does not mean that things always will be done better than if learning did not take place at all, but things will be done differently (Larsson & Lövstedt 2002; Child 2001; Larsson 2004).

This could be seen as the first problem of change within organizations. Change can be behavioral and then visible, change can also be mental, which can in some situations lead to observable change, but it does not have to. Change can also be positive or negative to the organization as well as the individuals in question.

Senge (1990) has contributed to the discussion of change and learning by having a more practical focus. He identifies five disciplines or techniques – personal mastery, mental models, shared vision, team learning and system thinking – which together create an organization with a capacity to learn. Senge’s main idea is that organizations need to develop capacity to continuously adapt and then change. This can only be done if all the members of the organization take an active role as learners in an organizational context. Senge holds that we can never say, “We are a learning organization”. Only when individuals learn will they come to understand that they need to know more.

To practice a discipline is to be a lifelong learner. You “never arrive”; you spend your life mastering disciplines. You can never say
“We are a learning organization,” any more than you can say, “I am an enlightened person.” The more you learn, the more acutely aware you become of your ignorance. Thus, a corporation cannot be “excellent” in the sense of having arrived at a permanent excellence; it is always in the state of practicing the disciplines of learning, of becoming better or worse.

(Senge 1990:11)

Individuals are in focus, and people have the capability to take action if they are given the opportunity. People need to take part in developing the organization as well as creating its future.

The role of action and learning also has a bearing. Organizational learning is where individuals experience new ways of doing things, where individuals use their language and dialogue to change and modify their way of experience and act (Marton et al. 1986; Ramsden 1999; Crossan et al. 1999).

3.6.1 Behavioral and cognitive change in relation to action

Experiential learning can be traced back to ancient philosophers. The following quotes from Confucius are a case in point:

I hear, I know, I see, I remember, I do, I understand.

Tell me, and I will forget. Show me, and I may remember. Involve me, and I will understand.

Learning is a dialectic process that involves cognitive psychodynamic and social processes (Illeris 1999). Learning is both a long-term and a short-term perspective. It is one’s knowledge, skills, attitudes, and social behavior that form the nature of learning. Learning has to do with two things; know-how and how to carry out this know-how (action). Skills must be learned to be able to perform everyday activities. One way of learning something is to help individuals to understand problems so that they could find their own solutions to a specific problem. It is important that individuals get the opportunity to solve problems within their own frame of reference, not the teacher’s frame of reference. It is only then when understanding comes about (Ramsden 1992; Marton 1988).

We could recapitulate a learning situation in our own life to understand the statements from Confucius above. When we were trying to ride a bicycle for the first time, learn to play a musical instrument or learn how to use the computer keyboards, we did not learn those things by reading about them, or listening to others of how to do them. It was through active participation and our own reflection that we did actually understand what we did right or wrong. Experience and reflection are probably more important than any manual or
lecture. It is not only through our own experience that we learn. Dewey (1980) says that individuals learn through others’ experience, but only when they can relate to their own experiences. Some form of experience is basic for learning and knowledge creation (Dewey, 1980; 1997, Kolb, 1984; Bandura 1977; 1986; Wenglén 2004). This phenomenon is very well described in a film called “The gods must be crazy”. A Coke Cola bottle is dropped from an airplane and is found by a bushmen in Africa in the deep isolation of the Kalahari Desert. This is the first time that the bushmen see a bottle like this and they do not know what to do with it. They try to use the bottle for many tasks, but in the end they start to fight over it and realize that they need to go to the end of the world to return it to the god. They had no experience of a Coke bottle and because of that they could not make any sense out of it, at least not according to our understanding of how to use a Coca Cola bottle. But regardless if they used the bottle for a “right” or “wrong” purpose, the bushmen must have changed their mental map because of this new experience.

With this little anecdote the focus is not only on the experience. The focus is on people’s mental models or cognitive maps. Every new thing needs to be related to issues from a past understanding. Wenglén (2004) based on Dewey, Kolb, and Bandura, characterizes experience into three aspects: direct experience based on what one does to himself, vicarious learning which is based on observation, and third degree experience which has to do with listening and reading about others’ experiences. Accordingly, experience needs to be relevant to the learner if he or she is going to understand what is observed, directly experienced, or what is read or listened to.

David Kolb (1984) has been very influential in helping us understand the need to connect experience to a learning situation. Building on theories form Kurt Lewin, John Dewey and Jean Piage, Kolb develops his theoretical framework.

The concept of experimental learning presented by Kolb (1984) is to be seen as a cyclical pattern where all learning is based on experience through reflection and conceptualizing to action and then back to the beginning, experience. Learning will occur as a direct participation in events. It is a continuous process based on new experiences. Kolb repeatedly says that people learn best from learning-by-doing experience. The model is to be understood as having a holistic approach, focusing on cognitive, emotional, and the physical aspect of the learner.

There are two important issues that can be learned from Kolb’s model; the first is that learning is seen as a cyclical process where the former stage will have an impact on the next stage. The second is that the model focuses on everyday experience, not only on formal learning and training.

Accordingly, people learn at their best when they are able to reflect their own experience and previous understanding. Looking at learning in this way the focus is not only on how information is distributed, but on individuals’ own skill as well as contextual factors to conduct a task assigned to them. Maybe the
most interesting idea of Kolb’s (1984) model is that individuals need to generate space and time to be able to take time to reflect on their own action (cf. Schön 1983).

Organizational learning is dyadic in the sense that there is a need to adapt very quickly to new and unknown situations which organizations had no idea before and there is a need also to utilize the competence that is represented within the organization (cf. Holmqvist 1999, on exploration and exploitation). But how is this to be done? It happens in relation to people’s own frame of reference. Individuals need to be able to connect new situations to issues that are familiar to them (Döös, Wilhelmson & Backlund 2001; Ramsden 2000). Accordingly, learning is action which is connected to experience, interaction and communication. This view could be seen as learning in practice instead of talking of learning in classroom. Mattsson (1995) points out that learning does not have to mean new understanding or knowledge. He talks about two sorts of learning, that which generates new knowledge and that which reproduces learning. The latter does not generate new knowledge since it is more in line with single-loop learning and the former can be seen as double-loop learning. Contextual factors are important when companies are having more of reproductive learning not much space is given to communication, interaction and interpretation. Members of an organization have learned one way of doing things, i.e. à la Taylor’s scientific management method while generative learning focuses more on communication, interaction, and interpretation, questioning given frameworks, with the aim of building something new and hopefully better. Both types are important but for Mattsson (1995) reproductive learning is overrepresented within industrial firms.

Dixon (1998) says that the authority to take a responsible action is based on how meanings are interpreted by different actors; in connection to this is motivation. Motivation is needed and one way of getting people more motivated is to give them both the responsibility and power to do what they believe is needed to be done (cf. Hall 1990).

3.6.2 Summary of change as a consequence of learning

Learning outcomes is the final part of the themes discussed in this chapter. It concerns issues that can be related to learning situations. Learning is most often connected to positive outcome. In the literature discussing outcomes of learning it is often believed that by starting up a learning activity (input) people will learn something that can be used positively in organization. People are supposed to learn and because of that learning, it is expected that something positive will happen. This is not that simple. Even if there is a change, changes can be seen as two fold; behavioral and cognitive. Cognitive learning, what happens in peoples mind will not always become visible, i.e. lead to an action. Behavioral changes, taking place when people actually take some action because of what has been learned, do not have to mean that they have changed people’s
3. Theory

underlying beliefs, i.e. cognitive changes have not come about. Accordingly, behavioral and cognitive learning can be positive, negative or neutral. Regardless if it is about behavioral or cognitive learning it is not just something that happens. Learning possibilities are based on experience and previous understanding. It is a cyclical pattern based on experience through reflection and conceptualizing to action. What can be seen is that people are always learning but in their own terms, i.e. based on their own framework and understanding. If something new and unknown props up, then it can be understood that it is hard to change behavior or mental models because of lack of understanding.

3.7 A tentative model takes form

With this framework as a starting point one can build a model for the type of organizational learning pursued in this dissertation. Because learning is a result of more than just one course of action, it can be visualized in a model. Organizational learning is not something that just happens. It is an interrelated activities or an abductive experience encompassing different themes.

![Model of learning in temporary organization](image)

**Figure 3.2: Model of learning in temporary organization**

Figure 3.2 shows that organizational learning constitutes interrelated themes that will in some way or another lead to some change(s).

The motivations of the model are as follows. We are seeing more and more companies leaning on work to be done in temporary organizations or projects instead of being fixed within only one organization, i.e. within the focal organization. Individuals within the temporary organizations possess different kinds of competencies that need to be communicated within the group. The
participants of the temporary organization will also have input into the process in the form of marketing information, economic information, etc. Input will be communicated and interpreted so that members can agree on what issues should be discussed further, i.e. agreed upon. This could lead to changes of behavioral character as well as changes in people’s knowledge base. By saying that agreement is a prerequisite to joint understanding, people within a group can after discussion come to some agreement without necessarily having the same understanding of the problem that is behind that agreement.

The last part of the model has to do with organizational learning. The group has after communicating and agreeing decided upon something and they have got a joint understanding. This will lead to some change, whether behavioral or cognitive.
4. The krAft Project

4.1 Introduction

You have to learn the rules of the game. And then you have to play better than anyone else.

Albert Einstein

Chapter four presents the empirical material collected by observing a number of meetings and by interviewing participants within the krAft project, (see 4.1.1). The chapter aims to provide an increased understanding of the context in which learning project process occurs making it easier for the reader to follow the interpretations in the forthcoming analysis.

To better understand organizational learning, one temporary organization, i.e. krAft project, has been examined throughout its lifetime. In a temporary organization interrelated in its character it can be said that there are three sets of interrelated processes: the group process, processes in each company participating in the project, and the action or change obtained during the project and as the project ends.

The first activity is the group, in this case temporary organization (krAft project) which is the focus of this study or the unit of analysis. The second activity is the processes within each company. ‘Nothing happens in vacuum’ and this is also true for this case. To better understand how learning takes place and what is learned within the krAft project, the participants were interviewed at their focal organizations. The last activity is the result which could be seen or understood as a consequence of learning, i.e. the possibility that learning would result in higher productivity, organizational changes or change of participants’ mind. As pointed out earlier (chapter three), measuring something as a consequence of learning is very hard, if not impossible. But it is interesting to see what kind of activities or changes within companies or those individuals taking part in the krAft project are going to happen during and after the period the krAft project was in progress.

It is not obvious that taking a course, or sitting in a seminar is the only thing that would cause a change in one’s behavioral or cognitive acting. It could as well be external forces that make one change his or her viewpoint. It is possible to say that what you learn today can have a delayed effect, i.e. people can not make sense out of what they have learned, because they were not able to make sense of the information when they got it, the context was not right. But later on – following one month, one year or several years – it is possible to make sense out of the information and then learning takes place.
The question is whether factors learned in the project contribute to a change in the outcome of the companies or whether other factors, external or internal, contribute to those changes? This is a problem when studying learning. One can never be sure if the change is the result of what one has just learned or something else, i.e. talking to others, watching TV, meeting with suppliers or customers (Dixon 1998). For example five in the krAft project participants say they find it hard to apply the knowledge they obtained from a course they took two years earlier. But when attending this particular krAft project, some issues they had come across in earlier projects started to make sense. Their knowledge or understanding is due to the fact that they had done similar projects before. Unless mentioned specifically, the result will be overlooked. It is not the aim of this study to focus on financial outcomes in each company since it places its attention on the process.

This chapter examines the group process that is the unit of analysis, the krAft project. The study follows the process by observing the group when participating in seminars and in forums. But this is not enough to understand if organizational learning has taken place. Organizational learning is about behavioral changes and cognitive development which happens through change of frames of reference, mental models, culture, strategy, etc. And to better understand the whole process three interviews with the participants from the companies in the project were conducted: one in the beginning of the process, one in the middle and one at the end. Representatives from each company as well as project leaders and tutors were also interviewed. The author attended five meetings with the management group, whose members were also interviewed, and participated in two Forums out of four. This is in addition to written material, and e-mail conversation.

The material gathered is apparently rich enough to analyze and understand the process to contribute both to the academic field and the business practice.

This chapter will start by introducing the krAft concept, and then an overall description of the PPD project will be presented. The process was rather hard to examine because the consultants and the project leaders did not get along well, a point that is discussed in some detail at the end of the chapter.

4.2 The krAft concept

It was in the year 2000 (Kraftprov 2005) that a consortium of Swedish education institutions started cooperation with managers and consultants, small and medium-sized business enterprises, and private and public support organizations to help SMEs, to develop individuals and their businesses, with the long-term relationship between SMEs and universities as a primary aim. The consortium was also work for increased networking between SMEs and academia, and between universities and private/public actors for business development in SMEs. It was the University of Umeå and Jönköping
4. The krAft Project

International Business School (JIBS) that started this consortium, but today over 30 actors are involved. Kraft is the acronym for the Swedish phrase affärsutveckling, tillväxt or kompetens development and growth. The name embodies the project’s primary aim, i.e. how to contribute to the developing and growth of personnel’s competences with k standing for competence, r for reflection, Af for business development (Affärsutveckling), and t for growth (tillväxt). This program was sponsored by the Knowledge Foundation (KK-stiftelsen), and it has been administrated by JIBS. The aim is:

- to help SMEs develop their businesses
- to initiate long-term relationship between SMEs and universities
- to initiate and improve networking in the academic system
- to initiate and improve networking between universities and private/public actors aiming for business development in SMEs (industrial development centers, free standing consultants, industry research institutions, etc.)

(Kraftprov 2005:1)

The project has been created in response to growing dissatisfaction with today’s courses and programs that managers and business leaders are offered. It is common today to bring several individuals together, give them new theoretical understanding and then hoping that when they come back to their companies, theory will be transformed into action. Those people behind krAft think that this seldom happens. It is hard to translate and transform new theoretical insights into action because theoretical context is often so complicated that it is hard to understand or put into practice. Kraft’s philosophy is built on the understanding that practice must come first. First there must be application then comes new theory, and afterwards comes application again based on new insights and understanding. Learning is always contextual, relating cognition, affection, social and behavioral dimension simultaneously. It is important to understand theory and action as the same problem, not as dualistic problems. The krAft philosophy is built on the basic understanding that theoretical solutions only be understood in real context, i.e. managers need a real problem if they are to understand abstract solutions to solve real problems. If problems are real then new theory connected to those problems will improve individual as well as business competences (Kraftprov 2005; Melander 2001).

With this basic thoughts in mind krAft programs have evolved on the understanding that working together with other individuals is better than working alone. By working with others, new insights will come about and will help the participants to learn about themselves as individuals, as a team and as an SME. Working with others can help individuals to brake away from taking
for granted ideas and see things in a new light. In other words it can be said that if individuals want to develop or if they want to let their businesses develop, new theoretical insights aren’t enough. Theories must be put into practice through discussions with other participants who have gone through similar problems (Kraftprov 2005).

A krAft program normally goes on for about one year, with about a dozen full day seminars. To create openness and trust within the group, members are encouraged to discuss sensitive issues. Every krAft project is led by an academic acting as a project leader, and a consultant/manager/entrepreneur acting as a krAft tutor. The basic idea for the project leader is to contribute with pedagogical skills and theoretical issues in “appropriate” forms to simplify theory to participants. The academic can ask other preferment’s to contribute to the program. The krAft tutor is required to spend some time with each SME to help the managers to turn theory or issues discussed in the project into action. The tutor’s job is to ensure that development takes place (Kraftprov 2005).

There has been growing interest in krAft projects since their launch in 2000. There has been an increase in the number of programs and participants (Melander 2006). The krAft programs are not of one dimension. There has been a variety of courses catering for female managers, diversity management, environmental management, strategic health and several traditional development programs. It is not only academics from Business Administration that have been involved. Academics from psychology, design, pedagogy, environmental management, product development, logistic, and marketing have taken part (Odenrick & Hall 2005).

Table 4.1. krAft 2000-2005 (Norback et al. 2006:20)

<table>
<thead>
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<th></th>
<th>2000</th>
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<td>Number of participating companies</td>
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<td>88</td>
<td>121</td>
<td>290</td>
<td>87</td>
<td>627*</td>
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<tr>
<td>Number of Universities involved (cumulative)</td>
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<td>6</td>
<td>10</td>
<td>13</td>
<td>19</td>
<td>19</td>
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* Nine of the companies had more than 250 employees.

The krAft project idea is based on the fact that knowledge is not easily transferable; it is not a fixed product. Learning, or development, is more a question about acting together. It is this philosophy that underpins program of krAft. It should not be fixed, but rather flexible and customized. Bringing together companies, universities, and consultants in a creative environment is
4. The krAft Project

bound to enable creative discussions that lead to change on the part of individuals as well as businesses, (Figure 1) (Kraftprov 2005)

Understanding regulations no more than 5 – 7 companies should form each krAft group, and the twelve-month program should include twelve days of seminars. In addition krAft tutors should visit each company approximately three times during the process, to give individual consulting (Kraftprov, 2005).

Figure 4.1: Kraft project (Kraftprov 2005:3)

The starting point in every krAft project is though similar. In step one, companies working together or having a high potential to do so are identified. Some of the companies know each other and have developed some kind of social relationship or trust, some of them have not done so, and others could be companies that are more interested in some kind of commercial gain from the group. In step two the search for potential krAft tutors starts. It is important that those individuals acting as krAft tutors must have genuine experience from working life and they should have a wide contact net within the business community. In step three krAft groups are formed and assigned a tutor. At this stage project leaders, tutors and participants from the companies will define the aim of the project together. They will together construct a unique structure of their own development program. In step four the project leader will start to form an educational program based on what is of interest to the companies and according to their demand. The goal is though not to teach a lot of theory other than what is directly related to the development and growth of their businesses, and through combining theory with practice (Kraftprov 2006a).

In summary, one aim of krAft is to help participants to continuously work with strategic business development through increased knowledge, giving them the possibility to reflect, and support them to carry out their businesses. Another aim is to increase collaboration with universities so that companies will
understand that this collaboration is of benefit to them, spurring them to continue with the project. A more long-term goal is to develop pedagogical models that can help create a conduit for the transfer of knowledge and competence from universities to companies and vice versa. Another long-term goal is to strengthen collaboration between universities. Last but not least the aim is to bring together companies that will make it possible for them to directly exchange knowledge and experience (Kraftprov 2006b:1f).

The group goes through different phases during the process.

**Figure 4.3: The phases of krAft groups (Kraftprov 2006b)**

In phase A development is low. People do not know each other, but they know that development is essential and contact with university can increase development. In this phase it is important to learn to know each other through discussions and develop common base for knowledge about each other.

In phase B a comprehensive theme for the development process is constructed. In this phase there is a creative and frank discussion, and most of the companies experience the discussion as fruitful. This is a positive phase and very important. If the goals are poorly defined it is likely that the participants will experience the project as not so relevant to their companies.

In phase C the group members are supposed to have met several times now. The goal has been established and the contents as well. The project starts and has a high tempo.

In phase D fatigue has come to distinguish the work: the project takes time without visible results. In this phase some participants leave as they cannot keep up with the pace.
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In phase E results start to show. The participants see concrete benefit of the work. Something that has been done is experienced as fruitful for the future and some of the things that have been done have been realized into real tangible result.

In phase F the krAft group has come to its end. But contacts among group members go ahead as the project leader and krAft tutors continue meeting the group to help them to form a relation so that they will continue the work by themselves.

In phase G the question about what should be done now that both project leaders as well as krAft tutors have completed their work arises. Some of the groups have made up some kind of arrangement with their krAft tutor to continue working together. Another important factor is that now contact is established with representatives from the University which can be reached if there is a need. Hopefully the group will continue to meet with each other.

Those different phases are not unique to Kraft philosophy they are based on Social psychology and its emphasis on how to evolve in groups, i.e. it is not a unique program structure that has been developed by the krAft people (Kraftprov 2006c). (See more detailed discussion in chapter two).

4.3 Description of the PPD project

The krAft project pursued here has been called Professional Product Design (PPD). It constitutes companies which are members of the Swedish Foundry Association. The project includes nine companies, but one of them, Alpha, operates as three independent firms, where the common denominator is collaboration round marketing issues, quality issues and organizational effectiveness. One of the companies in Alpha decided to leave the group at the end of the krAft project. Thus it could be said that twelve companies have been involved in the krAft project from the beginning, but because of the breakup in Alpha the number of companies turned out to be eleven.

The need to increase the competence within companies in the Swedish Foundry Association was first felt by Balder from the Swedish Foundry Association, Heimdall from ALMI, and one business consultant, Njord from Zeta. According to Balder, it was the knowledge that competition had increased significantly that made them start to think about what could be done to prevent the disappearance of the Foundry business in Sweden in the future. Because Heimdall and Njord had good experience working with the Swedish Foundry Association, it seemed natural to start the discussion. When the issue of financing was brought up, krAft and ProDesign were mentioned. They had good experience of working with both organizations and they saw that there could be a possibility to get economic support from both these organizations.

ProDesign is of a similar organization as krAft. In both cases it is the Knowledge foundation (KK-styftelsen) that finances the organization. The idea
was that the project would be practiced, according to krAft’s philosophy, while ProDesign would finance the special education. It can be said that the main difference between krAft and ProDesign is that the former requires involvement from the academia while the latter does not. It was seen as important to secure financing before starting up the project because the Swedish Foundry business believed it could not contribute with any extra money. If companies were supposed to pay the entire fees themselves, it was believed that no one would attend.

This krAft project started with a forum in September 2003, where companies in the Foundry business within the Swedish Foundry Association were invited as well as guests from four global companies to discuss issues regarding future possibilities for companies in the Foundry business, and the competition the Foundry industry was supposed to experience in the future. The forum was to examine companies’ interest in a project like this one or it was also something like a “promotion meeting”.

Some time later the Swedish Foundry Association contacted some of the participants that could be seen as having a potential to work together in a network for collaboration. Focus was on companies active in the southern part of Sweden. This was done to make it easy for those who like to attend to meet without incurring great expense. Worth notifying is the fact that although prerequisites were made to join the network, there was no attempt to explicitly define what the network should accomplish or what kind of collaboration could come out of it. The reason was that the agenda of krAft project should be decided jointly by those who would join the project; it should not be decided by consultants, the Swedish Foundry Association, or the project leaders.

The next step was to invite 16 companies out of those who were contacted from the beginning to join project. A rough scheme was made up, and four interrelated topics to support the process were decided: seminars (five), individual consulting (three visits to each company), specialized education (not specified), and forums (four). The overall aim of the project was to challenge existing attitudes with the participants and to stimulate new thinking. The general focus was to stimulate participants to increase their understanding of customers’ needs and to better understand internal processes in their own organizations. Simultaneously special courses would be provided, but decisions about what kind of special education should be offered was to be decided in collaboration with the companies taking part in the project.

In this stage it was decided that Heimdall from ALMI and Njord from Zeta would act as a krAft tutors, Assistant Professor Oden, from JIBS, and PhD candidate Idun from academia would act as project leaders and Balder from the Swedish Foundry Association would attend as a coordinator for the group. Because a standard group in a krAft project should not exceed 5 – 7 companies, it was decided that those 16 companies would be divided into two groups each, with one tutor and project leader and their own agendas.
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Clearly the project is was very ambitious, with seminars, special courses and individual consulting. But there are several important issues to note here from the point of view of an outsider. By giving lectures, connecting the issues discussed in every lecture with individual consulting along with special training, the potential for learning was hoped to expand. The agenda for the seminars as well as for the Forum were to develop in collaboration of all actors.

In the beginning, the management group presented a plan about the process as seen in figure 3.

![krAft planning design](image)

**Figure 4.4: krAft planning design**

It was decided from the beginning that the process consultant and the Swedish Foundry Association would be responsible for the forum, while university representatives, acting as project leaders, would be in charge of seminars as well as the process. The process consultant would also act as a krAft tutor, visiting each company several times during the project to help the companies to tackle problems and lead them in time of trouble. It was decided that issues discussed in Forum should have a practical approach, with people with practical experience invited to discuss issues related to the focus of each forum. From the
discussion in the management group it could be understood that there should be coherence between those different activities.

4.3.1 The first Forum

In September 2003 the first forum was held. Invited were members from the Swedish Foundry Association and representatives from GM-FIAT, SCANIA, Volvo, and Ericsson. They discussed the risk they believed subcontractors would experience in the future. From the discussion it was understood that four main issues were supposed to be critical to Swedish subcontractors in the future if they were going to survive. They needed to be more efficient regarding issues related to: quality, process capability, lean manufacturing, and networks. What was interesting to note was that the price was never brought up for discussion as an important factor. No one of those four big companies raised or discussed issues related to price. But in interviews with company representatives price surfaced regularly. Some of them expressed very strongly that price pressure and uncertainty about continuing business relations was something that they had to live with all the time, i.e. that those big dragons were moving their businesses to low price countries with price being crucial for choosing or not choosing a subcontractor. Another interesting observation was the sort of customer the companies would rather prefer. Many of them expressed that they would rather have customers other than those four big Swedish companies, because they did not have confidence in their future actions.

Following the first forum 16 companies were invited to participate in the project. The first seminar was divided into two groups; bearing in mind that a krAft project should have no more that 5 – 7 companies in every group to ensure a good base for a learning project like this. Initially the management group hoped that this would be the case. As we will see later however, the groups merge into one, because the number of the companies decreased.

4.3.2 The first seminar

The first two-day seminar was held in a conference center outside Jönköping, in March/April, 2004. It was a traditional gathering in the beginning with people sitting down and waiting for input from the project leaders, behaving somewhat as students do in a classroom. At this first seminar the group was divided into two. It started at twelve a’ clock with lunch and it ended with lunch the day after. Then the second group arrived for the same procedure. It was decided that the project leaders, krAft tutors, and the representative from the Swedish Foundry Association would be present in both groups at this first seminar. After the first seminar, decision would be made on whether all representatives should be present in the forthcoming seminars or if it would be enough that only one tutor and project leader would attend each seminar group.
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The seminar started with each company presenting itself; the companies presented themselves and made their expectation about this project clear. A common denominator in both groups was that they believed that the project could help them to better confront an unstable future.

All of the companies thought that they needed to better understand marketing issues. Three of the companies mentioned collaboration and knowledge sharing. Noteworthy was the fact that no company mentioned the need to learn more about technical issues within the foundry business. One reason was obviously the insistence by the management group that this krAft project should only include people in management positions and not blue collar workers. The project leaders, krAft tutors, and the people from the Swedish Foundry Association had a similar understanding as the participating companies but added that collaboration between companies was vital to meet external threats, i.e. together strong, apart weak. Even if everyone said they joined the project on their free will the participants answered the question why they joined the project could be understood as unclear, i.e. they had no clear idea why they joined the project, or maybe they were afraid to share their view with others. Because of that the answers became homogenous and rigid in some sense. They built their answers on vague understanding of what they wanted, and maybe their answers reflected a fear that the other companies would get information about their points of weakness. Some of the participants said that they would express their expectations more explicitly later on, i.e. in other seminars.

The project leaders emphasized the krAft project philosophy, i.e. it the question of learning together. krAft project for them was something of an ABC, which meant to work within three layers: academy – business – consultants. It means that all the participants should contribute with their experience into the process and they should work hand in hand with specific problems. There should be something like problem-based learning (PBL) an instructional method to challenges, facing participants working cooperatively in groups to seek solutions to real world problems. Working together should increase values for the project members.

The discussion in this first seminar focused on customers and the surrounding world with its possibilities and threats. Two external lecturers were invited to further the discussion, an academic and a consultant. Later on when I interviewed the participating companies, they did not express a good degree of dissatisfaction with the lecture given by the university lecturer. They said it was hard to understand, and some believed his information was old, not suitable for today’s questions or problems. This was also echoed by the management group. And before the start of the second seminar, one of the group leaders raised the issue with the lecturer, the matter the led to a slight improvement in the discussion, according to the participants and the management group.

The first seminar focused on topics such as the customers of tomorrow, customers’ demands, and how important it was to think in a creative manner.
By the end of day two, an attempt was made for a common understanding about what was important for customers and what could be seen as important for the participating companies to think about in the future. Flexibility, communication, right competence, lean production, short development process, help to develop at an early stage were among the aspects believed to be important for the customers. Important issues believed to be important for the future included the building of good relation with customers, increased profitability, securing quality, joint development with customers, learning within the industry, and learning by looking at other industries. These were seen as of vital importance for the companies in the foundry business today. There was some discussion about working conditions, i.e. motivational factors, but the issue was only raised by one of the groups. There was apparently a consensus in the discussion about main issues among the members. It was not a matter of right or wrong but rather whether certain issues could be seen as more important than others.

By the end of day two, homework was handed out. The participants were required to discuss in their organizations future customer demand, the way they believed what their customers thought and why they demanded so much / so little of them. They also revised the future role of their organizations and how this new customer demand would affect it as a whole, including employees. It was explicitly expressed that the most important part of the homework was to get personnel at all levels of the organization discuss this matter, to get their view and their commitment to the process.

There was a significant difference between group A and B. Group B did participate more actively in the discussion. One reason was that the project leaders and krAft tutors took over some of the discussion the first day but after dwelling on this problem they assumed more of a silent role during the rest of the seminar.

Asked about their impression on the first seminar, the participants said they thought it was abstract and hard to grasp.

(…) the knowledge given in the first seminar has left no impression on our organization but I believe it will later on because it is important”.

(Maria, interview May, 2004).

As the above quotation from Maria shows nothing the seminar’s contribution to the participants’ knowledge was modest but not much should have been expected as it was understood to merely focus on introducing the project and presenting some general discussion.
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4.3.3 The second seminar

The next seminar took place on the 15th and 16th of June. This seminar was different in the sense that the two groups had merged into one. The decision to have them merged was taken when it became clear that only 12 companies attended the second seminar. The management group had made two different agendas, one based on that there would be two different groups and one where the two groups would merge into one. Most of the participants were positive but only one of them believed this to have affected the project and that open discussion would be harder to get when the companies were so many. The merger was also due to economic reasons. More dropouts would have run the risk of having the project fail.

This seminar focused on strategy and technology, and defining or understanding core competence. Besides the lectures there were also two exercises done in groups, where companies worked together to solve specific problems. The discussions were lively, and the participants took an active part in the group work, and it did not seem to matter that many of the companies were competitors, i.e. it did seem to have an effect on the debate. Asked how open or honest they thought they were in group work, most of the participants, pointed out that they saw the companies more of colleagues than competitors, and that they found the discussion as relatively open.

An invited guest speaker, Mats Jonsson from ProfilGruppen, presented several interesting issues regarding starting up and running a foundry business. He highlighted three things: companies’ social responsibility, how hard it was to enter new markets when companies were new and unknown, and collaboration or lack of collaboration between owners. It was interesting to notice that the participants were very interested in Mats’s lecture which it resulted in a lively debate afterward. The participants were alert and asked many questions about him and about his company. Several of them mentioned this lecture when interviewed later on, describing it as one of the best lectures during the process. They said they thought the lecture was the most practical and useful of the classes they had. Actually one of the companies had read thoroughly ProfilGruppen’s annual report to better understand how to formulate purpose and strategies to help them formulate their own strategies and vision.

By the end of day one, Balder of the Swedish Foundry Association discussed specialized courses and how and when to conduct them. He had sent out a questionnaire to the participants, but only 4 out of 12 companies had answered. It was understood from the first meeting that the specialized courses would be free of charge, i.e. they should be part of the project fee. But Balder told the participants that the project was short of cash so probably some extra charges would be necessary. Some of the companies did protest loudly, and nothing was decided, but Balder ended the discussion trying to justify why this had to be done this way. Later on when I discussed this with the project leaders they expressed dissatisfaction about Balder’s way of handling the issue. They said he
promised too much in the beginning of the process, hoping that things, one way or another would solve by themselves.

After dinner an employee from the Swedish Foundry Association, Zoltan Tiroler, presented a new ongoing research about foreign competition within the industry. This was done in a leisure environment, while participants were drinking beer or other beverages. The lecture indicated very strongly that most competition was coming from countries within Europe, particularly Germany and Belgium. What was surprising to the participants was that those two countries were not known to be among low-cost states. This information was new to most of the participants who perceived Asia as the most dangerous competitor.

The discussions that took place in the evening were open and relaxed. Asked about their views of the lecture, many participants said that the informal discussions in the evening were good or maybe the best part of the seminar because meeting with others was the most valuable in a project like this.

The second day started by discussing the homework from the first seminar. Some companies had not discussed the issue with all the personnel in the organization as they were supposed to do, but it seemed that they had discussed their homework in the company managerial groups. The three companies that had discussed this in the whole organization experienced the discussion as a monologue instead of a debate. They wanted to involve the participants but they did not know how.

The next theme in this seminar was culture, given by Idun. It could be seen from the participants’ facial expressions that this was a hard topic to understand. In interviews with the participants it was not hard to discover that most of them thought the lecture was far too theoretical with no practical side to it, i.e. difficult to put it into their own context. Only two participants saw it otherwise and thought that the lecture was good and necessary to think of but they too thought it would be difficult to take home to their organization for practice. Some of the participants said the lecture was hard to grasp because of high consumption of alcohol and beverages the night before, i.e. some of the participants were tired the next morning.

The seminar finished with a new homework, which the participants were required to present at the next seminar. The homework focused on core competence.

4.3.4 The second Forum

The second forum took place on the 31st of August. Responsible for this activity was Balder from Swedish Foundry Association, Heimdall from ALMI, Njord from Zeta and Hermod from ProDesign.

The focus in this forum was lean production. It started with a lecture about lean production and then the participants performed a play based on the psychology of lean. One external guest, a lean specialist from Volvo Powertrain,
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Sködve discussed Volvo’s experience regarding lean philosophy. During the day the participants visited one company which had been using lean for several years.

The impression gleaned from the participants was positive regarding this forum. At least three companies in the krAft project started to apply Lean philosophy afterwards so it could be said that this Forum left a “fingerprint” in the process.

4.3.5 The third seminar

The third seminar took place on the 5th and the 6th of October. It started as the former two with lunch at twelve o’clock. Nine companies were present and three were absent. Of the three that stayed away only one actually had been active. The seminar was also characterized by the absence of the krAft tutors. There had been some disagreement among the project leaders and the krAft tutors about how to carry out the project, (see more about this disagreement in chapter 4.4). Whether the differences between the project leaders and the krAft tutors affected the project as a whole will be discussed and analyzed later.

One of the project leaders (Oden) started the day by discussing what had been done so far in the project, and the ideas on how to continue. This orientation was, according to the project leaders, necessary to emphasize the krAft concept, and to get consensus from the participants. In discussions with the project leaders before the meeting they expressed that they were afraid that the companies did not fully understand the process and it was necessary to explain to them explicitly what had been done and what they had to expect in the ongoing courses. The project leader started by showing them a slide about creating possibilities and then he connected that slide to what had been done and what would happen in the future in the project.

The purpose of this two-day seminar was to increase understanding about leadership. The plan was not to present a lot of theories by lecturing about different leadership issues, except it should be done in the form of a workshop, where the participants were supposed to work with different issues and then present their discussions to the others on what they had come to realize as important during the discussions. The aim of the workshop was to teach the participants how to better analyze problems and help them to help themselves to come up with some solutions to different problems.

The workshop was planned as an educational seminar emphasizing interaction and exchange of information among the participants, supported by the project leaders. The participants worked during these two days in groups mixed between companies. The discussion was honest and open. In interviews the participants described the seminar as being more open than the other two, as can be seen from the quotations below.
Yes that is what I thought about during the meeting. Really it was a very open discussion.

(Bartholomew, interview December 1, 2004).

It (discussion) has started to loosen up,

(James, interview December 6, 2004)

It was an open discussion; it was similar to what we have in Swedish Foundry Associations committee work.

(Matthew, interview December 10, 2004)

One of the important elements in every seminar was to let the companies account for the homework, which they were supposed to work with between seminars. Before this seminar the companies were supposed to discuss core competence in their home organizations with all employees taking part, if possible. Only two out of nine companies did actually take up the discussion with their employees. Seven companies did not. The companies had some idea of what the core competence was, but it was obvious that they had not thought deeply about what it really was concerning their own company. This was confirmed in interviews with the companies later on. Even if they knew what they were good at, or thought that they were good at, they could not explicitly express their company’s strategic advantage, or how their company was distinguished from its competitors, i.e. no company could actually pinpoint explicitly what was their core competence. Mostly they stated that they were good at producing material, but they did not see why they would be any different from other foundries.

As mentioned above this seminar focused on group work and the groups were supposed to discuss various issues connected to management problems. To me as an observer it was interesting to see if this group work would lead to any mutual understanding among the companies. It could be said that when discussing issues like leadership, no business secrets would be discussed so it could be very open discussion. Instead the discussion on problems related to business core competence could be expected to be more open than discussions about business processes, or customer related issues. Accordingly, focus would be on issues regarding management problems.

When discussing employees and their situation in today’s organizations, all groups came up with similar understanding of what could be seen as the main problem. All groups mentioned leadership, i.e. the manager, as a major stimulator to motivation. Lack of active leadership results in dissatisfaction, was something that all groups could agree upon. The debate of different ethnic affiliation was seen as problematic to all companies, mostly because it could lead to some kind of communication problems. Language could be one barrier that leads to a failure in communication. The respondents also cited cultural differences as a potential problem. The participants, working in four different
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groups, provided answers that were not significantly different. They got very open directions of how to solve the group work, but when giving their presentations and solutions it could be seen the groups had an almost identical focus. Asked if there was a common ground or common problem which they could identify, about 50% of the companies said there was none. But when asked later about their opinion on the seminar, they said the discussion was too general to apply in a specific context. They said that it should have been more focused, i.e. that the group work should have been more realistic. This is an interesting finding; why didn’t they see or perceive any common ground or understanding within the group, when it was so openly stated in the seminar? Even if they thought that the seminar was a little abstract, they found the discussion as open and honest.

The next element in the seminar was to present all the tools that had been presented in previous two seminars. The project leader, very demonstratively, used an old tool-box and picked up one administrative tool after another, in the form of a paper. The purpose of the presentation was to exemplify that those abstract lectures the participants had been listening to could be extremely practical in solving problems, i.e. abstract information needed to be interpreted within their own world, i.e. context. When observing the participants it could be seen in their facial expression, and the way they expressed themselves, that they had a hard time understanding what to do and why they were doing it. During interviews most of the participants said that the seminar was fuzzy for them, it felt like school where hard questions are handed out without instructions on how to solve them. Some expressed dissatisfaction with the project leader saying that their answers were actually right. What was positive was that they appreciated the group discussions, which they described as fruitful. They had some problem to understand how to use those abstract models in practical situations, but they appreciated the opportunity to discuss with their peers. When the participants discussed as groups, it was not the assignment per se they mentioned as the most fruitful, but the discussions which they saw as more work related.

During day two all groups got different problems to work with, and every problem was connected to one of the tools they got handed out the same day. In my view they did a good job. However when interviewed later one the participants said the group discussions were very positive, but they still felt the assignment was confusing and hard to use in a real world problem.

At the end of the seminar a new homework was introduced. Each company was to choose its own problem to work with. It was required to choose an appropriate tool to analyze and to solve the problem. At the next meeting the company was to report what it did, how it did it and why? Then the tutor presented the next seminar topic, “lean internationalization”
4.3.6 The third forum

The third forum was held on 31st of March, 2005, in Huskvarna. The theme in this forum was exports – possibilities and experience. Three companies from the krAft project were absent but several other companies were present. This was in line with what had been decided about the forum that it should be open to all foundry members in Sweden even if companies in the krAft project would have precedence. Both krAft tutors were present as well as on of the project leaders. From the university,

Henrik Agndal was present and he was going to be a guest speaker at the fourth seminar, so he was there to observe and see what was going to be discussed at this forum.

Eight guest speakers were invited to this third forum, six of them from companies active in exports, one of them belonged to a government agency, and one worked in the Swedish foundry Association. All of them had genuine practical experience in exports.

It started with an overview from the representative from the Swedish foundry Association about international foundry trade. This lecture’s main focus was on facts about exports and imports of foundry material. The industry exported only 30 000 tons and imported 300 000 tons, it accounts for about 10 000 industrial workers. The imports are mostly from Europe but not from low price countries as one would expect. The lecture dealt with how to bring back to Sweden the jobs lost to other countries. Among the issues that could be conducted better in Sweden, special mention was made of knowledge and competence and marketing and collaboration between foundries. During this lecture the participants were quiet and they asked no questions.

The next lecturer was given by a purchasing manager from SCANIA in Södertälje. He talked about purchasing strategies with SCANIA and what requirement SCANIA has regarding their suppliers. A minimum requirement was ISO9000. Those who did not have it would never be engaged in collaboration. He said SCANIA was not looking for best price but high quality; it was more than just price. The content of this lecture was that product development did not receive a lot of attention here in Sweden and that had to be changed. There were very few suppliers that can be system suppliers, i.e. manufacturing complete pieces or solutions. The lecturer said cost rationalization was important all the time. SCANIA did not see suppliers as nationally important except only those suppliers that could make the best offer were chosen. Change in organizational processes or products took a long time. Therefore it was important to be flexible and fast. The last point mentioned was that profitability was too low so there was a risk that Swedish companies would not manage changes because of poor fiscal status. Afterwards there was some discussion mostly about what Swedish suppliers needed to do if they wanted work with SCANIA.

The other speaker was a representative from a company called Advanced Magnesium Technologies. The focus was increasing sales through cutting-edge
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technology and innovation. The speaker was from Magnesium Technology Company specializing in alloying and processing for the manufacturing industry. This lecture focused on how to meet the future with new technology, how to reduce cost and improve environmental profile of magnesium and global automotive industries. It was more of a selling meeting than a lecture about exports / imports. Only two participants raised questions afterward, which can indicate the interest of this lecture.

Next on the stage was the CEO of a company called Zinkteknik AB. He talked about establishing business abroad to increase exports. This lecture discussed two important issues related to exports. First it was about leadership. This company had spent a lot of money on training employees to make sure that all of them knew about prices and costs. The main theme about leadership was that if companies were going to survive in the future, managers would have to have a long-term view. Second the lecture was about how to expand exports. What this company had done was to start subsidiaries in other countries, such as China and Bosnia. The reason for doing that instead of exporting from Sweden was based on four criteria; strengthening of the company trademark, price differentiation, cost reduction, and that simple production with high amount of man-hour was better suited in low-price countries than in Sweden. It was clear that the participants thought this lecture was interesting. They asked a lot of questions and the discussion only came to an end when it was time for them to go for lunch.

Then there was the lecture by an Alpha employee from the krAft project. The title of the lecture was "Is Swedish high pressure die-casting industry competitive". He started by talking about a visit he and another members of the Alpha group had made to casting companies in Hungry and Germany last January. He thought it alarming how competitive those countries have been and how poor the Swedish companies were doing. For him there was the question how many foundries will there be in Sweden in ten years? What could be seen from Europe was that foundry businesses had started to collaborate or merge to be able to bid for bigger deals. He said Swedish Foundry companies were too small to be able to make any counter attack.

It was followed by a CEO from Hooks Jigs Masking Products in Sweden. Like the lecturer from Zinkteknik, he pinpointed the necessity of having good human relations strategy. This company had also expanded its exports by establishing subsidiaries in countries other than Sweden. There were two reasons for the company’s decision to set a foot abroad: customers were moving abroad and the company needed to be closer to them, and that some jobs were less expensive in low-cost countries. The main thing was to listen to the market and act, and not wait and see.

There was also the speaker from ALMI in Jönköping. ALMI’s mission was to stimulate growth and development for small and medium-sized companies and innovators. This lecture focused on what ALMI could do to help to analyze businesses and what kind of a help it could offer.
The last lecture was given by a person from the Swedish Trade Council. It was about what the Swedish Trade Council could do for the companies. Those two last lectures were more about information on how those two organizations could assist companies thinking of exporting than discussing methods and tools to help them grow abroad.

Neither ALMI’s presentation nor the Swedish Trade Council’s lectures led to any discussion. The participants listened without asking questions.

By the end of the day Balder gathered all krAft project company members to inform them about the next of the project.

Asked what they thought of the day’s activities, the krAft project participants said that most of them thought this forum was very good and some of them cited the meeting as an example for others to follow.

4.3.7 The fourth seminar

The fourth seminar was first scheduled for February but was held in April, 2005 only one week after forum three? In this seminar four companies were absent. Two of the companies were part of Alpha group, and two independent. It was not surprising for the two independent companies to be absent since both had previously expressed in an interview their displeasure with the project, i.e. its direction.

Because of the long break since the last seminar, one of the project leaders started with a short summary of what had been done so far in the project. He gave some feedback on the work of the krAft tutors, and the issues the tutors had been working with within the companies, i.e. STIN-analysis. STIN is a business analysis tool to help companies to identify their strengths and weaknesses, determine where they are today, setting goals and how to match them. STIN has been used previously by the krAft tutors in different projects. The introduction in the beginning was an attempt by the project leader to get the participants back on track, i.e. tie them to the project and the project idea again. The project leader believed that this was necessary because of the long break.

This seminar differed from the third in that the krAft tutors came back and they got time on their own to discuss the STIN-analysis and related issues which had been a source of tension between the project leaders and the krAft tutors.

KrAft tutors wanted spend their own time at the seminars discussing the process with all the companies. The krAft tutors did believe that they should have some time to discuss STIN but the project leaders glossed over it. As a result, the krAft tutors were prohibited from participating in the last seminar, but now they were back. The project leaders said later on that excluding the project tutors could have jeopardized the krAft project and therefore they should be allowed to participate in this as well as in the final seminar. The issue of collaboration between the krAft tutors and the project leaders will be
discussed later on in more detail. In this seminar one of the project leaders (Idun) was absent because of sickness but another member from the university was present and was acting as a lecturer and project leader during this seminar. Some of the participants believed that Idun had ended her commission as a project leader and the new one had taken her place.

The seminar started with a summary of earlier discussions. Then the two krAft tutors started to discuss the STIN process. They began by saying that what had been done so far was not exactly according to what they had put as the aim of the project when the krAft project began, but that the project had turned out good anyway. According to the krAft tutors, it had been a noticeable change within the group, regarding the participants’ way of thinking in new directions. This was something that they could see when giving an aggregated picture of what they had found when conducting the STIN analysis in the companies.

STIN is divided into five different analytical levels: customer/market, organization/competence development, business development/economics, production/technical issues, and other processes.

The krAft tutors were supposed to discuss STIN and give feedback to the companies about the process. They did that by making a short presentation about their findings. But this was not the only issue they discussed. The discussion moved from reviewing STIN in this krAft project to what could be understood as a promotional meeting about a continuous project that would start in the autumn, i.e. after this krAft project would come to an end. The krAft tutors wanted to know how best to pursue with the krAft project. They said that if STIN was going to be done in a right and competent way, it should last for about 1½ years, involving two consultants, who should visit companies together as a team. There was some discussion about this issue and one could see that the participants generally thought of the STIN as a good tool to work with. The companies believed it was always useful to understand a process, if something had been done better or worse by comparing issues in retrospect on how things had changed, even if that would mean a change to worse. After the krAft tutors had their “sales meeting”, they continued discussing some aspects they had seen when doing the STIN analysis. Those issues they touched upon as a common denominator in the companies were handed out to the participants on a paper.

Balder from the Swedish Foundry Association continued discussing what would happen to the krAft project in the nearest future regarding specialized courses and forums. He finished his presentation by introducing Goal 3 project financed by the EU, and asked if they were interested, and wanted them to consider this until the next day. Balder’s discussion supported krAft tutors’ discussion to start a new project and how best to finance it.

The next item on the agenda was a presentation from the participants about what they had done on their assignments. In interviews before this meeting, I got the feeling that some of the companies believed it could be hard to do their
homework because they experienced it too abstract and fuzzy. They thought that it was hard to apply the tools they had received to handle a real problem. This was confirmed when they started talking about the assignment. None company had used the tools to solve the problem. A positive sign was the fact that everyone had thought of a problem and had tried to prepare the homework with some companies seeking help of their employees. The participants who had discussed the problem with blue collar workers thought it positive not to confine the discussion to those only involved in management.

When the tutor asked about quality development during the process, using a framework from SIQ (Swedish Index for Quality) the participants said there had been a positive development during the year in their companies. They echoed the same attitude during interviews. Asked if they had learnt anything in this seminar most of them said no, but added that it was useful to participate.

The next activity in this seminar was an academic lecture about internationalization. This was a general introduction into the field of internationalization. The lecture mainly focused on a definition of internationalization, root to success or failure, motive, choice of export market, different structures, and taking advantage of the network you are involved in. As usual the lecture also included group work. It was a positive atmosphere in the meeting and the participants took an active part in the discussion. When the lecturer asked the companies about their export activities, the answer was that the companies were not export-oriented, exporting far less than 10% of their total production, and they all felt that they needed to expand more into the international markets. In a discussion later on how much of their production stayed in Sweden, most of the companies stated that most of their products ended up somewhere abroad. So the question was whether they actually needed to expand into the international market, or it was more important for them to focus on the internal market. Internationalization seemed to be a topic of concern to all the participants, but the question was in what form. The lecture finished with yet another assignment which was to be discussed at the next seminar.

The representative of the Swedish Foundry Association came to discuss future events in the specialized education program and give an overview of what would happen in the last forum, which should be seen as some kind of an examination. The idea was to visit Volvo in Gothenburg, and Renault and Volvo in Lyon, France, in June. Even if the participants were positive, they saw some problem, and one of the problems was that almost none of them sold products to the car producers, and because of that, the car companies were not potential customers, at least not now. One problem could also be that it was more important to focus on the Swedish customers who were buying foundry goods from abroad, in a bid to regain the domestic market. The Foundry Association said it was going to look into that and see if a visit could be arranged to another company as well that could be of interest to the group. Then the foundry representative continued discussing the issue that the krAft
tutors had brought up the day before about getting support from the EU, Goal 3, to arrange a similar krAft program in the autumn. Because the application time was running out, quick answers were needed. The new program would not only be offered to those companies participating in this krAft project but also companies in the foundry business would be invited to join.

In the evening of day one the issue of how to be able to compete on the international/domestic market was brought up again. The discussion continued until the next day with some of the participants willing to discuss the topic during the break and even after the lecture had finished. This was a new phenomenon, unseen in previous seminars, indicating that the participants had a positive view of the lecture which they saw more useful and open than the earlier one.

4.3.8 The fifth seminar

The fifth and final seminar was held on the 10th and the 11th of May, 2005. As usual it was a meeting in a conference center outside Jönköping. There were some companies missing. Three out of four of the Alpha group were absent, also Theta, Beta and Delta, which joined the next day. Perhaps Alpha thought it was enough to be represented by one of member only, i.e. the CEO. Other were said to have been extremely busy and it was hard for them to attend. Both Idun and Oden, the project leaders, were present as well as Balder and Heimdall and Njord, the krAft tutors. One lecture from the University was invited to talk about leadership.

The lecture by academic from the University began after a short introduction from Oden. It was about communication, and how people tackle different roles when discussing with different people. It was a mixture of lecturing and group work. One could say that during the lecture as well as in group work the discussions were open and active and most of the participants took part.

Later on a new assignment was handed out. The lecturer divided the class into two groups and the task was to discuss the question of how to increase collaboration for successful businesses. There were two rules to follow; 1) Brainstorming, no idea is bad, and 2) to evaluate those eight ideas the group believed were the most important. Oden and Idun were given an observer role, but they were not allowed to say anything, just observe. Table 4.2 summarizes what the groups defined as important:
Table 4.2: Important issues summarized

<table>
<thead>
<tr>
<th>Group 1</th>
<th>Group 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Offensive marketing, common marketing, joint plans and attending fairs.</td>
<td>1) Common marketing, and common technique, and common work.</td>
</tr>
<tr>
<td>2. Work in a smart way, shorten the lead time, automatize, and produce at lower cost.</td>
<td>2) Organizational: recruiting, competence development, developing business ratio.</td>
</tr>
<tr>
<td>3. Meet more frequently, be present together during meetings with customers and supplier.</td>
<td>3) Collaboration around purchasing regarding tools, and necessity.</td>
</tr>
<tr>
<td>4. Decentralized organization / good job environment.</td>
<td>4) Joint marketing of Swedish Foundry.</td>
</tr>
<tr>
<td>5. Joint purchasing.</td>
<td>5) Rationalization.</td>
</tr>
<tr>
<td>6. Working together, fusion between companies.</td>
<td>6) Joint support of service organization</td>
</tr>
<tr>
<td>7. Setting foot together in low-price country.</td>
<td>7) Help small Foundry to “come in” early in the innovative process</td>
</tr>
<tr>
<td>8. Demand more from the Swedish Foundry Association.</td>
<td>8) Develop products jointly.</td>
</tr>
</tbody>
</table>

Afterwards the groups were supposed to merge their answers but they had to do so through consensus, persuasion and not by threat. They had no right to change any sentence and only chose eight out of sixteen points mentioned in table 4.2, which are rather similar in some sense. The difference was that group one was more into some kind of a merge while group two did not want to go that far. The participants thought that this exercise was interesting but they openly expressed that they would have liked to merge the issues in some other way.

The next day Oden started by reflecting on the previous lecture. That caused a lively discussion and it could be seen that the participants thought that the lecture before was interesting.

Then he went on to describe what the participants had done during their assignment. They were supposed to have solved questions on internationalization, on what problem could arise with internationalization, on what products are most suitable to export, on why should a company internationalize, on what structure should be used (indirect exports, direct exports etc), is there a need to adapt existing products before internationalization? Is it possible to identify the different kinds of networks that could be helpful in their internationalizations process? The companies had not discussed the questions with all the employees within the company. Some of them discussed the assignment with their management group while others did not. They all agreed on the necessity of exporting their products but no one reflected upon the homework. It was more of a general discussion about internationalization.

After this discussion one of the project leaders continued discussing what had happened the previous day and how the participants interpreted it. He
wanted the participants to bring forward what they saw as important and what they thought was interesting or necessary for the future. The participants mentioned collaboration, and mutual help as important. They said this could only be done by being open and sincere. According to the participants it was important to commonly focus on marketing issues, purchasing things that were “on the sideline” of the production, and collaborating around educational activities. Even if they explicitly expressed the need for collaboration, most of the participants said that it was hard to collaborate because they were competitors. But even if they were competitors, collaboration was vital if Swedish foundry business was going to stay alive in the future. Social activities and social relations were found to be important, something that at least this group had to continue focusing on. It was just a question of the form.

The project leaders, Oden, started to sum up what had happen in this krAft project. He said that it was much about finding customers and how to reach them. It was about working in networks instead of working alone. It was a need to focus on promotion and communication mix: how do we communicate and with what tools? Oden handed out a paper that could be used as a template when meeting customers. What was interesting to notice was that Oden had other obligations in Jönköping and was explaining and talking in a very fast manner. He was apparently under much stressed. In the middle of the session he handed out the responsibility to Idun and left the group. After a short group work Idun ended the discussion.

Then Balder took over. He started to discuss the fifth and final forum, i.e. examination. The thought from the beginning was that it should be held in France in a tour that would have included visiting Volvo and Renault and maybe some foundry. Balder had after talking to the participating company decided that this was not the right thing to do. The participating company didn’t want to go abroad to seek customers. It rather wanted to focus on Swedish customers. There were two reasons for this. First, the companies believed that it was more important to try to win back jobs that had been exported during the years, i.e. 300 000 tons of material. They said that the domestic market was still possible to explore and gain more customers. Secondly, most of the companies involved in the project were not focusing on Volvo, SAAB, and Ericsson etc. They were not their first tier suppliers. For some they were second tier, and for others even lower down in the chain. This meant that visiting Volvo and Renault in France was seen as a waste of time and money. It was a question whether it was right to visit Volvo and Balder considered it a good idea to visit Volvo because of the company’s professionalism in purchasing. In the end it was decided that Balder would contact Volvo in Gothenburg to see if it was possible to visit in the middle of June. The day after visiting Volvo Balder had the ambition to gather some of those customers that were importing foundry goods from abroad in Jönköping, to meet up with them and try to use the knowledge acquired during the krAft
Jönköping International Business School

program to win the customers back. When the discussion about exam was settled, Balder presented a quality course which was going to be held in June.

After that Heimdall, one of the krAft tutors, started by recapitulating the previous day’s discussion on how to continue the process. The two krAft tutors were going to be involved in the next program, using STIN as a tool to understand the current situation as well as making up a plan for the future. As could be understood from the discussions, the companies fulfilling those requirements to join this new project expressed that they wanted to be a part of the new project. At least two companies stayed away, Eta and Epsilon, due to a variety of reasons.

The last to discuss was the participants’ assessment of the day’s activities and it was clear that they were positive about them.

4.3.9 The fourth forum

The forth forum was held in September, 2005. This forum was supposed to be some kind of an examination. The idea was to meet with supplier(s) and try to use knowledge gathered from the krAft project and translate it into reality. The idea from the beginning was to meet with suppliers abroad. The participants did not seem willing to do so by the time of the last seminar. They believed that to meet with a Swedish supplier would be better because it was the Swedish suppliers that were their focus group, and not suppliers abroad.

It was decided to meet with Volvo in Gothenburg and the date was set on the 13th of September. It started with a tour of the Volvo plant. Those companies that took part in the tour were Alpha, Beta, Gamma, Epsilon, Kappa, Theta and Lambada.

The tour was followed by a meeting with the representatives from the purchasing department. People present from Volvo were working with quality and purchasing. They started to present what they were doing in Volvo. Some highlights from the discussion were that low-cost and high quality were important. It was also mentioned that Volvo was going to focus on first-tier contractors and that they would focus more on big suppliers instead of small ones. Volvo representatives said that they believed suppliers working with Volvo needed to be big, and encouraged all the participants to think of what they could do together, provided they wanted to sell something to Volvo. Volvo representatives underscored collaboration as the factor behind high quality, low price and short lead-time.

The next thing on the agenda was a presentation of the krAft project and the companies involved in the project. This was the examination. The companies were going to present themselves and pinpoint their strengths and competences. It became a traditional presentation. The presentations that were done by the participants from the krAft project were an inferior quality.

After this discussion there was lunch together with the representatives from Volvo.
4. The krAft Project

4.4 Disturbance of peace

The project was not without problems. Early in the project it became clear that there was tension between the project leader from the University and the other members in the management team. It is important to discuss briefly this problem because of its influence on the project. An understanding of this disagreement between the members of the management team would clarify why the participants and the project developed in the way they did, the point that will be elaborated further in chapter 5. As an observer I didn’t realize that there might be problems more serious than the ones been involved in. I didn’t understand the expanse of it until later on. The reason could be my Icelandic background. A Swedish observant participant might have noticed the problem much earlier. Another reason was perhaps the fact that I did not take part in all e-mail conversation that took place. A third reason could be that I was not an ally to either of the wings, i.e. academia or consultants.

Every project should be based on at least four phases (Macheridis, 2001); definitions phase, planning phase, implementation phase, and reflection phase. In the remainder of this part those different phases are examined to give the reader an overall description about what happened in each one of them.

The idea of starting a project was initiated by Balder from the Swedish Foundry Association, Heimdall from ALMI, and Njord from Zeta. The idea was to increase exports by companies within the foundry business in Sweden. It became clear that to be able to pursue a project like this funding would be necessary. Balder, Heimdall, and Njord had gathered experience from working with krAft and ProDesign, and therefore it was supposed to be a good idea to try to get some support from one or both of the organizations. In interviews with Njord, Balder, and Heimdall it could be understood that it was not the krAft philosophy that was the reason for applying money from krAft or ProDesign. It was more a means to an end. The main issue was to develop technical skills within foundry companies, and support in the form of money was needed. Njord and Heimdall had worked with a concept called STIN, a business analysis tool to help companies to identify their strengths and weaknesses, determinate where they are today; setting goals and help them reach goals. For Njord and Heimdall there was potential in using STIN as a basic tool to identify what could be seen as a problem within the companies and then the project could be adapted to solve those problems.

In the definitions phase it was clear a foundry-related problem had been identified. It concerned the need to develop different kinds of technological competences within the industry, not necessarily technical. In several interviews with Balder, Heimdall, and Njord, they made it clear that it would be too costly to carry out the project relying solely on financing by the Swedish Foundry Association and therefore other outlets should be sought.KrAft and ProDesign showed an interest in participating in the project but it could be said that they had a different agenda regarding getting involved in it. By getting krAft to
participate, it became clear that the krAft philosophy would be superior in the process. In the management group it became clear early in the process that members did not share the same understanding of how to carry out the process. By definition it was called krAft project, but the consultants (krAft tutors) believed that STIN could be used as a starting point and then the krAft process could be attached to it. This was not the understanding that the project leaders, (university representatives) had.

To clarify the difficulty of coming to some agreement regarding the definitions phase, a mechanical and organic approach was needed. The krAft tutors and the representative from the Swedish Foundry Association preferred clear purpose and strategy before starting up a mechanical approach. The members from the university talked about goals and visions and the necessity to adapt the process or it was proceeding on organic approach. It became obvious in the management meetings that there was a difference between the two groups of how to conduct the future work.

Another interesting point was the project leaders’ lack of faith in the STIN method which they saw as quasi scientific in nature. By expressing so strongly their mistrust, it could be understood that this was one of the things behind the escalating tension. As an example of how discussions about STIN could be advanced, one of the project leaders said in one management meeting that if a student would hand in an exam based on STIN he or she would fail, because of the nature of STIN. The krAft tutors believed from the beginning that they could use STIN as a starting point but the project leaders had a different opinion about it.

Project leaders’ constellation was another issue that they and members of the management group disagreed upon. Oden was a senior researcher and lecturer while Idun was a young female doctorate candidate. The krAft tutors, and the representative from the Foundry Association expressed clearly when interviewed that they thought that Idun was giving too much space for the discussion. They thought she was too young and inexperienced, and they wanted Oden to take a greater part in the seminars. When discussing this issue with Idun and Oden both believed it was hard for senior consultants to accept a young researcher’s competence. It could be said that it was a question of generation gap and gender. Whatever it was a problem and the problem was ignored, or at least not discussed openly in management meetings.

The problem exacerbated before the third seminar when Idun and Oden refused to participate if the krAft tutors took part in it. Oden and Idun expressed their dissatisfaction with the tutors who would often interrupt the seminar and make critical remarks. The third seminar was carried out without the tutors being present. Idun and Oden hoped that this would set a precedent. At the next management meeting Balder demanded that the krAft tutors be present in seminars four and five. In this meeting, held on the 29th October, nothing was decided about how to conduct remaining seminars. The next management meeting was held on the 9th of December following which Oden
4. The krAft Project

held private meetings with all the members of the management group to try to solve the crisis.

At the management meeting all members were present except Idun who was ill. According to Balder, Heimdall and Njord thought it was much easier to discuss how to continue without Idun i.e. Oden was more reasonable.

In this meeting Njord and Heimdall discussed what they had done regarding the STIN analysis and it was decided that the krAft tutors would get some time at the next seminar to discuss the process with all the companies. They believed it was important to get the participants to discuss attitude toward STIN on an aggregated level. A new agenda was made about the process and it was decided to hold a forum in February and the next seminar in April. Due to unspecified reasons, the forum did not take place until the 31st of March so it was a gap of almost six months between seminar three and the next activity.

All members of the management team had problems of working together due to the fact that there were two separate agendas. One agenda focused on the STIN process and the other focused on the krAft process. As Oden and Idun said the fact that there were two agendas did not occur to them until the middle of the project. The problem was solved by letting the krAft tutors present the outcome of STIN, which the project leader had objected to in the beginning.

Accordingly it was only after the third seminar that the project leaders and the project consultants could actually agree on the krAft process as the main process. Only then all individuals within the krAft management group accepted to implement the krAft philosophy as the main process. This should of course had been done much earlier in the project.

At the forth seminar all participants of the management team were present except Idun who was prevented from attending. The management team described the atmosphere in the meeting as more open and creative than ever before. Even if the project leaders were somewhat critical of STIN, it was important at this stage to avoid problems as the project was reaching its end.

There was also the problem of who should be the project leader. For the krAft tutors it was Balder, but Oden and Idun also saw themselves as project leaders. Oden and Idun saw Balder more as an administrator than a project leader. This could partly explain why this did not surface. This atmosphere of within the krAft management group was unique as it never happened again. It could have been seen fruitful for collaboration in the future for the participants to have met and discussed. This was not done except the problem was partly solved but only on the surface.

4.5 Summary

This krAft project started in September 2003 with a forum and ended with a forum in September 2005. The philosophy behind the project was to use some kind of learning by doing. Learning by doing was regarded important to
connect theoretical discussion to real problem-solving. The problems were detected through discussions with the participating companies at the beginning of the process.

The project’s was mainly based on arranging seminars for the participants as well as individual consulting. Its aim was not fixed. However the overriding target was to develop the foundry industry and its members with a focus on export-related matters. During the project it became clear that exports were not the most important. Of paramount importance was how to regain the domestic market which consumed 300 000 tons of imports form abroad.

During the project five seminars were held, and four forums. In addition, numerous trips were made by the krAft tutors to the participating companies.

It should be noted that the atmosphere was quite tense in the beginning and the outstanding problems were only sorted out after the meeting in December - only after three seminars.

The project ended with a forum, where the participants visited representatives from Volvo presenting themselves and listening to Volvo’s representatives and discussing future vision and purchasing strategy.
5. The process and direction

5.1 Generating knowledge

This section of the chapter discusses how information within this learning project has been generated. It is essential to account for the important activities the participants performed during the seminars, how they interpreted what was discussed with regard to benefit, use, complexity and so on. It is also important to account for how the participants generate knowledge from each other. It is vital to see how the participants’ focal organizations have influenced the interpretation of knowledge from the seminars as well as the points with a practical bearing on their own organization.

5.1.1 From the seminars

The participants saw the seminars as an important tool to gather knowledge and ideas from lecturers discussing different topics. The point behind krAft projects is that the project management group or anyone else should not provide a strict agenda for the seminars beforehand. The structure is supposed to have a strong focus on flexibility, where different seminars could be adapted to the participants’ interest and what the participants regard as important based on their own practice and problems. The seminars are also regarded as important to build an emotional feeling of being in a group together. The project leaders wanted to let the krAft project develop in collaboration with the participants help. As the quotation from Oden indicates, the project must be flexible and not rigid.

We shall be flexible and adapt the process following what we discover that must be done

(Oden, interview June 15, 2005)

As an initial agenda in the beginning of the krAft project, four seminars out of five were in fact decided by the project leaders, in discussion with the management group. The only change was that the seminar whose topic was not decided in the beginning was announced later. It focused on internationalization, which was actually the initial aim of the project, i.e. export. The participants did not have the change to make their voice heard about changes during the process, so the question of flexibility was never tested. Throughout the project the management group and the participants did not hold a single session to discuss what the latter wanted to focus on.
It can be gleaned from the interviews that the project leaders on one hand, and the participants, krAft tutors, and the representatives from the Swedish foundry Association, on the other hand, entertained different view about the seminars. The krAft tutors and several participants thought that the seminars were unstructured i.e. lacked coherence. They mentioned that the seminars made it to some extent hard to follow the project’s overall aim i.e. see the main thread. There was little understanding why some issues were discussed and others were overlooked. The project leaders apparently blamed the krAft tutors for creating some sort of a hostile environment. They accused the krAft tutors of making odd proposals during the seminars, trying to maneuver the agenda into directions with no connection to the overall process. In order to make the most out of the seminars, the krAft tutors were to act as a link between the participating companies and the project as a whole. Because of this misunderstanding, not much information about what the participating companies needed was discussed, in meetings or elsewhere.

At the end of the project the participants were asked to summarize their interpretations of the seminars regarding what they saw as important, or interesting. Only one of the participants believed that the seminar was very useful and that there was a great deal to gain from it. Most of the participants said that most of the lectures were abstract and hard to grasp. What the participants saw as fruitful were the discussions conducted in groups, and the social gathering in the evening. However, forum three, the lecture given by the CEO of the Profilgroup, and the information about imported foundry goods discussed in the evening at seminar two, were seen as memorable by many participants.

One way to explain why the participants did not take an active part in the seminars or contributing to what they believed was missing could be attributed to their initial expressed aim of taking part in this krAft project. Were there any special topics that attracted their attention when they announced their interest to join the project? Did they join to meet aims laid down by the project management groups, or did they have another reason for joining? The participants expressed almost similar reasons for joining the process. Most of them were interested in getting inexpensive education, particularly specialized education. They thought the fee they had to pay to attend this project was negligible when compared with the variation and diversity of programs the management group had attached to this project. Interestingly, there was discrepancy between what the participants publicly said and their responses regarding questions about similar issues raised during individual interviews.

During the seminars the participants would state that they wanted to be better at marketing and they did want to be better at handling an unstable future, i.e. the focus was on comprehensive management issues. But privately they would either say that the people in their company were in need of competence development, or their selection for the seminar was not well
5. The process and direction

thought out. But there was no doubt that they would have preferred to join the course rather than staying away if given the option:

(...) yes and we want to be better at selling, that is to market ourselves, how we should sell (...) development of marketing.

(Philip, interview June 6, 2004)

Philip’s company has seen some changes in ownership structure. The new owners want them to increase their production and they need to understand better how to sell. The company was previously owned by a big international concern. But the new owners are seeking to establish their own identity.

My expectations? I had no idea what to think in the beginning. The idea of meeting colleagues is good, but we knew them before. (...)
The expectation was to meet with others especially that I had just started to work with marketing issues in my company.

(Andrew, interview August 8, 2004)

Andrew was new in his position as marketing director. This position was new to him and his main goal was to get a better understanding of marketing-related questions. As can be seen from the quotation the aim to join the krAft project can be seen more of an individual undertaking rather than emanating from a group desire to develop the foundry business:

It was really to create contacts and to know more other foundries.
We have through the Foundry Association five foundry companies created knowledge about each other’s organizations. This was very much appreciated by those who did take part.

(Thomas, interview August 23, 2004)

Thomas as a CEO in his company had a positive experience of working with other rival companies. Although he mentions creation of contacts as one aspect for joining the project, taking part in the educational activities offered by it was seen as a strong motivator:

What excited us to join was precisely this competence development – those special seminars (...) more concrete things like techniques of measurement.

(Maria, interview May 7, 2004)

Maria, owner and CEO of her company, had, two years earlier, taken part in another krAft project of she had accumulated a positive experience. She believed that this krAft project could actually help her company continue the work started by the previous krAft project. But for her the main reason for
joining was to be able to take part of the specialized education the project offered.

James, a CEO of Alpha, had no expectations other than competence development which this krAft project was intent to offer. Even if James’s company had been involved in another krAft project one year earlier, which Alpha group regarded as very positive to, his aim to join was driven by individual motives.

If I am going to be honest I can say that I only had one expectation of joining and that was to get us a lot of reasonably priced competence development.

(James, interview May 7, 2004)

These answers they indicate that it was specialized education that tempted the participants to join this krAft project. In one interview one interviewee mentioned that the specialized education offered made it worthwhile to attend. It is clear that answers given by the participants in private interviews differed from what they expressed in public.

One major element in the program was that the krAft tutors should function as a bridge between topics discussed in the seminars and practical problems in the companies. Theoretical problems discussed in seminars were to be understood in a practical context. The companies should be able to take back ideas from their own learning domain (their own companies) to their projects to help solve the problems they face. It could also be done the other way of round, taking problems discussed in seminars back to their focal companies along with the method of how to solve them. Only two of the companies, Alpha and Gamma, believed that the krAft tutor did actually contribute to the process in the company. But it was only Alpha who discussed openly some issues in the seminars connected to what the krAft tutor had done. It is worth mentioning that both those companies did have the same tutor as their process consultant. Most of the companies, except these two, were critical to krAft tutors’ performance. Most of the participants had no idea what the tutors were supposed to do or what they had been doing. Even if the krAft tutors visited each company between 2 – 4 times, only these two saw some connection between the seminars and the krAft tutors.

One important part of the seminar was that the participants were supposed to do a home assignment, which was connected to a previous seminar. The home assignments were designed in a way to help the participants taking part in the project carry it out in coordination with other employees from different levels at their focal organizations. The idea was to anchor the krAft project in respective organization, along with its employees. Overall the companies’ performance with regard to the assignments was rather poor. Only one of the four assignments was discussed with the employees at different levels of the companies, and this was only done by certain organizations. Mostly, the participants only discussed the assignments with the management group or with
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those who attended the seminar from the same company. One of the reasons why they did not take the discussion to their organizations was the belief that it was hard and time-consuming to involve regular employees in them. However Alpha was an exception. The krAft tutor involved in Alpha did let it conduct work that could be related to those assignments that were handed out during the process.

When the participants were to account for how they did solve the home assignments, it became quite clear that they had not spent that much time doing it. Their answers seemed rather general in character. This finding the participants supported during the interviews. Even if the participants had a hard time to see some thread in the project, they did actually get new insights about their lack of competence regarding leadership and organizational issues. They came to realize that their insufficient knowledge about organizational and leadership issues and how to meet an unsure future was at least as important as operative issues. Management issues were something that all companies came to believe that they needed to develop after the project ended. Balder, from the Foundry Association was supportive, saying that this krAft project was actually the first project held by the Swedish Foundry Association that had its focus on issues related to management:

This is actually the first project in which we use more structure and long-term goal-oriented work. No technical issues in a strict sense. We have actually never carried on any project within the Foundry Association that has worked with business development. We have never worked with a project that illustrates organizational structure, leadership, communication, and this project discussed such issues also (...) This was totally new.

(Balder, interview May 30, 2005)

An important thing the participants mentioned when interviewed was the experience they obtained from participating in this project. They got time to disengage themselves from ordinary activities and spend time outside the company to reflect and think about issues other than just day-to-day activities.

But not all the parameters were fulfilled. The overall aim that the process should be driven by different activities to bolster what one could gain from the seminars, tutors, and home assignments did work according to how the leaders had projected. The positive part was the participants’ development of an understanding about their own lack of competence about organizational issues. The project, therefore, was not without defects and so were the companies.

Many participants explicitly said the focus on academic issues disturbed the process. But when asked if they believed that they would have come up with the same insight about organizational issues in the absence of the academic discussion, they were less sure that would be the case. It can be added that if the relation with the krAft tutors had worked, there would probably have been
more practical understanding. In a situation like that the role of an academic could have been rather understood as disturbing.

5.1.2 Generating knowledge from each other

Much time was consumed on group-work during the seminars and class discussions led by the project leaders, along with the lecturers. It was important to get some understanding on how the participants apprehended group-work and discussions in the seminars regarding knowledge exchange. It was also important to understand how they interpreted and made use of the topics brought up during the discussions, and what they did with regard to the process by interacting with the other participants in this krAft project.

Only two or three of the companies had some kind of businesslike relations with each other. Even if there were some business relations between some of the companies, it could be said that the relation was limited in its scope. Others were not involved in any kind of mutual trade. Even if they knew each other, the acquaintance was mostly due to relations during meetings at the Swedish foundry Association.

To address how sincere the participants were when openly discussing topics in the seminars, they were asked in the beginning of the process whether they believed they could say whatever they wanted or would hold certain information back if necessary. The answers were rather unambiguous. The participants stated that they regarded themselves as open with information but they believed that other participants were withholding it, i.e. not as open as themselves. In my last interview with the participants, they said they no longer believed anyone withheld information on purpose. They believed that all companies were open and sincere regarding what they discussed in the meetings. Only one company claimed that they thought the situation had turned out to be negative and that the discussion, though said to be open, was not as liberal as in the beginning of the process. The reason they gave was that the groups, which consisted of two in the beginning, merged into one. All participants agreed though upon one thing; two issues were never to be discussed, price and individual customers. They experienced it as hard to discuss price and customers because of the constellation of the group; that the participants were actually competitors.

Even if the participants experienced the discussion as open in the beginning of the process, they expressed optimism that once relations developed, the discussion would be even better, and there would be even more fruitful contact. In the beginning it seemed that the participants had not found a common platform for a genuine discussion, and that they did not take the initiative themselves to discuss other issues than those that were on the agenda at the krAft project.

In every seminar there was a mixture of lecturing, group-work, discussions in the classroom, and social activities in the evening. The group-work was either
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done company-wise or the group members were dispersed among the companies. The participants expressed a positive attitude toward the group-work especially when it involved members of other companies. The participants thought it was an opportunity to discuss with members from other companies as well as listen to what the others had to say about different issues, i.e. new insights.

The questions the participants were working with in the group-work were mostly general in character. The nature of the questions could not indicate that there was a need for the participants to withhold information that could have led to divulging some company secret. The general character of the questions could actually have been the reason why the participants experienced the discussion as open, at least from their own point of view. Another reason why some participants experienced others not as open as they perceived themselves, in the beginning, could be that they did not know each other that well at the start of the process. Social relationships were to be established before trust could appear; this was obvious when looking at the krAft project in retrospect. In the beginning of the project the participants did not take that active part in the discussion but later on they started to discuss more openly and in a more relax manner.

I did not participate in the group-work and therefore I can not comment on the discussions that took place among the various groups in the group-work. However judging form the comments made afterwards in the classroom it could be said the discussions were lively and open, and that the topics that needed to be tackled were covered. The participants backed this positing during interviews with the author.

The third seminar focused on Oden’s workshop during which different administrative tools were presented. The tools were connected to seminar one and two. The project leaders had, after the first and second seminars, realized that at least some of the participants experienced the seminars as theoretical, complex and impractical. They thought it was necessary to exemplify knowledge gathered in the first two seminars by letting the participants work with more realistic problems. Employing the tools, the participants had the understanding that the theoretical, abstract models presented will be applied to practical situations in manner that would be clear to the participants. Accordingly, the questions attached to this workshop were seen as a good opportunity to openly discuss issues related to the participants’ own problems.

The participants took an active part in the discussions that took place in the first seminar. This happened even though many of them experienced the tools to be hard to understand and use. Actually the participants expressed, when interviewed, strong skepticism towards the tools. The skepticism was not made explicit in the seminar. Regardless of the participants’ negative attitude towards the tools, the discussions in the classroom afterwards could be understood as open and sincere. The problem they were supposed to solve was practical and it did not have them to reveal any company secrets during the discussions. They
could choose their own problem and choose a suitable tool to solve it. Nonetheless, they generally found doing the home assignment hard. Almost no participants carried out the assignment and those who tried said they gave it up in frustration.

I agree with the participants with regard to their attitude vis-à-vis the seminar on active and dynamic discussions. They had started to discuss interesting issues in a sincere and open manner.

Thomas, for example, showed that the participants had actually started to discuss different kind of issues openly with each other in the project. He pointed to new says of discussion through raising issued related to their own businesses and are getting confirmation from others about how one self was doing. There was exchange of ideas between the participants. The discussions were dialogical and monological. Some issues related to their own companies were in fact discussed openly:

*I think that it has been rewarding to listen to other people’s problems and get a confirmation of what you are doing (…) It is the better part of this (…) I believe it is good.*

(Thomas, interview June 6, 2005)

The participants thought the discussions during this seminar as well as in the fourth and fifth seminars were active and open because they were not about customers, prices, products, etc. The theme of the discussion focused more on leadership and organizational issues. Accordingly, these issues were viewed as interesting and insensitive the discussion of which would reveal no company secrets.

Asked at the end of the krAft process what they had learned from others, no participants mentioned a single concrete thing. I did get the impression that some of the companies were actually very competent, but this did not result in any change or actions within their own organizations.

One tends to believe that when so many companies meet during such a long time, some kind of a common interest leading to the construction of networks or communities of practice would emerge. No such grouping was noted to have evolved during the process. Only two companies had decided to meet to learn more about their organization or processes. Those two companies were not competitors, and did not share customers or markets.

It is interesting to note that although the participants believed that the discussions in the seminars were open and rewarding, no one could actually put a finger on any specific incident or issues deemed of significance.

One important feature in the concept of the seminar was the schedule which was held from lunch the first day to lunch the next day, with a social gathering in the evening. All the participants mentioned the social activities as one of the most valuable in this krAft process. The participants continued to discuss work-related issues, and some of the participants expressed their astonishment that there was so little small talk, and even if it existed, it mostly focused on job-
related issues. According to the participants, questions about organizational issues in general and more down-to-earth discussions were elaborated on in the evening. They said that they could ask direct questions like *how do you do it*, *why, do you have these problems*, and so on. The participants believed that it was important to meet in a forum like this, as it gave them the opportunity to socialize, and to learn to know each other better, and as some of them said to built up a network in the future. At the end of the project almost no company had utilized the network from those newly found friends. But the participants believed that even if they had not been in contact yet, they could contact each other if necessary.

Some of the participants had a negative attitude towards that companies that were registered but only attended sporadically. The companies that had registered but failed to attend regularly were likewise not viewed positively. It would have been better for them too not to have registered at all. At least four of the companies failed to attend all the meetings and could be categorized as provisional members.

In summary, little could be gleaned form the discussions or whether the participants generated information from each other. The participants mentioned nothing that could be regarded as memorable or important and could be traced to one or more companies as being of significance. What they regarded as of paramount importance were the social gatherings in the evening, and the group discussions. One thing that came out of the discussions was the participants’ discovery of common problems they needed to continue focusing on. Those problems were related to management and organizational issues. They had come to realize that the future was unsecured in many ways in the foundry business, and if the companies were going to stay in business they needed to be more competent regarding issues connected to organizational matters. Survival needs more than how to conduct operational issues.

5.1.3 **Discussing in focal organizations**

How knowledge was generated from the participants’ own domain was important to the krAft project. In other words it was important for the participants to connect theoretical discussion with a concrete understanding by using theoretical knowledge in practical situations. From the project management’s point of view this would initiate questions by the participants and broader understanding, when a problem in a respective company was to be integrated into the project in the form of more specific discussions, tied to a specific real problem. One way of understanding how the companies actually did this was to investigate how they solved the home exam they were supposed to have worked with between meetings.

An important part of generating knowledge from the companies’ own domain, understanding problems and/or finding them was for the information depended on help from the krAft tutors. The krAft tutors visited each company
several times during the project to help them with several issues that could be connected to the krAft process. As we have concluded earlier (chapter 4.1.2) there was a discrepancy in how the project leaders and the krAft tutors interpreted the aim of the project. The krAft tutors believed that the seminars would support the STIN analysis while the project leaders believed that the krAft tutors would support the krAft process.

A second important part connecting problems from the companies to the krAft process was through specialized education. Based on real need identified in the seminars and by respective companies and helped by the tutors, the companies were supposed to come up with several suggestions for specialized education. In that way it was believed that every part in the process would support the other, i.e. seminars, consultation, and specialized education.

Regarding the home assignments, it did not function as it was supposed to. Only the first home assignment was solved in some way, or the participants tried to solve it. The first home assignment was about customer and customer demand in the future, and one part of it was to let employees take part in the discussion, (Actually the project leaders initially wanted the participants to solve all home-exams by letting the employees take part in the solution). The reason was twofold: to get deeper or more comprehensive knowledge by involving more people, and to connect the whole organization to the krAft project. In the first home assignment, most of the companies did try to involve more than just the management group. Most of the companies only solved the assignments in the management group. The solutions were only done by those who had been attending the krAft seminars. Generally the participants regarded the assignments as a good thing. Some of them thought they were hard to understand and apply, particularly the one from the third seminar. Only two of the assignments were said by some of the participants to be good. The one from the first seminar was about the demand for future customers, and the one from the fourth seminar was about a problem on internationalization or export. Both these assignments could be characterized as easy to understand and practical.

Most of the companies tried to solve the first one according to instructions, but the other where seen as too specific and more suitable to be solved by management. More will be said about the participants’ attitude regarding these two assignments.

The second home assignment was about core competences. It was not surprising that it was not discussed in the whole organization. Most of the participants had no idea about core competence. It was regarded hard to discuss with the employees and some of them said that they had no clue about the concept and thought they would risk losing face in their own organizations if they attempted working with it.

The third home assignment was about using the tools that had been introduced in seminar three. It required finding a problem and seeking a solution to it relying on some of these tools. This was perhaps the home assignment that was criticized the most when the participants were interviewed.
Only two companies tried to use it in the organization before giving it up, saying that it was almost impossible to use those tools to solve the problem. This home assignment was solved by most of the companies in the management group.

The fourth home assignment was about internationalization and export. It was a concrete assignment whose introduction did not require it to be solved by other than the management group in each company. When listening to how the participants did account for the solution at the next seminar, it was clear that this particular assignment was discussed, mostly inadequately in the management group. Bartholomew summarizes what the participants thought of the assignments and how they felt about them, particularly the third one:

*The export part (…) it was concrete and good (…) but it became bad when we were told to use those dammed paper (tools) (…) nobody understood that assignment.*

(Bartholomew, interview June 6, 2005)

All participants had at least tried to solve one or more of the assignments, but they had not been using enough time to solve them. In private most of them would say that they had discussed the solutions on their way to attend the seminars in the morning, though this was not verified during the interviews.

How did then the krAft tutors help identify issues the companies deemed as important? Generally the participants expressed the same impressions of the help they got from the krAft tutors. Only two of the companies said that they got some help from the tutors. The rest said they did not see that the tutors had contributed at all. Some of them said that they never knew what the tutors were supposed to do or what their role was in the whole project. Some of them stated that there was no relevance between the project and the tutors work. One of the companies expressing satisfaction with the tutors’ work had an earlier acquaintance with one of the tutors in another project. The krAft project was more of a follow-up, where STIN was known from the previous project. The other company that stated that they had a pleasant collaboration with the tutors had earlier established broader collaboration with them, more than what this krAft project was aimed at. The tools (STIN and others) the tutors offered to help the companies to identify and solve problems were seen as good and helpful. In both cases it was the same tutor that was involved in these companies. An analysis was conducted in one of the companies and it showed that the representatives from that company thought the seminars were useful and that they had a clear connection to all of the home assignments that were handed out in the seminars.

The fact that only two of the companies thought that they had got help from the krAft tutors is not that encouraging. The tutors visited all the companies several times, but only two of them believed their assistance was useful.
The specialized education was also a way to connect the krAft project to each company. During the project several special courses were offered to all of the participating companies. All courses held by the Swedish Foundry Association had some connection to krAfts’ specialized education. At the outset Balder told the participants that the courses would be free of charge but because of some fiscal problems the participants were asked to pay some money, arousing their anger.

One way of finding out the need for educations was for the tutors to help identify competence slack in dialogue with each company. As we saw earlier, most of the companies did not experience that they had got any help from the tutors.

Five specialized education programs were included in this project: marketing education, lean education, quality education, education about methods of measurement, and education about technology in robot.

Asked whether they saw any connection between the specialized education and the process as a whole, the participants were almost unanimous that there was none. But I do not think that observation on the part of the participants was all right. At least two of the courses given could be seen to have a strong relationship with the process: the marketing course and the course about lean production. But the fact that the participants did not come to understand this is very interesting.

5.2 Communication

This part of the chapter will focus on communication in seminars with krAft tutors, and the participants from each company.

5.2.1 Communication in the seminars

The way communication was maintained in the seminars was complicated. Firstly, the participants discussed frequently during lectures, and they were encouraged by the project leaders or lecturer to raise questions, queries or just cite examples from their own experience. Secondly, every seminar was divided into lecturing and group-work. The group-work involved working with other companies or own company. The group-work decided the type of groups that should be used. Thirdly, discussions between the participants were conducted during the evenings in every seminar. Fourthly, because communication is also about transferring and understanding meanings in a social context, i.e. it is a question of direct communication and understanding, lectures/tutors were not acting as intermediaries alone; this role was charged by the participants too.

The project leaders were very different in many ways. One of them was an experienced lecturer with genuine work experience, male around sixty years old. The other one was a young female PhD candidate, in her thirties, with little
work experience. This female lecturer was among the problems discussed by some of the participants and the members in the management group who saw her as less reliable because of her lack of work experience. Both krAft tutors were male, in their sixties with long work experience as business consultants. One of them had his own consultancy business, and the other was employed at a governmental consultancy company. Both tutors expressed openly at management meetings as well in interview that they had some reservations about the PhD candidate having such a prominent role in the krAft process.

In the first seminar the communication can be characterized as one sided. This first meeting was organized in the form of a traditional lecture, where the participants had the role of listeners except when asked directly; otherwise they were quiet and passive.

In the first seminar the focus was on future customers in the foundry industry. Future customers were characterized to be likely more demanding than today’s customers, and companies needed to be more competent interacting with them than those of today. Generally the participants interpreted this seminar as somewhat abstract and because of that they had hard time to apply it in what they called “their own real situations.” On of the reasons why the participants interpreted the seminar as hard could be because they were not sure what the project was about. The participants did not know each other that well, and they did not have a clear view of the aim themselves. Because they interpreted this seminar as somewhat abstract and hard to understand could have been the reason of their being cautious to open up. It could be somewhat a fear of losing face.

The first seminar was divided between two groups, with six or seven companies in each group. The first group was much more passive than the second one. The krAft tutors and Balder from the Foundry Association took much space in the discussion by raising questions and answering them. They did not wait for the participants to answer and reflect. Afterwards they said that if they had not done this at the first seminar it would have been a disaster. Before the second group arrived it was decided that the krAft tutors and Balder should try to be more passive, confining their contribution to questions aimed at the participants. The second group was much more active than the first one, and the krAft tutors and Balder did take more passive role here. It should be noted that the participants in the second seminar were themselves more lively and active than those of the first. The lively atmosphere in the class could not be attributed only to the passive role of the tutors and Balder. The question therefore remains if it was actually the krAft tutors and Balder’s fault that the first and second groups at the first seminar turned out to be so different.

In the second seminar both groups merged into one, and jointly took part together in the discussions. Only one representative from one company thought that the merging had resulted in poorer discussions. This seminar was characterized by lecturing and group-work where the tutors had fixed questions for the participants to answer. According to one of the project leaders, the
strategy in the beginning of the process was to get the participants to learn basic concepts before applying them into real situations or problems. There was a need to increase the level of abstraction to increase the participants’ basic theoretical understanding of how to solve practical problems.

In this seminar the participants referred often to an invited guest that had been active as a CEO in a big foundry called ProfilGruppen. He told a story of how it was to start a small foundry that had evolved into a big one and became quoted on the stock exchange. All participants except one appreciated this discussion as practical and relevant. One of the participating companies used material and ideas from this lecture to formulate different visions and aims for their own company. One invited guest from the foundry association held an informal discussion at the evening of this seminar about imported foundry goods. He said that imported foundry goods were approximately 300,000 tons per year, almost equal to what the Swedish foundry business produces in one year. This resulted in a lively discussion but in a more leisurely form.

This incident had a huge impact on how the project formed later on. The primary aim of the project was to focus on internationalization but the information about imported foundry goods led to a change in the aim and focus customers had about domestic foundry customers, i.e. scrap the imports and concentrate on domestic produce. It became clear to the participants that there was an immense potential of exploiting the domestic market before there would be a need to explore the international market. In the beginning of the kraft project the management group’s intention was to let the participants visit a customer abroad, as a form of examination. When this was presented at the last seminar the participants expressed their wish to rather visit Swedish customers because it was believed that the focus would be on domestic customers instead of their foreign counterparts in the nearest future.

The communication in the first two seminars was more in form of lecturing where the participants were mostly given theoretical stuff. If the participants said anything it was because they were asked specific questions by the lecturer rather than they had something in their mind they wanted to bring it up for discussion.

In the third seminar the failure in communication between the participants and the project leaders was easy to spot. First the participants were supposed to account for the home assignment which was handed out in seminar two. It was obvious that the participants had experienced it as hard to solve. They found it hard to understand how to solve the home assignment and the discussion could be characterized as straggling and somewhat unprepared. No attempt was made by the project leaders to summarize or deepen the discussion afterwards. The participants accounted for what they had done (or not done) and the discussion was finished. When interviewed later, it became clear that they had hard time understanding what they were supposed to do. Because no attempt was made to clarify, it felt like the problem was not solved and that the question was still unanswered.
In this seminar the participants were given for the first time the opportunity to discuss in groups comprising members of different companies. The first question they discussed was how to get people within organizations to function in line with organizational goals and aims. The participants believed that the discussion at this seminar was open and rewarding. One of the participants reflected specifically over the fact that it was not only owners who were present but also “ordinary” managers working as employees, i.e. people that at are subject to leadership.

What issues did the participants appreciate in the discussion? Mostly they mentioned that it was good to get away from daily routine and to have an opportunity to focus on problems involving strategic issues.

After the first group session, the group leaders summarized a common view of what different groups had come up with. Then the groups were supposed to choose some of the problems mentioned and select one tool that had been presented by the project leaders to solve that problem. When interviewed, all the participants expressed their dissatisfaction with how to use the tools presented to them. They saw the tools as abstract and unrealistic in a real situation. What characterized the group discussion, according to the participants, was the use of the time to discuss problems other than those they were expected to discuss. When they were short of time they would then start to discuss the problems they were supposed to discuss.

Even if they did not understand how to use those tools the project leaders handed out, the aim of this exercise was more to stimulate discussions, than come up with the right answer:

We see our role as stimulating new ways of thinking

(Oden, interview May 10, 2004)

Oden expressed a wish projects leaders had almost failed to meet, the matter the participants saw as a problem in the project. They understood what Oden here calls “stimulating” more as an academic way of discussing, which they find hard to cope with. Accordingly the tools were not understood by the participants. Even if this standpoint had been discussed in all three seminars, the participants had hard time to understand that, or as Maria puts it.

Hard problem, hard to analyze

(Maria, interview May 10, 2004)

Oden believed that the reason for why the participants had problem understanding the tools were because they did not understand the philosophy the tools were based on or because they were not use to working in an academic way. The problem was stated explicitly by Bartholomew in one seminar, it remained unsolved.
Is it so that the starting-point is not clear? We see this as very abstract, too many issues. We are not accustomed to working with such a big picture.

(Bartholomew, in seminar 2005)

According to John, the participants did face some problems for which no solution was at hand:

I believe you (Bartholomew) mentioned that we looked at it from a general point of view. We would have needed to struggle with specific problems. We had hard time imaging that.

(John, in seminar 2005)

This quotations summarizes very well the participants’ frustration of being unable to understand the problem stated by the project leaders, or what they were supposed to do in discussing or solving it. In private interviews, the participants described the first day of seminar three as somewhat abstract. Though they found day two somewhat easier, they believed it was confusing.

In the second day of seminar three the group got only one problem and one tool to work with. Though it seemed to be easier to work with only one tool instead of many, the participants still did not do the home assignment handed out at the end of the seminar. They still felt the tools were hard to use and therefore the home assignment was not solved according to what the project leaders had in mind. The word “horse-sense” was often mentioned during the discussion about how the home assignment was done.

But it was interesting to see how groups from different companies had developed a common understanding of how to approach these problems. They did experience them as confusing but they were in agreement on how to solve them. The approach was only slightly different.

The participants generally found the fourth seminar as good, practical and down-to-earth and user-friendly. Now the krAft tutors were back again in the process. It was in this seminar that the krAft tutors got the opportunity for the first time to discuss what they had come up regarding their work with each separate company, mostly STIN. According to the krAft tutors, it was important to get time to communicate on an aggregated level the results, common problems, thoughts, and problems that they had discovered while visiting the companies.

In krAft tutors’ view the problems the companies faced were mostly connected to organizational factors, management and leadership. The issues the tutors raised during their visits could have generated a lot of discussion between the tutors on the one hand and the participants and the project leaders on the other. But unfortunately no such discussions took place.

The reason could be that the whole point of the discussion was how to promote a new project that was to be launched the next fall, once the krAft project came to an end. It could be understood that the krAft tutors and Balder
had decided to dump the krAft project in favor of something else that was bound to happen. Many participants experienced similar views when interviewed later. Some of them mentioned that it would have been better to focus on the krAft project now and let the discussions about the future prospects await.

The home assignment that the participants were supposed to do in this seminar did actually lead to a good discussion about the problems that could be found in each company. Most of the companies chose to focus on problems related to management issues. The discussion was lively and open, and the participants could see and acknowledge the problems that were raised. All the companies accounted for what they had done regarding the home assignment, but none referred to the tools they were supposed to use. This again confirms the observation made in seminar three regarding the participants’ lack of understanding about the tools.

The fourth seminar was characterized by open and lively discussion. One reason why it was open could be because the topic discussed had nothing to do with issues that could be regarded as confidential information by the companies. Nothing was said about prices, customers etc. The topic focused on exports and imports, and what could be done in the future. It was obvious that the participants felt an urge to discuss this topic, and that they felt a need to place more focus on it due the volume of related goods imported by Sweden.

The fifth and last seminar focused on communication. The participants were divided into two groups. They were asked to decide on eight points they regarded as important concerning collaboration between companies for successful businesses. I could only follow one of the groups for obvious reasons. In it I could observe that the discussion was open and honest. The participants discussed collaboration and they tried to come to mutual understanding without forcing their views on others’. It took the group a short time to come to an agreement about those eight points. According to the project leader that followed the other group, the discussion there was of a similar nature. As an observant participant, I believed the participants entertained a high degree of willingness to collaborate. In the other group, collaboration was also mentioned but not as explicitly as in the one I attended. Afterward the groups were supposed to merge the lists into one, without changing any single point. They were to choose eight points out of those sixteen the two groups had raised. In the joint meeting the atmosphere was open and much more competitive than when the groups were working alone.

During interviews many participants thought that more time should have been devoted to this assignment. Many regarded the discussion as among the most valuable in the whole krAft project. Interestingly, the companies did not seem unfamiliar with or against the idea of collaboration. The question remaining unsolved was the degree or form of collaboration.

When the participants reviewed the home assignment, it resulted in an intense discussion by the companies. The matters raised in the assignment were
not strange for them, enabling them better understanding and preparation before heading to the class. When interviewed the participants pointed out that this home assignment was practical and useful in many ways, but all of them had decided to discuss it within the management groups in their organizations. The assignment was interesting because it touched on strategic issues, issues that could at first glance be regarded as confidential. But this was not the case; they discussed what markets, what customers, what products, etc., could be of interest to each respective company to focus on in the future. The communication was very open and apparently there was no attempt to have hide anything.

In a concluding session, led by Oden, the participants were asked to choose a topic that they wanted to discuss regarding what they considered important for the future. The focus in this discussion was on collaboration, and how to start collaborating. It was obvious that in this seminar the companies had got their eyes set on just how important collaboration was for the Swedish companies to remain to survive in the future.

Volvo purchasers agreed upon the significance of collaboration during a visit by the participating companies to the in Gothenburg in September, 2005. Volvo’s representatives said explicitly that they regarded most of the Swedish foundry establishment as too small to have the capacity to serve Volvo as a single source supplier. Volvo’s representatives exhorted the participants to collaborate at some level in case they wanted to stay as Volvo’s subcontractors.

Another thing that the participants discussed at the end of seminar five was the need to continue meeting, taking part in learning courses or something of a similar nature. Even if it was not necessary to merge in a broad sense, they still could join forces in marketing and bidding without having to merge.

This seminar stood out as interesting due to its openness, and the fact that the participants had the courage to discuss sensitive matters, like strategy, organizational issues, and future positions.

### 5.2.2 Communication between tutors and companies

The participants experienced the meetings with the krAft tutors as not being productive. Only two companies thought that they got very good help form one of the tutors. The general opinion was that even though the tutors had visited all the companies at least once, the participants never really understood their role in this process.

The krAft tutors’ agenda was to use the STIN analysis tool to stimulate discussion at each company. STIN as a tool is conducted to focus on five different processes: business development/financial issues, organizational factors/competences, customer/markets, production/technology, as well as other processes. Some of the participants mentioned that they believed that STIN was too subjective an instrument to work with. They actually wondered if it was at
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all meaningful to spend time and effort on something that they did not believe in.

First, the companies and a krAft tutor were involved with the focus by each company on the STIN process. The idea was to decide the company’s situation at the present point at time based on those five factors mentioned above. The next step was to decide where the company wanted to be in the future, and then decide the process of going from then to the future.

How did the companies interpret using STIN? Only one of them actively worked with STIN between seminars. Others only used the STIN analysis tool when the tutor came back again, but in-between it was well preserved in a file.

In the last seminar when what had come out of STIN was discussed, the tutors stated that in this particular project it had not functioned as aimed at in the beginning. They said that if STIN was going to succeed in a meaningful way, companies needed to get involved at least 18 months in the project. They also said that to make STIN a success, at least two tutors (consultants) were needed to attend to every company. The best result would be if one tutor would have something of a technical competence and the other more business-orientated competence.

One reason for the tutors to find it hard to work with the companies was the fact that nothing was decided upon from the beginning of the project. The aim was unclear and it was not certain which process was to support which. Should the STIN process support the seminar process or should the seminars support the STIN process. According to Njord, the problem was that the tutors never got a clear picture of what they were supposed to do, or as Njord put it:

*If they had defined what they wanted to do in the seminars, then we (the tutors) could have completed it with what we wanted to do. They (project leaders) have been little confused about what it is that the companies want to get help with.*

(Njord, interview June 3, 2005)

In one case of the krAft tutor’s work was beneficial apparently only to the Alpha group. Actually Alpha consists of three companies so at least three companies out of twelve felt that the tutor made a fairly good contribution. Representatives from Alpha group were just as confused as other companies at the beginning of the process. They did not understand what the tutor was going to do, but they had high hopes that he could help them develop as a company. After one encounter with the tutor in a two-day meeting, he and the Alpha representatives agreed on an overall agenda of how to continue the work together. The agenda was based on STIN analysis instrument but not on the krAft process. Even so the Alpha representatives saw many similarities in both processes.

The other company that interpreted the work with the tutor as meaningful was one that had worked with the tutor earlier. They had already done the
STIN and now it was a question of updating the process and how to continue with it. The relation was already established.

Those companies that did not understand STIN showed no interest in absorbing how the STIN tool or the tutors’ work would be helpful. Accordingly, those companies interpreted the discussion with the tutor as meaningless and time-consuming. The representatives found it meaningless because they could not see its connection to the krAft project at all.

This was one of the problems in the krAft process; the tutors had their own agenda which they followed. The project leaders did not bother to try to understand what the tutors were doing and in-between there were the companies, trying to figure out the agenda of the two agendas without losing the ability to solve the problem in the process.

STIN was not discussed until the fourth seminar. But even at this seminar, it was more about marketing of new projects rather than a genuine discussion of its relation to the companies. Thus the companies never had the opportunity to discuss what was good or bad about the STIN tool, or how it could help them in the krAft process. Had it been discussed earlier, it would have been possible sooner or later to integrate the tutors and the project leaders into the same program, mitigating the adverse impact of two separate and conflicting agendas at the same time.

5.2.3 Communication in the focal company

One pedagogical idea that was elaborated by the project leaders at the beginning of the project was to let the participants, who all were in management positions, involve employees in each organization in the krAft project. The krAft project was supposed to develop the whole organization and this would be done with help from others in their own organizations. A krAft project should have a clear connection to a real problem connected to the companies involved and their experience. The companies should use their new theoretical understanding grasped at seminars to help them identify and solve problems. In this way a clear connection would be established between abstraction and realization. One way of making the krAft project more beneficial to the employees within each company was for the participants to enroll in the specialized education. By identifying problems within each organization, lack of competence would be detected and then the employees’ connection to the krAft project would be established through the specialized education.

One way of involving the focal organization was to let each of the participants in the krAft project solve home assignments. The first home assignment was the only one that most of the companies actually did by involving their employees. Most of them experienced the discussion with the employees in this assignment as a monolog. Two or three of the companies experienced this assignment, to involve the employee, as positive. One
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representative mentioned in the first interview that he had not done the first home assignment and that he was skeptical if that would actually result in anything good. Later on when interviewed he said he had solved the first home assignment by involving most of the employees and was surprised that the discussion became so fruitful.

Even if some of the companies found a positive element in the assignments and that this was elaborated during the seminars, most of them had decided not to involve the employees in any new assignments.

The reason for the decision to have the employees involved or not in the process was three-fold: even if they saw their employees' involvement as fruitful, they said that they would not do that, at least not at this stage. Secondly, the companies experienced the discussion as a monolog, saying that involving the employees was a waste of time and money. What those companies wondered about was how to get the employees to actually take part in the discussion. Thirdly, there was the view that this type of discussion would continue in some form, or at least partly.

Some companies did see the discussion with employees about the company problems or strategic issues as positive, but no company proceeded ahead with involvement in other home assignments.

Despite the decision not to have the employees involved in the krAft project there could have been a better way than the abstract and theoretical method in which the problems were presented. Mixing theory and practice was one of the aims of the krAft project. Only few companies did something concrete. The two companies best tying internal processes to the krAft project were the ones that had good relations with the krAft tutor. When the two companies worked with different processes it could then be understood they were connected to the krAft process in general, though mostly with a focus on the themes the tutor was pressing. It was in particular in Alpha that the problems were envisaged in the way the tutor conducted. The participants from Alpha experienced the seminars as abstract, particularly when concentrating on questions of leadership, culture, and core competences. However, when working with the tutor the participants could more easily realize those problems in their own context. From the interviews with Alpha personnel, it could be inferred that their appreciation in the seminars was due to their belief that the whole krAft project would have been worthless without the tutor. They also said the presence of the tutor made it easier for them to make a better use of what the seminars dealt with.

The idea behind the specialized education was to enter deeper into issues that the participating companies were lacking. How to address these issues should come from the seminars with the tutors' help. In this way the specialized education was going to leave an imprint on each organization. The participants provided almost identical answers on their views on specialized education. They believed that the specialized education was rewarding in most cases, but they did not see any connection between it and the krAft process. The only
specialized education they could be seen as having a relation to the overall process was the course on lean education. The focus on lean education was not decided in collaboration with the management group. Actually the project leaders were in some way skeptical to lean. It was decided by the tutors, the representative form the Swedish Foundry Association and the member form ProDesign. They decided to deal with lean education and this was done in collaboration with the companies. It was obvious when listening to the participants that lean was a hot topic and they really wanted to learn something about the concept. Some companies had already decided that they were going to work according to the lean philosophy and some had tried lean before but not succeeded, but believed it was time to try it again in their organizations. When the participants got the chance in interviews to reflect over the outcome of lean education, many of them thought that lean was one of the best elements in the whole krAft project. They also stated that it was through lean they were able to realize many of the theories discussed in the seminars.

As have been stated above, employees were not that much involved in the process. In some of the participating companies the discussion about the krAft project was put into the regular meeting agenda, as a fixed point. Mostly the discussion about the krAft project was conducted while driving to and from the seminars, and when the tutors came to visit. Most of the companies did not use the time between the meetings to reflect over what had been discussed in the seminars or with the tutors. Instead of seeing the seminars and the tutors as an opportunity to make changes and introduce new ways of thinking into each organization, the learning moment was almost solely confined to the seminars and visits by the tutors:

*I had talked to A and B (managers) a little bit about this, but it is not that much that we can do about it. We talked a little bit about the home assignment in some way but all was postponed till February so it does not feel like it is so urgent.*

(Bartholomew, interview December 1, 2004)

As we can see from this quotation, doing the assignment was not regarded as something that would be good for the company. On the contrary, it was seen as something that only needed to be done because the teachers had asked for.

Maybe the home assignments were seen as a necessary evil because the participants needed to account for it at the next seminar. A few participants did not even bother to spend any time solving the home assignments. The project leaders did not exert pressure to have the participants work on them.
5.3 Integration of knowledge into organizational context

One way of interpreting a project like krAft is to understand it as a joint venue for people to meet to be educated and then leave to practice this newly found knowledge on their own at their focal organizations. Another way is to see it as the krAft project management group wanted it to be. The projects was about gaining a joint understanding and bringing about a change in collaboration with the participants. This could also mean that the participants could end up acknowledging that there was no common ground to work with.

This part discusses and focuses on collaboration and common understanding within the krAft group as a temporary organization. It will also focus on how the participants attempt to get a joint understanding about issues in the seminars and how this joint understanding is treated within their focal organizations.

5.3.1 Joint understanding

After the first two seminars, only few participants believed that a common ground among the companies could be achieved. Most of the participants could not see that the discussions had led to anything that could be comprehended as common. But even if the participants could not point out any single event or issue that could be seen as common, they mentioned that the problems the companies were facing were similar. One participant said: "It is only a question of nuanced problems, but they are the same". Even though problems were not specified, it could be understood that the common understanding was based on the threats that the foundry industry was facing from abroad, and that the foundries in Sweden needed to be more effective by running their businesses. Rather than seeing this as an explicit shared problem, the participants only referred to it implicitly.

But surprisingly enough a common problem could easily be detected in the accounts the participants gave for their taking part in the krAft project. The main problem that could be crystallized was related to marketing. The participating companies expressed strongly that there was a need to increase knowledge and understanding about customers or market in general. At the first seminar the participants discussed what could be regarded as important to customers and subcontractors in the future. What is surprising is that they had a consensus in their understanding of those two issues, but the participants did not reflect later that this could be seen as a commonality. It was not until the forth seminar that it started to become clear that there might be some common problem regarding the understanding of the future market.

No one of the participants mentioned collaboration as an important factor in the beginning of the process, but members of the management group
brought it up as an important issue to the companies. It was as if the participants had not thought about it at all. Except for the Alpha group, no company was working with other companies in the group, or having any deeper social relations.

In the second seminar what appeared as a common problem emerged and it looked as if all the participating companies were of the same opinion. Zoler, a representative from the foundry Association, had a discussion about imported foundry goods to Sweden. What could be understood from the discussion was that the volume of Swedish foundry imports was almost equal to the domestic foundry products. Even if the companies mentioned this discussion as very interesting when interviewed, they declined to explicitly say that this was something that could be regarded as a common problem to the group. It was as if they wanted to avoid seeing or understanding that the problem was common for the industry.

It was not until after the third seminar that the participants started to see that there was a common problem that could be utilized. Still the participants did not specify what was common except for the belief that they were facing almost the same problems. In this seminar the focus started to change. Then the companies started to discuss common problems in seminars and group-works that were related to organizational and management issues. The seminar was not about educating the operators in the focal company but rather on how to increase management knowledge and understanding.

Asked if they saw the discussions in the seminars useful to their companies, the participants said that they had discussed the issue in the meetings and had already began to reflect on problems that could be regarded as common:

(...) it was almost the same discussion, or problem and question with all the companies. It was just different garment, but it was the same basic problem – how have you solved this and this.

(Bartholomew, interview December 1, 2004)

In the end of the krAft project when the participants were asked whether they needed to be able to tackle the future, most of the companies agreed that they needed to focus on marketing and development issues connected to the organization as a whole. On customers it was regarded important to know about their needs and wishes. Most of the companies had come to realize that if they were to be able to communicate with customers, they needed a clear profile, i.e. know what they were good at, or what could be characterized as their core competence. This was a common problem with all the companies. When asked what their core competence was, the answers were vague and unclear. Many of them had come to realize during the project that they needed to be more explicit about their strengths or weaknesses to be able to communicate both within the focal organization as well as with external customers.
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Regarding organizational factors, it had become even clearer to the participants that focus on organizational issues was important. Questions about employees’ motivation and participation in the daily work were often mentioned both in seminars and in interviews. The participants also mentioned also that recruitment of “right” personnel was often hard because of lack of foundry competence among the people available in the job market.

Another issue regarding common problems could be seen in the interest the participants showed in the lean production seminar. It was the lean seminar or forum that was one of the topics that were frequently mentioned as important in the krAft project. It was the need of process thinking that they were looking for to improve their businesses. There was a joint understanding that Swedish foundries needed to increase their productivity to be competitive to foreign competitors. It was the strategic dimension of their business that did become more and more in focus during the project.

In the last seminar the participants had started to discuss the importance of collaboration. Even if the type or the form was not agreed upon, it was the understanding that there was a need to discuss and figure out in what form and about what issues collaboration could be seen as possible. From the beginning, the Alpha group had been positive to collaboration but others had been more hesitant about if. They expressed that they were not sure if it was possible because of the nature of competition between the companies. In the last two seminars some of the companies actually started to discuss if they as individual entities were too small to be able to expand on the international market as well as the domestic one. It could be understood that the only way of growing was to conduct some kind of collaboration. It can be said that even if they had started to discuss collaboration, the discussion was only in its infancy and no decision was made in this krAft project on how to conduct the discussion further. But what was discussed in the last seminar focused on whether it could be seen as feasible to start talking about collaboration in purchasing some components, bidding commonly on jobs, taking courses and so on. Even if the participants did not agree on how or what form could be used, it was obvious that a seed has been planted.

When visiting Volvo truck in Gothenburg, during the last forum in September 2005, where the participants of the krAft project met with Volvo purchasing people, the same picture was elaborated by the company’s purchasing personnel: Swedish foundries were too small to be able to become Volvo contractors. The purchasers from Volvo were very clear in their perception that if Swedish foundries would not collaborate they would not be able to be Volvo subcontractors in the future. It was obvious that this remark had an impact on the participants.

To summarize this section on joint understanding in the temporary organization of krAft, the companies did not in the beginning of the process see any communality. However a joint understanding started to develop during the process. This understanding was not about a specific issue but rather about the
problems that the participating companies faced and which they found to be almost similar. It is interesting to note that the participants openly discussed those problems without fear of revealing confidential company information on customers and prices. Half way through the project, when the participants experienced the discussion as more general, no problem was detected regarding the issues raised.

5.3.2 Collaboration

People coming from different companies in the same industry that have been meeting during such a long time in a project like this could be expected to develop some kind of relations or collaboration due to commonalities or issues of common interest. In this project the question of collaboration has been asked explicitly.

At the end of the project the participants were asked to mention something about the collaboration during the project to see if they believed collaboration could be established afterwards due to the krAft project? Only two companies mentioned that they had created contacts that would help them to meet in the future. They said they would not collaborate as such, but would need to learn from each other and to understand better each other’s way of working. Both companies believed that they could learn something by looking at each other’s processes, they did not believe that this would result in any collaboration because the companies were rather different regarding marketing focus. At its best it could result in some kind of business relationship in the future.

Even if no one else had started to collaborate, or had something in the pipeline to do so, they all thought that because of the krAft project they would know who to call if needed, but to the author’s knowledge no such calls were made.

The project’s main potential, according to the participants, was the belief that they had discovered what mainly hindered the discussion of different issues. They experienced this as a good ground to start a discussion. But from what the participants said there was no clue that a concrete collaboration about products or product development would take place.

In the beginning of the process most of the participating companies knew about each other. They had been seeing each other in meetings organized by the Swedish Foundry Association, where all of them are members. Only one of the participating companies had not been in touch before because they had only recently joined the Swedish Foundry Association. This company’s initial goal of joining this project was to initiate contacts with other companies in the foundry business, “starting at the periphery” as they called it. Of course some of the companies had been more active regarding meetings and committee work within the Swedish Foundry Association than others. Especially two companies had close relationship with the Association, Alpha and Epsilon.
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It was obvious that the management group was more into collaboration than the companies in the beginning of the process. But even if this was a topic that was mentioned several times during seminars and discussions, nothing concrete was done to initiate collaboration, except in the last seminar. It was a general experience that the discussion about collaboration in the last seminar could have been better and more effective.

At the end of the project the krAft tutors and Balder wanted to know how many of the participating companies would like to continue working in a constellation like, all companies except two were interested. The participants pointed out that they wanted to continue to meet, and discuss different issues in seminars. They also mentioned that they liked and wanted to do some specialized courses like those they were connected to in the KrAft project. The interpretation is that the participating companies had started to understand that the collaboration in seminars or maybe education in general was a positive thing. This interpretation was also supported when interviewing the participants at the end of the project. But then it could be understood that it was not only a question of what they would gain but rather what they could lose in case they missed a similar project in the future.

The participants experienced the type collaboration emanating from meetings in a project like this as valuable despite the apparent lack of ideas on how to develop it further. Such ideas only surfaced lightly in the last two seminars and the participants began appreciating the role of networking and collaborating in improving economic performance.

Collaboration could have been developed even further if more companies were present. Some firms had registered but did not show up others only attended sparingly. Some of the participants reacted negatively towards those companies that were registered as participants in this KrAft project but did not fulfill their commitment of joining all the seminars. The companies failing to attend regularly were regarded as less secure regarding contacts and collaboration. At least three companies were noted for the irregular attendance, raising negative remarks from other participants.

In today’s world contacting people and exchanging information is easier than ever before; one could visit, telephone, or send e-mail. But the participants rarely contacted each other as they all were busy with their own projects during breaks between meetings. The contacts took place during the seminars or when attending specialized courses. One participant from one of the companies contacted another company’s participant. It was because the company had a request from a customer that they knew was with the other company before. They want to gather information on the customer. They believed that if they had not known each other due to the project, such a contact should not have been possible.

No communities or groups were established during the krAft project. It was not observed that any cliques were constructed during the leisurely meetings
held in the evening. The companies had been mingling and discussing together without intentionally selecting one participant from a particular firm.

In sum there was no collaboration as such, but the companies had shown that they were interested in continuing work together in constellations like these.

5.3.3 Connection to one’s own processes in companies

The context of how individuals learn is important (see theory chapter). Accordingly, there are two important issues that need to be taken into account regarding integration of information into organizational context. Firstly, it is about how one’s own context is used to understand abstract information. Secondly, it is about how practical issues are understood and brought back to the krAft project to discuss with the members of the project.

The project was a mix of lecturing as well as home and group assignments. The krAft tutors and the project leaders’ declared important aim was to visualize and put in a concrete form the discussions conducted in seminars to real problems within each focal organization. One way to know how the participants had taken the discussion from the seminars into their focal organizations was to ask directly if any new processes had started in their companies during the project, or if there had been a change in these processes with possible explicit connection to the project.

Generally speaking, the companies became more conscious of the fact that their own organizations were defective in one way or another. This was due to what they had learned during the project. Because of the seminars, and in one company because of the previous work with the krAft tutor, the participants had begun to understand that there was a need to reflect over processes and organizational factors. They had started to see things in a different light, become more conscious about their strengths and weaknesses. The participants said that there was a connection between different activities conducted in the project and their own companies, but they had hard time to come up with any specific factor or issue to demonstrate a direct tie.

Even if the participants said they were more of colleagues than competitors, the discussions in the seminars did not focus closely on problems or issues related to their organizations. They said if there was talk of things directly connected to some specific organizational issues that discussion happened in the evening in smaller constellations. It did not involve all the participants. In the beginning of the process the participants did not expect, and or perhaps did not dare, or were not mature enough to discuss company-related issues with other participants. They did not have confidence in how others would react to information or questions about their own companies. Later on in the process when they actually became more open, the discussion was not connected to a specific issue or problem within each company. It was more of a general nature, gearing it up for organizational development, and rendering it hard for practice.
In general it could be said that what they had learned in seminars had been difficult to transfer directly into organizational context. However, it has made the participants more conscious about their way of managing their organizational problems in general, whether good or bad.

The home assignments could be seen as a way of taking the discussion from the seminars to a focus on separate companies, i.e. directing the discussion to be more practical. All home assignments were connected to a theoretical framework and by doing them the participants could then try out how to translate theory into practice. As we have seen before in this chapter, most of the companies did not work properly with the home assignments due to lack of knowledge about how to tackle some of the problems related to the discussion in the seminars, krAft tutors or other participants. The project leaders did not follow up the discussion in the seminar and the krAft tutors did not spend time discussing the home assignments when visiting companies. Actually some of the participants mentioned that they were dissatisfied with how the project leaders did handle the discussion. It was obvious that some of the companies had not done their home work, but the project leaders did not confront them about that. When the issue was raised during seminars, the tutors almost overlooked it and no attempt was made for a follow-up. Another thing that the participants did when accounting for the home assignments was that they seldom connected their answers directly to some specific issue in their companies; the discussion was more general in its nature.

It was hard to provide a general picture of the companies’ responses to the activities directly connected to the project. Asked whether these activities were carried out because of them being part of the krAft project, they gave mixed answers. Most of them said that even if they had not been participating in the project, they would have done these activities anyway.

> Now we are going to launch lean production. It is a devilish (complicated) project, will continue into next year in active form. And one does not know if we would have been so quick starting it

(Epsilon, interview June 28, 2005)

Epsilon had been thinking of starting up lean for some time. This had been decided before they attended the krAft project. So the krAft project was not the reason for embarking on the lean production. But the fact that they were joining, encouraged its installation across the company:

> Because we did start this project (krAft), there was a need to increase our competences in different levels in the company. One of the companies mentioned that the trigger to why they needed to be certificated according to ISO 9000 was that they did not get an order because they did not have ISO 9000. To be able to be certificated the company must go thoroughly into different vision documents, but the question was just how. Because one is in the
PPD project then we experienced in different lectures how this could be conducted, how this should be done to speed up the process. It was not that the need was discovered because of the PPD. We had a problem and that the PPD process functioned as a promoter to something that would have happened anyway.

(Matthew, interview June 21, 2005)

It was the same thing with Matthews’s company. They understood that there was a need to change and that the krAft project became the promoter of change.

Another participant said the experience of discussing home assignments and company problems when driving to and from the seminars was good. The participant said it was the feeling of getting the freedom to think creatively, and to have time to do that. It could also be due to the fact that the project leaders forced the participants to express their thoughts explicitly in seminars the matter that increased consciousness, he said. What this participant meant was that it was a good thing to get away from all daily routine and just to be able to spend time to discuss questions regarding strategies and organizational issues:

_I have the whole day, the whole evening, the whole time before I go to sleep. I have the next day to think and reflect in the car on my way there and on my way home. When on the job again thousand other things happen and it is easy (...) but you have a whole day and night just to think about this and it feels very good to get the chance to get away from your own business. You just think of what happens there._

(Maria, interview December 12, 2004)

Members of Alpha Company, which had previously worked with one of the krAft tutors, said that they benefited a great deal from participating in this krAft project. They stated that even if the seminars were good, it was the collaboration with the tutor that did make the biggest difference to their company. The tutor had done a comprehensive survey of Alpha and in that way all employees had been involved in a process that in a way was somewhat similar to krAft’s albeit partly supported by it.

Generally it can be said that the participants experienced the discussions in seminars and forums as rewarding, especially as they helped them escape the daily routine at work and get the possibility to focus on more strategic questions. No one believed it was because of the krAft project that they had started new processes or activities. They believed they would have started the processes anyway, but it could be said that the krAft project helped the companies to take the initiative.
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Seldom had the participants mentioned a specific problem that they wanted to discuss with other participants, or the project leaders. In the beginning they were not that keen to discuss a few topics, that could be understood as confidential, i.e. prices and specific customer problems. Later on in the process they began discussing more openly general problems that had to do with the organization in general, i.e. management problems or strategic issues.

There were though some interesting issues that could be identified during observations and interviews. It was obvious that the participants went through a mental change during this project. The main issue the participants discovered was the presence of common problems within all companies, mostly related to organizational issues and leadership. They were seen as easier to discuss because they did not lead to divulging any company secrets. The participants did realize that if there was to be a lift to companies in the foundry business focus must be on strategic issues.

5.4 Interpreting knowledge through collaboration

On important part about collaboration were how the participants discussed and interpreted knowledge and problems dealt with in the project, the seminars and conversations between meetings and with the krAft tutors. It was a question of what issues to choose for discussion and which to ignore. In this section four issues related to how the participants interpreted knowledge in collaboration will be discussed: firstly, how open the participants were to each other. Secondly, what did they say to each other? Thirdly, issues dealing with forms other than seminars were also discussed. Fourthly, this section will discuss the freedom the participants experienced to discuss issues openly and without restrictions.

5.4.1 Openness to others

The discussions are characterized as open when participants openly and unreservedly discussed issues. The participants had the courage to dwell on sensitive issues which they discussed in detail. At the beginning they felt that there was openness in the discussion which increased as the project proceeded. Initially, the participants were asked whether they thought the discussions were straightforward and open. They said they regarded themselves as open, even though they refrained from discussing sensitive matters like price and customers. Paradoxically, there was the view that the other side is rather secretive. But the situation improved in the course of the project with the participants changing their views of others as being restrictive and less open. As
the project proceeded the participants’ confidence increased and they began discussing almost everything.

It is interesting to see what and how issues were discussed? In the first seminar the discussion was rather general. The project leaders and the lecturers discussed general problems, so were the discussions by the participants who initially shunned discussing problems within their own organizations. When the participants began talking about why they joined the krAft project, it was clear that their answers were not frank and open. They were very flat and general. The same position was detected in interviews conducted later. The participants said they were generally interested in improving their companies, increasing their competence, learning something new and so on. They mentioned nothing about the specialized educations which most of them cited in private interviews as the main driver for attending the project. One of the participants said actually that attending the seminars was something that had to be done to be able to get specialized education.

The first seminar could not be characterized as a dialog. The participants were silent unless asked directly. They were thought open in the sense they were not reluctant to answer and discuss questions raised by the lecturer. But no discussion among companies took place. The discussions were rather general and did not delve deep into problems the companies faced. It was more of a traditional lecture with the lecturer posing questions to the participants. The participants were in the stage of getting to know each other. Trying to see how and what they should discuss was also a question of whether and how they should participate in this project. It could be said that in the light of the participants’ aim of joining the process, which was in some sense indistinct, they needed more information about it before starting to take part in it. There were no social activities in the first seminar as it proceeded until nine in the evening. All the participants felt they were tired and wanted to go to bed as soon as the lecture ended.

The discussions took almost a similar trend in the second seminar. They were mainly about strategic issues. The focus was on helping the participants understand strategy as a phenomenon, and connected the discussions with the internal processes in companies. Discussions were open and could be understood as fruitful to the participants. Still they mainly focus on general issues instead of the participants’ own problems and ideas.

One event in the second seminar had a large impact on the participants, prompting them to redirect the focus on their companies. It was related to a discussion in the evening about a survey conducted by the Swedish Foundry Association on imported foundry goods. The discussion about this survey was open and the participants developed a joint understanding regarding what customers of foundry goods should be focusing on. This common understanding was about the fact that the strongest competitors in the foundry business were not as was commonly believed to be found in low cost countries as most of the foundry goods imported into Sweden came from countries like
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Germany, Belgium, Austria and other European states. What the participants came to realize by discussing this matter was that maybe the Swedish foundry business should focus more on Swedish customers importing foundry goods instead of focusing on exports. The krAft project that had internationalization as its main focus turned its attention on how to regain the domestic market. The shift of focus to the home market was further strengthened when international issues were brought up for discussion in seminars three and four.

The first two seminars were not about debating or discussing different viewpoints. They were more about learning to know each other, i.e. gaining trust. The topics discussed in those two first seminars could not be characterized as issues that could be discussed in detail and the participants experienced them as rather abstract and hard to grasp. Even though the participants experienced others as having an open attitude towards them, the discussions could not be said to have been entirely open.

Though the discussions were generally thought of as open, many participants believed they were not as forthcoming as they should be. But there was a common understanding that the situation would improve once the participants knew each other better.

I am surprised that they are still as open as they are. I believe it would be really hard to get people to be open, talk about their problems. I am still rather positively surprised as I believed it should be different – (…) – what has given me the most are the lectures, so far. I know that for example in other krAft projects the discussions with other participants were really important. But I feel that we are not there yet. I don’t feel that we have come that far in the group – we have not been the kind of group that opens up that much – we are not really there.

(Maria, interview July 5, 2004)

And I don’t believe that you (participants) open up to each other in the first meeting and not in the second, and not in the third, and not in the fourth.

(Simon, interview August 18, 2004)

Yes, one hopes that it (the discussions) will absorb a little bit of practical insights and the like. I mean that one can get tips from some other participants that this will work or that we (participants) have tried this and it does not function at all.

(Bartholomew, interview August 19, 2004)

In summary, it is clear that, given that the participants’ comprehension, what was tackled in the first two seminars was abstract. Because it was abstract it could be understood that the discussion was open, but no participant did
actually discuss anything specifically related their own organization. Accordingly, it was hard to understand if the discussion was honest even if it was open. But the fact that the participants perceived the discussion or at least their contributions as open was important.

In seminar three the participants were supposed to present an account of how they had done their home assignment. They were supposed to inform their employees about their core competences, and discuss how these could be seen in the future. Accordingly, a discussion of core competences with participants coming from companies within the same industry could be understood as sensitive. That perhaps explains the reason why the discussion was so flat and general. No one mentioned anything about their core competences explicitly. One of the participants openly refused to discuss the issue because he thought their core competence was part of business secrets. The participating company did talk about core competence but the discussions were rather general. Core competence was not discussed in connection to own companies. It was only generally touched on by the participants. Raising issues connected to the companies’ own core competences could have generated open, frank and unrestrained discussion. But unfortunately it did not and the project leaders did nothing to make it happen.

In group assignments that were conducted in seminar three, the participants were supposed to discuss questions regarding leadership. They were divided into three groups and were asked to identify what were the most important questions for them as leaders of the future. Then the project leaders handed out tools to solve those problems. The participants experienced the discussion as open, as they all had started to see themselves as colleagues rather than competitors. Even if the group discussion was not observed by the researcher, judging from a distance the participants seemed to be eager to enter in a dialogue with each other. The participants mentioned later on that it was the first time in the kraft project that they started to discuss concrete problem among themselves.

In group assignments and activities the participants were supposed to focus on their answers on direct questions handed out by the project leaders. They tended to discuss many other questions that they regarded as more important. Some of them mentioned later on that they had focused on real problems but in the end of the group assignments they only concentrated on the questions that they were supposed to answer in the classroom. They had started to use each other’s competence to discuss problems that they were facing in their own organizations:

*It was really an open-hearted discussion (...) It was the same discussion, or the same problems and questions by all companies. They were just different approaches, but the basic problems were the same – how have you solved this and this?*

(Bartholomew, interview December 1, 2004)
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It has started to let go (the discussion) and in those group assignments you just don’t focus on what to do, because that is not something that you should do (…) because it is not that important. It does not give you that much (…) that’s why you (participants) should start to discuss other issues.

(James, interview December 6, 2004)

It became clear in the third seminar that the discussion was opening up. The discussion started to be more focused on real problems, where the participants discussed different issues, how the others had solved them or how they had tackled them. In interviews later on, they said it would have been more helpful if the project leaders had been more attentive and relied more on discussions that were conducted during the group activities and assignments even if these discussions were not in line with what they were supposed to discuss, namely the emphasis on the kind of problems they faced in their organizations.

Not much happened in the fourth seminar during the lecture. It was mainly composed of lecturing, group work, and discussions. The participants experienced the group discussions as good and open.

In the evening an interesting discussion started to form. The participants started a discussion about collaboration. It was James, CEO of Alpha, who initiated it. It was not unexpected for James to raise the issues since, in previous meetings, he had been talking about how well the Alpha group, constituted of three companies, was doing following the formation of three independent foundries. This discussion was experienced as very sincere by the participants and it continued until the next day. Even if there was not that much discussion about collaboration, it was quite clear that the companies were not alien to the concept.

The discussion became really open and lively particularly at the final seminar. The participants had a home assignment that they were supposed to explicate their ideas about internationalization. All the companies had some idea about what they wanted to do in the future and how. They recounted, sometimes in detail, what they had for strategies, their strengths and their weaknesses. Initially, the discussion was rather general and I think it was not impossible for the companies to see that. But it turned out to be much more specific tackling delicate matters.

To sum up, it could be said that the discussions had been open from the start. They were open regarding the manner of discussion but quite closed regarding connecting the discussion to the participants’ own problems. Later on when the discussion focused more on management and organizational problems in general, the participants had no problem touching on incidents or episodes from their own experience or organizations. Only two participants from the same company experienced the discussions as less open at the end of the project compared to the beginning. All other participants experienced that the
discussions became more and more open. Maybe it would be better to describe them as more fruitful than open.

5.4.2 Understanding each other viewpoints

This section discusses the character of the discussions during the project in relation to topics of interest to the research. It concerns the way the participants scrutinized and debated each other’s points of view. It also deals with whether they could agree among themselves and the way they did so regarding the topics under discussion.

In the first seminar in which future customers were discussed the participants had a unanimous view about what could be regarded as important to the customer in the future, important to themselves as suppliers, and important to themselves regarding employee and leadership. The participants discussed this in one group in the seminar and they were supposed to work with the same questions at each company and involving their employees. The picture they presented in the seminar corresponded to the picture they got from each company. The question was not whether there was an understanding about those issues. Issues brought up by someone at the seminar were never disputed or questioned. It can be said that they had a common basic understanding and the phrases and words used were easy to understand. Most of the participants were of the same background, had the same education and worked in similar companies, and that could be one reason for the high degree of consensus.

In one seminar an invited guest lectured about his experience on starting up a foundry and ending up with a big concern that was quoted on the stock exchange. Some of the participants reflected about their own situation when listening to this lecture and it was clear that the participants had no problem understanding what this CEO had gone through during his journey of starting up and driving a company. The participants that did not see this lecture as important or had a hard time understanding were company employees and not owners. The owners were much more interested in this lecture. At this point it could be said that there was some difference in how the participants interpreted what was delivered in the lecture.

After the two first seminars it became clear that the participants were grappling with similar problems. By listening to others and by taking part in group discussions this view became clearer. They came to realize that irrespective of the fact that the companies were not all similar, they had similar problems, problems that can be related to a higher level in the organization. It was not a problem of being better at molding. It was a management problem that they came to realize together. After attending two seminars the participants were asked if they could see any similarities on any of the companies. Most of them said there were none. But from the author’s observation, the participants exhibited a high degree of unanimity on topics under discussion such as
marketing, quality and other issues connected to an overall organizational context.

Before the start of the third seminar the project leaders discovered that the participants did not share the same view as themselves about the project. The project leaders attributed the lack of a shared view due to the long break between the seminars and thought it necessary to try to create such view among the participants. A common picture was presented that was based on the first two lectures. It was about demand from customers; how a company depended on its history, i.e. core competence, resources, and technology. From the discussion the project leaders concluded that leadership should be topic to discuss. But the need to discuss the leaders was never reviewed with the participants, who were just told that from a logical point of view the project’s focus should turn to leadership. The participants raised no questions or attempts to dispute the project leader’s view.

Understanding in the third seminar was not a problem among the participants. The problem was related to how the participants understood what the project leaders were trying to mediate to them. The project leaders tried to create a common understanding of how to solve problems by presenting tools. While the participants chose to discuss what they called “real” problems, they felt that the instructions from the project leaders were indistinct and hard to use in real situations. The participants believed that if there was to be a homogeneous view of the problem under discussion, the tools to solve it must be practical and concrete. This view was explicitly stipulated in the seminars as Bartholomew points out:

"Is it possible that the starting-point is not clear. We see this as very abstract, too many things to discuss. We are not accustomed to see such a big picture."

(In seminar three)

Bartholomew point was that the problem was with the project leaders and their six different problem solving tools as they let the participants decide both the problem and the solution based on very vague understanding or vague problem definitions. This was a general understanding among the participants.

Besides the discrepancy between how participants and the project leaders understood the problem, the issues of almost similar importance happened in the third seminar. It was in this meeting that the participants begun to see that there was actually a common problem with the companies present. They started to discuss, as part of their group assignments, down-to-earth problems and the way they interpreted them. They found out that those problems were not unique to their own companies but rather common to the whole group.

The fourth seminar started in the same way as the third seminar. It began with a review of what had been done so far in the project. This was necessary because of the time span between the meetings. There had been six months between the third and the fourth seminars. Again the project leaders regarded it
as important to re-integrate the participants into the project and re-establish a
common view of it.

At this seminar the krAft tutors returned to the project after being “banned”
from taking part in the third seminar. The krAft tutors had earlier wished to
have time to discuss the STIN analysis in an aggregated form. They wanted to
discuss with the participants a common view of what they had come up with
during their visits of individual companies, concentrating on issues these
companies needed to focus on in the future. It was important, according the
krAft tutors, to explicitly show the participants that their problems were not
unique and that a particular one in a certain company could be found in all
others. A list was handed out to the participants pointing out the highlights of
the STIN analysis. The problem and future challenges included:

- Economy: Business development, increase in productivity, 
  need to focus on the surrounding world, checking quality.
- Customer / market: improved marketing, getting a clear 
  picture of the company, shortening lead time, knowing the 
  main competitors, knowing how to lead a project, 
  internationalization, taking part in suppliers’ development 
  processes.
- Organization / competences: leadership is important, 
  economic understanding with all employees, employees’ 
  engagement, continued improvements, development of 
  operational personnel.
- Production and technique: Lean thinking, set-up time, 
  cassation, quality, planning and management.

When the krAft tutors had presented their aggregated list, they asked the
participants if they would want to continue with a similar project in the future.
All participants said they would be interested to continue a similar process. This
presentation did not result in a discussion; the participants listened without
making any comments about the list presented by the krAft tutors. Accordingly,
the participants seemed to have the same understanding of what the tutors had
found out. The aggregated list is also significant with regard to what had been
discussed in seminars before. It could be said that the list echoed the same
understanding as the project leaders had been discussing during the krAft
project.

Regarding the home assignment the participants were supposed to present in
the fourth seminar, the participants thought that the tools that were handed out
were hard to understand and hard to apply. Some of the companies did try to
use the tools to solve the problems but eventually all gave up trying. It was not
difficult to see what the participants had tried to do or not to do regarding their
assignment. However, the project leaders made an effort to absorb difficult
questions by giving them time to reflect and form a better understanding.
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Collaboration was among the issues raised in the discussion that took place in the evening of seminar four. The participants believed that some kind of collaboration was not impossible, but there was a question about what form of it should take. Collaboration was also brought up in the evening of the last seminar. It was clear that a common view had emerged among companies within the foundry business in Sweden that they should collaborate around some issues. The discussion was conducted in a positive atmosphere, even if no decision was made on what steps to take in the future for collaboration to take place or whether it was feasible at all. The participants shared view was that collaboration did not have to imply that companies would merge into one. They agreed to work together regarding the purchasing of different parts and launch joint educational programs. They also agreed to call each other in case of problems. The companies showed a positive attitude to collaboration in the seminar, but some were more skeptical when interviewed later on. Despite the skepticism, the general understanding was that collaboration was necessary. But it was more a question of with whom and about what, than how to agree.

As has been pointed out earlier in this chapter the importance of collaboration was reaffirmed to the participants during their visit of Volvo trucks in September, 2005. Swedish foundries were too small to bid for a job in Volvo. Swedish foundries needed to collaborate if Volvo was going to see them as interesting partners to work with in the future. It was clear when interviewing the participants that they shared the significance of the need to collaborate due given their small size... Even if the participants did understand this, they did not share a common understanding of how this should be done in a practical manner.

Generally, the participants had no problem understanding each other. But difference in understanding emerged between them and the project leaders. Although the participants occasionally signaled that it was hard for them to understand the project leaders, little was done to overcome the problem.

The participants did think that the seminars were rewarding or provided them with new ways of thinking and the possibility of taking a day off to focus on problems other than the day-to-day activities; they had hard time to connect what was said and done to what they called “real” situations.

5.4.3 Freedom, equality and respect

How the discussions in the groups were conducted is important for several reasons. Was it anyone, any company, which could be seen as dominant regarding size, knowledge, relations etc? Did the participants then express themselves as themselves, representatives of their companies or as members of the temporary organization? How did the discussion go on? Did the participants treat each other with respect? This section attempts to discuss these questions.
The participants in this project held management positions in their companies. Overall when observing the discussions no obvious inhibition could be spotted. The participants seemed to be relaxed toward each other, and to the topics discussed. Only two participants coming from the same company expressed some frustration. As they were middle managers, it had prevented them from directly contributing to actions and activities in their company.

All companies except one could be characterized as either small or medium-sized. The company that did not fall under SME category was a part of an international concern, but was still rather autonomous, with only a few restrictions from the mother company. The size of the companies varied from 25 employees to approximately 100. The companies were in other words quite similar, regarding size and structure, and could be characterized as SMEs. In all companies except three the owner was the CEO, i.e. family owned.

No company was involved in dependent relations with another company in this project. Some of the companies had something of a business-related relation, but the relation could be characterized as inconsistent to all involved parties. It could be said that no company needed to feel that it was inhibited from taking part in discussions with other companies.

The companies showed respect to each other during the meetings and throughout the discussions with an attempt to establish relationship. Not once were there hot-tempered feelings between the participants regarding any of the topics discussed. From the way the participants solved group assignments one could detect that the answers were rather identical, but this should not be taken as an indication that anyone of the participants was trying to lead or take over the discussion.

Only on one occasion the participants had apparently felt some mistrust with each other. This was not spotted in the seminar but was mentioned in an interview with one of the participants later on. One of the disgruntled participant said the other participants were using the group-activities in order to gather information about the other companies, and not with the aim of contributing to the discussion. This was not always the case, according to the participants, but this had occurred from time to time. Nothing could be observed in the seminar about this dissatisfaction and the discussions were still open. Even if one of the participants did mistrust the other participants, no apparent attempt was made to shut him form the group-work or the discussions. Accordingly, it did not seem to matter, or change anything in the relationship.

The group could be described as homogeneous regarding education. All the participants except three had some kind of a high school engineering degree. Only three had some kind of university education. It was obvious that solidarity among the group was mainly due to this homogeneity. They spoke the same language, using more or less the same phrases. Most of the participants shared the same culture and that could be one of the reasons for their solidarity.
All the companies were members of the Swedish Foundry Association. All of them except one had been involved in some of the Association’s activities. Being a member of such organization could actually create a “we” feeling. They used the word “colleagues” more than competitors when they talked about each other in interviews. They saw several threats that bound them together such as the need for several more profitable customers to increase productivity, stand firm against low cost countries, etc. Because of this “we” feeling they felt that the companies faced common problems, boosting the sense of equality and respect among them.

Solidarity increased among the group in the course of the project. The discussions became more and more open and the participants started to discuss more delicate matters, particularly during the last two seminars. During the project they came to realize that potential customers “out there” were so many that they did actually not need to be frightened of each other, and maybe the only way of getting more customers was to collaborate around some issues. If there was tension in the beginning of the project it disappeared. It was just the knowledge of the need of collaboration that reduced insecurity among the participants. It induced them to look at each other’s potential of what they had been doing in their companies and the different ways they had been solving problems. In other words they started to see that others could be of help if they asked for it.

The relation between project leaders and participants was little more complicated than the relation among the participants. Most of the participants said that they had great confidence in one of the project leaders, Oden. The confidence was based on the fact that Oden was not only an academic. He had many years of experience from working as a technical manager in “real” life. But they were relatively less confident in Idun who did not have a practical experience besides her academic degree. Not all the participants appreciated her involvement in the course.

The relation between the krAft tutors and the participating companies could also be described as complex. The tutors were experienced consultants and the participants expressed that they had confidence in their knowledge. This confidence was mainly due to the accumulated experience the tutors had and that many participants were previously in contact with one or both of them. But the problem was that only two companies believed that they had any help from the krAft tutors in this process, and then only one of the tutors was mentioned as helpful. Some participants were frustrated, saying that they could not understand what the tutors’ role was in the process, a factor explaining the participants’ confidence. It would perhaps be more illustrative to say that the participants did not expect anything out of the discussion with the tutors as the process continued.

As mentioned in chapter four, the relation between those in the management group was in some sense strained if not hostile from time to time. The project leaders did not have confidence in the krAft tutors and the tutors
did not have confidence in the project leaders, in particular Idun who was said to have failed motivating the participants because of her lack of practical experience.

5.5 The power to change

A krAft project was to be seen as collaboration between the participants and the project management group. The project was supposed to grow in interaction between all members in the project. It was thought necessary to have a clear connection between practice and theory. Theoretical discussion should be adopted by the companies, participating, in “real” situations. The question now is whether this really worked out? How influential were the participants from the beginning and during the project? Could the participants change or modify the goal during the process? This last question has to do with how the participants experienced their own power situation regarding the role as co-producers of the process.

5.5.1 Who did decide the goal(s)

The Swedish Foundry Association’s opinion was that foundry business was bound to change in the future due to major transformations in the industry. International competition was getting harder and foundries in Sweden should take this seriously if they were going to survive in the future. According to Balder, the foundry business in Sweden had a lot of experience behind but was old-fashioned in some sense therefore could be regarded as out-of-date. Thus it was regarded important to organize an educational program or a project to strengthen the Swedish foundry in some way or another. The management group had a slightly different a different perspective in mind:

*The background, in a nutshell, is that the process that we started is half-way through nowadays while competition is increasing and it is clear that it has an effect on all industries, but particularly in ours where we are putting quite many man-hour per ton castings – the manual ennobling is quite high. It leads to that we are seeing competition from low price countries (...) This was actually the background music to our thoughts telling us that we needed to work in a more structured manner with competence development.*

(Balder, interview May 30, 2005)

*It started because they (foundries) needed to increase their exports and it was called the export project.*

(Oden, interview June 15, 2005)
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Clearly Balder and Oden had a different view on why the krAft project started. Balder is focusing on competence development to increase Swedish foundries competitiveness. Oden in other hand has one focus from the start; increase export.

Idun, the other project leader, joined the project after Oden; it was not decided until late in the project who was to assist Oden from the academia. When she arrived she claimed that she had little information about what it was all about.

*I had very little information of what this should be about (...) I spent quite some time in the car (with Balder) discussing what we were supposed to do. I had no idea. It can also be added that I had spoken with Oden in the beginning because I was concerned that my technical knowledge was rather low and my experience from the industry almost non-existent. I had talked to Oden if they actually wanted someone to take part with this profile focusing on leadership and motivation issues and issues that were not directed towards industry. Then Oden said that it was precisely what they by all means wanted to have, a young female. They wanted to have some variation and spread knowledge by doing this. He thought it would be a good complement. It was somewhat what Balder told me in the car when we talked together. Because I told him also that if I was going to take part in this project we needed to make all prerequisites from the beginning. (...) What I remember was that one (foundry industry) was losing competitiveness at home and the (Swedish) foundry needed to raise themselves a few levels (...)*

(Idun, interview June 15, 2005)

Idun’s statement shows that she was unsure from the beginning about what was expected of her. But she was clear to others in the management group that her strength was in leadership and organizational topics. From her discussion with Oden and Balder, she understood that she was the person they were looking for.

The krAft tutors had a common picture about the project. They said that in the beginning the export track was the focus when they started to discuss what Swedish foundries were in need of. During the process of the project it became clearer that the need was more for general business development than just exports.
And then we could create well a program that should both contain, shall we say business – business development and (...) development for the employees in the whole company and then we didn’t have it or we planned it, we divided krAft into two, business development, and ProDesign. It was something that happened in some phase.

(Heimdall, interview May 27, 2005)

As we can see from these quotations there were some differences among the people in the management group. But a common denominator that they actually agreed on was that there was a need for business development within the companies to be better able to handle demand from customers.

The description that was sent out to the companies in the beginning as a way to “sell” the project was titled “Professional ProDesign (PPD) of casting components – A development project for increased sale to qualified customers in the Nordic countries and Europe”. It was thus decided that the project should be about business development and exports within Europe. It could not be said that the aim of the project had changed but it was modified. It was particularly the information in seminar two, the presentation of the survey the Foundry Association had done that modified the focus. Instead of having the focus on Europe, it shifted to Sweden to try to find out how to slash the volume of imported casting components to Swedish customers from abroad by relying on home-made parts.

Even if this was first brought up in seminar two, it was only in the last two seminars that the participants started to discuss this openly and asked the management group to arrange meetings with customers in Sweden rather than visits abroad.

It was the management group that decided the goals. The participating companies had no role to play. Nevertheless, Balder, as a representative for the Swedish Foundry Association, functioned as a link between the foundries and the management group. The overall goal did not change during the process, it was only modified. Instead of focusing on international customers, the discussion was geared towards Swedish customers' foreign imports.

One could assume that sometime during the process the management group would actually ask the participants if the focus was right or needed to be shifted or be modified. But this particular issue never surfaced in the seminars. It was never on the table during management meetings, at least not while I was present.

The agenda for the seminar was decided by Oden and Idun. They presented an initial agenda to work with in the beginning of the process to those in the management group and it was accepted. In this initial agenda, it was decided that there should be five seminars in this project. The contexts of four of these seminars were already declared. The contexts of the last seminar were left undecided. This initial agenda was carried out without any change. The topic
of the fifth seminar was later on decided to be on internationalization, which did not come as a surprise as it was part of the initial aim of the project.

The question is how involved the participants were in deciding the content in each seminar. The idea with krAft was to let practical problems guide the seminars. But the participants saw the process as somewhat unstructured, theoretical and hard to conduct in its own context. The participants did not have the understanding that they could actually change the focus in the scheme and it was never discussed during the seminars. The participants thought that during the discussions, especially during the group work, some very interesting issues came up that could have been discussed further. But when the participants provided an account of what had been discussed, they experienced that the project leaders put them back into the general track very quickly. Some of them said that the project leaders should not have followed the scheme so slavishly; they should have been more sensitive to what was actually said.

Even if the participants experienced the seminars as struggling, most of them got the feeling that overall the seminars were good. The seminars had helped them to get a better and different picture which increased their understanding of organizational factors. They also said that the seminars should have been more focused on practical issues than only academic matters. It is though surprising that while this particular point was raised in interviews, no one actually discussed it in the seminars. This is perhaps the reason why the participants did not reflect on it until the last interview when they had discovered that the process had been too theoretical. As one of the participants pointed out that many participants would probably have not joint the project had they obtained enough knowledge about its contents.

This lack of practical connection was something that irritated the participants. Idun and Oden had in the beginning discussed this problem with members of the management group. Idun had circulated an internal memo in which she had raised three critical questions on how to be able to establish a successful project.

Critical factors for a successful seminar: The aim of the PPD project is very ambitious and the ambitious aim has been the guiding light when designing the seminars. If this is going to be successful, it is very important that all the parts connected to this project – from forum to consulting contributions – aim at the same goal. Otherwise there is a risk that the companies will lose focus, and that the aim of the project will not be fulfilled.

There is also the risk that what will be handled during the seminars will not be translated into action. Here the krAft tutors will have an important role in helping the companies to jointly anchor, mediate, and transform the knowledge.
The risk with a project that combines business and technological development is that one issue can dominate. When it comes to PPD project, we understand that focus should be emphasized otherwise there is the risk of change in attitudes not happening.

(Internal memo)

As can be understood from this memo that was discussed in the first management meeting, it was explicitly pointed out that the project would not succeed in the absence of agreement by the management group about the basic focus. Another important issue that the memo points out is the need to let all activities support each other. During the project there was lack of support and understanding within the management group that led to two different agendas, one conducted by the project leaders and one by the krAft tutors.

5.6 The collective process – networks

Organizations cooperate with each other in a variety of ways and in different degrees. They can choose to widen or limit their cooperation, but some kind of collaboration must be there, (see theoretical chapter). The krAft project can be seen as a network of actors. The question is whether the krAft project actors had any collaboration and if they did, how was it carried out?

In the beginning of the project it could be observed that the companies did not depend on each other. No company had a dominant position that could be used to force others to do something that they would not want to do. What bound the participants together was the fact that all companies were members of the Swedish Foundry Association and they shared similar knowledge and culture.

Accordingly, there ought to have been some kind of community spirit among the group. Looking at how the participants connected during the krAft project, several questions could be raised: was there anything in the participants’ search for knowledge that would lead to the development of collaboration? How did social relationships develop, and did this project lead to the formation of a community or communities between individuals?

5.6.1 Knowledge needs

The participants’ initial aim of joining this project was not to establish contacts with other companies or build up some kind of a network. Their basic aim of taking part in this project was to increase knowledge in their own organizations by being able to join the special educational program attached to the project. When asked if they were involved in any kind of a network or collaboration with other companies, the answer was no. If they were involved in any
5. The process and direction

networks, it was either through the Swedish Foundry Associations committee work or the network of companies in their own community.

From the discussions conducted during the project, the participants found that some of the involved companies had some strength that could help them learn more about their own businesses. It did not take the participants long to discuss their lack of knowledge or competence. But their particular issues did not become the focus of the discussion. No attempt was made by the participants to connect beyond the seminars. When the participants were asked if they had taken anything back to their own companies from the discussions with the other participants, no one provided a positive response.

Another way for the participating companies to understand their need for competence development was the krAft tutors’ separate discussions with individual companies which took place twice or three times during the project. Because the participants did not see a connection between the tutors’ job and the whole project, it was hard to pinpoint any specific need that could have been discussed in seminars or among themselves. It was not until the fourth seminar that the krAft tutors provided an account of the problems they had discovered with the participating companies. But the tutors had little influence on the ongoing process so even if there was something that could have been done together because of lack of knowledge, it would have been hard to implement. At this point only one seminar remained and its topic had already been decided.

Most of the participants said that they experienced the seminars as too general, lacking focus, particularly on practical issues with a bearing on their companies. It was not hard for the participants to discover that many of the questions discussed were not of a confidential nature, but rather general. The issues raised were not even related to the floor level as they mainly concentrated on how to survive in a more demanding market. To be able to survive, some kind of collaboration was seen as necessary. Collaboration was related to questions of leadership and organizational development. The participants’ understanding of the significance of collaboration indicated that they were keen to continue working together in the future and within a project like krAft’s.

Some of the participants, as well as Balder, mentioned that it was not a tradition within companies in the foundry business to collaborate. The companies were more to be characterized as independent with little need or understanding for collaboration.

Only the Alpha group had show a desire right from the beginning of the krAft project to talk about collaboration. They said that Swedish foundries needed to collaborate if they wanted to survive in the future. They had already started a network of three companies to be able to conduct bigger and more complex jobs. The Alpha group had already solved the obstruction of working in a network and they had started their collaborating in 2001. What they had realized during this journey was that they needed to be even more integrated, as one company, and not as three different entities regarding marketing and
organizational questions. The group’s cooperation with one of the tutors helped them develop this understanding.

At the end of the process the participants were asked if they had started to collaborate with anyone in this krAft project. The answers were very unambiguous, “no they had not”. No collaboration or related discussions were initiated. Most of the participants said that in this project they had gathered knowledge about the strengths of the others and that they might get in touch if necessary.

5.6.2 Social community – collaboration in groups

Groups form, develop, and disappear due to different reasons, (see theory chapter). In the krAft project the aim was somewhat known to the participants when they started the process. Even if the aim was known and even if both the project and the participants shared the same aim, differences would still be there. The participants believed that they could develop their companies by having access to specialized education, but not mainly by attending seminars. Only one company mentioned during seminars as well as the interviews that the aim of joining the project was to get access to a social community or network.

The participants were well aware of the fact that this project would include of companies that could be seen as competitors. It was interesting to see how the group would develop socially. Did the participants develop group feeling, for example?

Discussions in the seminars could be understood as open. The participants discussed many topics, but they tried to avoid talking about customers and prices. The “we” feeling grew particularly with those who had attended most of the seminars. This “we” feeling increased during the project for several reasons. First, the participants started to see that the foundry industry was under attack from imported goods. If no action was to be taken, there was the overwhelming risk that the foundry business in Sweden would lose even as bigger chunk of the domestic market to foreign companies. Initially, they believed that the threat was from companies in Asia but in the course of time this view changed as European companies were seen to be more of a threat than companies from Asia. “We” feeling was also strengthened by the fact of being a part of the krAft project. Some of the participants complained about the absence of other foundry companies who were supposed to attend. The feeling was that they had learned something important; they had got deeper insights into the future, creating “we or us” as members of the project versus “those or them” in reference to companies which opted to stay away despite their initial interest in the project.

Balder mentioned that the foundry Association was contacted by many members inquiring about the krAft project. During one year the word had gone around that this project was unique. It was not only companies within the
industry that had observed this project. Even the board of the Swedish Foundry Association had commented on it in one of its meetings. According to Balder, the board saw the project as a big potential for future development within the foundry industry in Sweden.

The “we” feeling got stronger because the participants started to know each other more and more. They had started to understand that the problems they were facing were not unique to their own companies. These problems were common and present in almost all companies. It was particularly in the group discussions that this common understanding started to evolve.

When the participants met they were open toward each other. The activities in the evening were of pivotal importance in tying the participants together. But the social relationships evolved during the seminar did not spill over outside the project. The participants said they would only get in touch with each other when the project was over if they needed to.
6. Analysis of the krAft project

This chapter analyses the krAft project on the bases of the tentative model presented in chapter three, (figure 6.1). Based on the empirical research (chapters four and five) the model needs to be changed to better fit the problem it is supposed to describe. In the end of this chapter conclusions will be drawn based on the discussion.

![Figure 6.1: The model of learning in a temporary organization](image)

6.1 The process of learning

6.1.1 The forming of the krAft learning project

The reason for starting up the krAft project was in response to the Swedish Foundry Association’s belief that there was a threat of outsourcing. Asian countries were believed to take over more and more of the Swedish foundry production and therefore the Swedish foundries were thought to be under attack. There was a risk of the foundries disappearing if no action would be taken. The Swedish Foundry Association wanted to start up a group of foundries that would together learn to better handle the future. The initial aim of the Swedish Foundry Association was to find external financier(s) that could help conduct a first-class education. The Swedish Foundry Association did not have the financial power to conduct this on its own. As a result krAft and ProDesign were contacted. When looking at the project in retrospect the
members of the krAft management group believed it would have been better to have conducted the project embracing both the university members and ProDesign in order to make it more suitable for the consultants.

When the project started, members of the krAft management group had different paths in mind regarding how the project should be handled. On a meta-level there was a consensus on how the krAft project should be conducted. It was on the practical level that the members of the krAft management group were found unsuitable. The krAft management group did decide the overall aim of the project without direct connection to what the participating companies had elaborated on when visited by the consultants, before the first seminar. This made the participants in some way unfamiliar with the krAft process, when they attended the first seminar.

The companies involved in this krAft project eventually expressed their positive attitude towards working in a constellation like this. Initially there was a sense that some companies would not share their ‘secrets’ but this actually changed in the course of the project. In the end they believed that the discussion was rather open.

The group was fairly heterogeneous. All companies except one were of the SME type and the background of those attending the meetings was rather similar. This made it easy for them to discuss and understand each other. All the participants attended by their own free will. None was actually forced to be there by their company or by the Swedish Foundry Association. When the krAft project started, the participants took part as individual companies, i.e. it was a project comprising different companies. They were more interested in getting used to the krAft project to help their focal company. During the process they started to act more as an organization on its own. They started to see similarities in the problems they all were having. The participants stopped seeing themselves and their problems as unique and recognized that others shared similar concerns. This was something that developed during discussion in seminars, group work and in the social gatherings in the evening.

Thus the krAft project participants could not be described as passive bystanders. Because the participants developed a social relationship, they constantly developed the project. They were all interested in changing something within their own organization to be better able to handle an unstable future. The problem was that no participant had a clear focus of what they wanted to change in their own organization when they arrived at the first seminar. Their understanding started to change during the krAft project.

Seeing the krAft project as a temporary organization had its complications. The participants began as individuals and their aim of joining was to develop their own company. During the krAft process the group grew to be stronger and stronger as a united collective – the individual aim had been replaced by a more intensified focus on the whole group aim. The problem was that only when the participants met in seminars they could be seen as a temporary organization. The participants started to focus on similar questions connected
6. Analysis of the krAft project

to their own companies, and to help each other, by discussing problems openly. In-between meetings no contacts were made between the participants. Between meetings the participants did not think of the krAft project. This was somewhat problematic as the temporary organization dissolved between the meetings. When meeting again in the next seminar, the participants continued working together. And they became an organization again.

6.1.2 Communication and interaction

There was a high level of ambition by the krAft management group in the project to listen to different individuals in seminars. The communication was not to be done in the form of traditional lectures, where the participants were supposed to sit and listen. This was somewhat problematic. When the participants attended the first seminar, the agenda was already decided. Only one seminar was not decided, the fourth seminar. When it was decided it was done without any discussion with the participating companies. It was only the members of the krAft management group that actually determined the content which was going to be handled.

It was important that all parties, project participants, project leaders, project tutors, and representatives from the Swedish Foundry Association should take part. Each member brought their own competence and skills. All of them were supposed to take part in the project by interacting and participating in all activities. Because of the problems between the project leaders on the one hand and the project tutors on the other hand this interacting and participation was not as good as was believed to be in the beginning of the krAft project.

The participants were supposed to discuss the homework in their own organization, which however proved difficult. The reasons why the participants had difficulty discussing homework in their own company were several. For example they did not have a full understanding of the problems they were supposed to solve. Another reason was that they experienced discussion with employees as one-way rather than two-way dialogue. As a result, the participants found it difficult to understand what they were supposed to do. The assignments were done in cooperation with those attending the krAft project and no other employees were involved. Another reason of why they did not discuss the homework with their employees was because of the lack of connection between the theoretical problems and what they saw as the actual problems their organizations were facing. In the seminar the project leaders discussed a problem by providing several problems (problematising one problem). This multiple view of the problems and the solutions were regarded as problematic to understand and deal with. What could be spotted was that the participants needed to keep the problem discussion simple to be able to find a solution. Only three of the participants held an academic degree. The rest were not used to tackle problems from an academic viewpoint.
Because the relationships between the project leaders and the project tutors were so fragile, it was not possible to connect theory and practice in the form that was decided in the beginning of the krAft project. The project leaders and the project tutors chose not to discuss their disagreements until the last two seminars. If there had been more open discussions between the project leaders and the project tutors, the discrepancy between what they were saying and what they were doing would have been minimized. It was the lack of discussion and coordination between those within the krAft management group that made the project less effective.

When analyzing the seminars several issues could be brought forward. There was the common understanding among the participants that they often interpreted lectures as too theoretical and hard to understand. The participants had difficulty relating the theoretical discussion to real problems in their own organizations. The initial idea discussed by the krAft management group was to use the homework and company visits by the project tutors to clarify what was unclear from the seminars. Only two of the companies said they had a good relationship with their project tutors while other companies expressed their dissatisfaction with the project tutors work. It was obvious that the tutors were quite unsuccessful in communicating and interacting when visiting the companies. One reason was of course the lack of consensus between the tutors and the project leaders. Another problem was that when the participants accounted for what they had done with regard to solving the homework, no comment was made by the project leaders as to the homework being poorly solved or not. The participants admitted when interviewed that not much time had been given to solving the homework. They made it clear in interviews that not much (if any) effort was put into the project between meetings. Only two companies believed that there was a connection between the process driven by the project leaders and the process driven by the project tutors. Those two companies had worked with the STIN process between the seminars and saw a clear connection to the overall program. Representatives from those two companies regarded the discussion that was theoretical (in seminars) and practical (when visited by the project tutors) more understandable and rewarding than those who failed to understand the connection between theory and practice. Even if STIN can be said to be rather subjective, it helped the participants understand the theoretical discussion better. It was because of this subjectivity that it was rejected by both of the project leaders rejected STIN. The problem was that the project leaders did not want to discuss if STIN was useful of not. They decided that STIN was not a good tool to work with and therefore it should not be included in the overall krAft process.

The process of how to conduct the krAft project was never discussed with the participants. There was a discrepancy between what the project leaders said and what the project tutors said, and this made the discussions hard for the participants to follow. The agenda that was decided in the beginning of the krAft project, by the krAft management group, was never discussed or changed.
6. Analysis of the krAft project
during the process. Even though the participants discussed their dissatisfaction explicitly, the agenda was not revised. The participants were never asked during the krAft project if they had anything to say about the aim of the project. The project leaders devoted some time in all seminars to discussing the aim of the project. It was not whether the aim was right or wrong. The discussion centered on getting the participants’ consensus about the aims that were already decided. When the project tutors visited the companies, they started directly to discuss STIN without reviewing what had happened in the seminars. Because there were two different agendas in the process, the participants had hard time understanding and discussing the overall aim of the project. The participants became more of passive bystanders than co-creators of the project.

The participants regarded the communication and interaction in the evening and when working together in groups as the most valuable during the krAft project. It was during this interaction that they started to discuss issues directly connected to their businesses. They started to see each other more as colleagues instead of competitors. In the beginning of the project the discussion was rather strict, but it became very open and frank as the project went on. When the project started, the participants were rather worried that they would give away company secrets and that was one of the reasons for the discussion being understood as rather strict. In the course of the project the participants started to discuss other issues that were regarded less confidential by them. The discussion was then more about strategy, leadership and organizational issues in general where the focus was on productivity.

Looking at communication as the first input, it was clear that it would lead to some kind of change or action. What can be seen is that communication and interaction has led to individual reflection, by the members of the project. When the participants started to discuss openly matters connected to organizational issues they began to see that their problems were similar to others in the project. The problems were no longer just related to exports as had been the case at the beginning of the project. When listening to different speakers in seminars and discussing with each other they came to realize that the problem was about how to increase their own productivity, and regain the foundry goods that were now imported.

One of the problems was the lack of effort to translate theory into practice. It was found that the participants had difficulty understanding the theoretical discussion because they experienced the discussion as unfamiliar to the daily problems they were struggling with in their own companies. The communication between the participants strengthened during the krAft project and as a result they developed some kind of a group identity (in-group).

6.1.3 The process of agreement
In the case of the krAft project the participants were supposed to discuss together, to help each other, and even to form some kind of a network i.e. the
participants were supposed to learn to help themselves. They were not supposed to sit down in seminars and forum as passive bystanders or as individuals absorbing what was served to them. The participants were supposed to discuss agreeing on issues and create a joint understanding. It only led to some kind of joint understanding when they had agreed on interesting issues to discuss (Joint understanding will be discussed in 6.1.4). Agreement is important if there is going to be a joint understanding through which organizational learning occurs.

In the course of time the krAft project participants started getting the feeling that their problems were on a different level than just operational, i.e. that they needed to be better at molding. They started to see the problem as rather general that could actually be submitted to all of them. They saw problems that were connected to organizational development; like strategy issues, leadership and productivity. They could actually agree that all of them had those problems in some way or another. It was not because the problems were discussed openly in the seminars or forums that they became organizational in nature. The participants’ understanding developed and strengthened during the discussions.

When the project was presented to potential participants, the emphasis was on how to improve exporting skills. During the time of the project a new understanding started to grow. It was not to get cheap education to be better equipped to export goods. The participants changed their understanding to see organizational issues as an opportunity to decreasing productivity and to getting a smoother flow within their businesses. By increasing their companies’ productivity they would have a chance of regaining the markets now grabbed by foreign exporters of foundry goods to Sweden. It was not until the fourth seminar that the participants actually started to discuss this openly. One reason why it took the participants so long to realize this was that there was no connection between the process driven by the project leaders and the process that was driven by the project tutors. Another reason is of course that they needed time to learn to trust each other and reflect on new information. When looking at the krAft process in retrospect, based on what the members of the krAft management group pointed out, four issues that can be identified regarding the agreement process: Firstly, the project needed clear leadership. Secondly, the process done by tutors and the process carried out by the project leaders should have been connected right from the beginning of the krAft project. Thirdly, much more effort should have been put into discussing the homework to connect the process to theoretical and practical issues. Fourthly, the focus should have been discussed openly by the krAft management group when selling the idea to potential participants. It would have been better to just state from the beginning that this learning project would be on organizational issues not operational ones. It is a question of shortening the lead time of thrust and reflection.

In the end of the krAft project all participants except two wanted to continue working with a project similar to the one they had started together. They had come to realize that working in a project like this helped them break
away from day-to-day routines, and enabled them to develop their companies. The participants understood that if they did not develop their companies they eventually would lack the productivity that is necessary today. They also came to realize that collaboration was something that foundry companies should start discussing more openly. Even if the participants agreed on this, they could not at this time agree on what kind of collaboration was needed or how this collaboration should be accomplished.

The agreement process had several aspects. Firstly, the individuals needed to have time to think for themselves before being able to reach agreement with others in the group. As can be seen in chapter five the participants did not start to discuss openly their problems until the project had continued for some time. They needed to get accustomed to the idea that they could actually start to discuss openly. It could be seen that the participants needed to learn to trust and know each other before discussing openly something that could be seen as common and open to all of them. Secondly, reflecting together with peers can also be one of the processes when coming to an agreement. It was in the discussion with others in the krAft project that the participants actually started to understand that if they were going to succeed in the future there was also a need to start to focus on issues which not only operational. During the discussions, the participants came to see that their problems were similar in principle. It was only in the evening that they had the chance to discuss topics without direction from the project leaders or the project tutors. Accordingly, in those discussions the participants discussed most and developed trust, which led to an agreement of what was important to focus on. Thirdly, agreement could come about when someone with authority outlines and sums up. In the third and the fourth seminars the project leaders had started to understand the fact that the process in the krAft project was not uniform. The participants, because of the double agenda, were somewhat unsecured about the aim and expectations of the project. Because of this insecurity, the project leaders devoted some time to explain what had been done in the previous seminars. The project leaders needed to get a consensus about the project’s aim. It can also be said that how the agenda was put together by the krAft management group directed what was interesting to agree upon during the project. Focusing on issues connected to strategy and leadership stipulated what the participants saw as important to agree upon.

Accordingly, agreement is a combination of those three factors; individual reflection, reflection with peers and letting an authority take charge of the process. By individual reflection it means that when members come across new information not fitting into their own way of thoughts, they need to individually reflect this new information before discussing it any further. Reflection with peers means that sometimes it is needed to understand information with others in their own companies or with participants within the project. Letting authorities take charge of the agreement process is the last part.
Agreement was not the same as if the participants had created a joint understanding. For example, when the participants had been listening to several lectures and taking part in discussions with peers, they started to realize that collaboration was something that was needed within the foundry business. All of them came to the conclusion (agreement) that there was a need to collaborate. The problem was that they had very different understanding of how and about what they should collaborate. Agreement has nothing to do with shared mental repertoire of how to understand and solve problems; in this case agreement did make it possible to take the discussion of collaboration into the agenda. Another example of agreement was the fact – thought implicit - that customers and prices should never be discussed. The participants regarded this as the most secretive issue they were involved in. Even if there was an agreement about this issue it can not be regarded as joint understanding as they never raised important questions like: Does this mean all customers or if prices were seen as relative or fixed?

6.1.4 Joint understanding

When there was a joint understanding the participants had modified their understanding about the world around them. Behavioral changes or mental changes had happened. It could be seen that it was not until the participants found a common ground (that they actually agreed on issues important to discuss) to stand on that they could create joint understanding. Accordingly, joint actions can only be taken when there is a common understanding about the issues discussed. The participants in the krAft project had actually agreed on something and that changed their cognitive view.

In the beginning of the krAft project there was no understanding of working together. By discussing with other participants within the krAft group, new insights started to develop. Instead of focusing on how they themselves as individual companies could be doing better, the participants saw that the problems discussed in the group were rather similar, regardless of company. The participants started to change their view. They understood the fact that there was a need to focus on issues connected to strategy and leadership, instead of focusing on issues connected to operational matters. Focusing on issues connected to strategy and leadership, the participants started to see their problems or possibilities in a new light. They understood that collaboration between foundries was necessary. They had developed their understanding by being aware that in some cases it would be necessary to work together. In this krAft project they did not come any further in the discussion of collaboration. They had the joint understanding that collaboration was needed but not about how to collaborate. This new understanding was based on the fact that they had started to trust each other as partners and not as competitors. This new understanding that collaboration was necessary led to a new round of discussions and agreement process.
The participants regarded the krAft project as a good way of creating a common ground of understanding within the group. The problem was to sort out relevant information that could lead to joint understanding. Meeting for such a long period of time helped the participants to realize what they required to do as individual companies and what contributions they were to expect from others. Listening to lectures connected to discussions in groups having the opportunity to leave and go back to their day-to-day routines was a prerequisite for changes in the participants’ mind. Accordingly, time is an important factor when shaping joint understanding, i.e. time to reflect.

During the project the participants started to see that issues regarding organizational matters were important to all foundries in the group. They needed to have more knowledge about their customers, quality, and what they as individual companies were actually good at (core competences). Focusing on these questions would give them an opportunity to prevent import of foundry goods to Sweden. The understanding that imported goods were not coming from low-cost countries made them realize that there was a problem regarding productivity and quality in Swedish foundry companies. Accordingly, joint understanding had to do with the fact that the participants agreed individually on discussing some issues and agreed on the fact that they would not discuss other issues, and this happened tacitly as well as explicitly. This enabled them to discuss further and to reach joint understanding about the problems agreed upon. It was a back and forth process between communication, agreement and joint understanding.

The participants came to realize that taking part in a learning project like this was a positive thing. All companies except two wanted to continue working in a similar project after the end of the krAft project. The fact that the two companies that did not want to continue did not mean they were not interested in continued collaboration activities. It was more about the fact that both of the companies believed they needed more time to reflect on what they really wanted before deciding on how to continue. It was also an understanding that collaborating with other foundries was not easy, but there was joint understanding that there was a need to continue discussing and developing a common ground that they could work with. Accordingly, there had been a change within the participants’ mental mode.

It was only in the fourth seminar that the participants started to see each other’s problems as their own. This understanding developed because the discussion became more open regarding common problems. There were several issues that were important to take into account when trying to understand how joint understanding came about, and why it took so long to develop. Firstly, the different activities within the project were supposed to support each other. By this it was meant that theoretical discussion must have practical relevance. Only when the participants individually could relate new and unknown information to something real, they could interpret it individually as new understanding. It had to do with the fact that the participants needed to reflect on new
information before deciding how to tackle it. Secondly, to be able to come to a joint understanding, the discussions needed to be open and there was a need of thrust. Companies that are traditionally seen as competitors need to learn to trust others, only after that can they start to create joint understanding about issues. This will not happen the first time competitors come together. It will take time. Thirdly, the participants needed to have space and time to reflect and discuss, and this was done in different forums.

Discussing joint understanding was rather problematic because it did not have to mean an end of an agreement process. Joint understanding formed when the participants actually agreed that issues were important to focus on. The participants understood that the problems they as companies faced were more about internal issues rather than the threat from low cost countries. This new joint understanding was seen as a prerequisite for agreement and then it can be seen as joint understanding, i.e. it has to do with reflecting on new information in a different way. But the problem is that the agreement process and communication is the starting point to be able to create a joint understanding. There were lots of agreements and discussions about what issues should be raised during the discussion, what issues should be left out, etc. But in the end issues are agreed upon primarily to continue the discussion. When there was a consensus about how to understand this new information, joint understanding could be said to have been formed. Accordingly, it is not necessary to agree on something that is a positive issue.

6.1.5 Change and action

As can be seen in the discussion above, joint understanding is evidence of changes. In that sense joint understanding is an inter-organizational learning. Coming to agreement is not enough to say that there is organizational learning. To agree on something only indicated that the members of the project agreed on taking some issues into the agenda or left some out. Even if there was an understanding that something needed to be discussed it did not say anything about if there was an understanding between members.

Acton is another evidence of change taken by the participants in their own companies due to the change in their cognitive map. But that was not organizational but individual learning. In this krAft project changes happened differently based on the participants’ different possibilities and aims. Instead of focusing on issues in their companies that could be regarded as operational, the participants started during the project to understand that the problem was rather organizational. Those participating in the krAft project came to realize that there was a need to focus on issues that would increase effectiveness within their companies.

The aim of the krAft project, formed by the krAft management group, was to change the participants’ attitude in a wide sense, even if the participants were
6. Analysis of the krAft project

not aware of this aim. The participants started this krAft project to be able to export more; they initially believed that the Swedish market could not be exploited more than it was. If they wanted to stay in business they would need to look for other markets.

It can be said that the krAft management group managed to fulfill the aim they had set for themselves at the beginning. When the project started, the participants were rather negative working with other foundries as they saw them as competitors. As the project went on, they began to show more positive attitude towards working in groups like this, even if they were competitors. Prior to the krAft project, the only time they had any contacts with other foundry companies was through the Swedish Foundry Association. One reason why the participants changed their attitude to be more positive working with other foundries was the fact that they did not believe that the others would need to “steel” customers to grow bigger. The domestic market was still so large that much more was possible to do before other Swedish foundry products were consumed. But they were apparently persisted to regain markets lost to foreign competitors.

This krAft project was the first project the Swedish Foundry Association was involved in where the learning activities did actually focus on organizational and strategy issues. This was one of the strengths of the krAft project. By having this focus on problems could be related directly to the foundry business and not to operational activities in general. Most of the companies actually stated that they had been involved in courses focusing on leadership, organizational and strategy issues. Those courses had not had foundry business as their main focus, as their emphasis was rather on businesses education. It can be said that by joining this project the participants got the chance to listen to different individuals in seminars and forums, and reflect on the issues raised in their own companies or/and together with others in the krAft project. The strength is in the facts that now they were forced to take some of the discussions into their own businesses, reflect and act on this new information. They came to realize that there was a need to increase their own companies’ productivity and cater in a better way for customer requirements. The participants came to understand that in some sense the need for collaboration to reach that goal was necessary.

During the project all the companies started some project in their focal companies that was in one way or another aimed at increasing productivity. It was about a quality project (lean production), ISO 9000 certification, or a project focusing on communication.

Accordingly, there were several actions taken by the participants that could be related to their engagement in the krAft project. But the participants stated when interviewed that they would have done it regardless of their being a part of the krAft project or not. Being a member of the krAft project only speeded up the process of change. Saying that the krAft project speeded up the process of starting up project within their companies, shows that the krAft project had an actual impact within participants mind.
Accordingly, the changes were twofold: Mental change(s) that did not have to lead to any action, and mental changes that did lead to some action(s). In this project both types of changes were spotted.

6.1.6 Summarizing the krAft learning project

The analytical framework focused on inter-organizational learning in temporary organization. Individuals from different organizations were in focus as an inter-organizational unity to better understand organizational learning and its consequences. The problem with this temporary organization was the fact that when the participants met in seminars or forums they became a social unity. But in-between meetings the organization dissolved. The participants did not make contact with others in the temporary organization in-between meetings, and they did not put much effort into the temporary organization in-between meetings. The participants said that if they would have needed they would not have hesitated to contact anyone they wanted to. But even though mentally this temporary organization was alive between the meetings, the participants knew that they would meet again and they took some ideas from the seminars to reflect about.

What was quite clear was the fact that the group of participants in the krAft project strengthened their collaboration during the project. The participants had in the beginning of the project the understanding that other participants were not as open as themselves. This understanding changed, and in the end of the project no one believed that the others were holding back information. The discussions became open and sincere. Being for so long part of one project, thrust and understanding about the others in the group had developed.

Apart from two companies, the other participants wanted to continue with a similar constellation in the future. One contributing factor was the view by the participants to regard others as a good additional source of information. This actually changed in the course of the project. The participating companies started to see others or new issues as more important than before the krAft project. The participants were moving into closer relations, at least mentally, due to the form of the project.

The companies stated that the academics or tutors had little influence on them. One of the reasons was of course the internal problems that were observed in the krAft management group. But the representatives from the foundry association said that they might work with the university in the future, but neither the tutors nor the university representatives said explicitly they would cooperate in the same way as in this krAft project. This study has shown that a clear leadership is needed if a temporary organization is going to function properly.

However, it was interesting to note that all the participants were somewhat satisfied, saying they would like to join a new project even if it was going to be conducted by the tutors, except for two companies that were not interested at
6. Analysis of the krAft project

this time to continue working in a project like this. One can wonder why they would want to join. One reason was that the participants were keen to continue working with other foundry representatives despite the doubt they experienced about the tutors’ work. Another reason was perhaps due to the positive impact made by the representative of the company which was in touch with the tutors previously and their positive attitude toward the STIN process and the personal survey discussed in seminar four. Lastly it could be due to the suggestion made by the representative from the foundry association and the tutors in a bid to sell the project in the future by telling the participants that there would probably be some funding from the EU if they decided to continue.

No collaboration developed between the companies participating in the project. Their meetings were solely confined to seminars, forums and specialized education classes. Throughout the course there were no discussions that showed the companies were interested in establishing any collaboration. It could also be said that the companies were rather similar in many aspects and they did not see the need for other participants’ competencies. That of course could be related to their unwillingness to discuss their own core competences in seminars. Moreover, as small independent companies, they did not feel the need in the beginning of the krAft project for working together. One of the main positive findings of the study is the companies’ understanding of the importance of collaboration, and that such collaboration is not a threat but a benefit.

6.2  Adapting the model of learning

In the end of chapter three a tentative model on learning in a temporary organization was presented. Based on the analysis of the empirical material there is a need to complete and revise the model. It can be seen from the discussion in this chapter that the model is more complicated than the one presented in chapter 3.

The temporary organization took some time to form. It was not that in the beginning of the krAft project that the participants felt like a unity, i.e. an organization of their own. In the beginning the participants were just individuals representing their own companies meeting in a learning project, like students. As the project continued the participants started to see themselves as a collective of people sharing an interest of being better of conducting their business signs that a temporary organizations was beginning to form. The individuals within the project started to see themselves as a social unit seeking information that could be helpful to them all. This understanding did result in the fact that the project became an organization of its own – a temporary one with common goals which the participants agreed to accept. Between meetings the organization dissolved to be merged again when the meetings recurred. The participants needed to come back to the project and were urged to continue to
develop as individuals and as a group. One reason for the temporary organization to dissolve could be that by meeting with other individuals from other organizations that were regarded as competitors was regarded as problematic. If the participants only had met once they would not have changed their understanding that others were having similar problems and that collaboration with others in the group was possible. The participants wanted to continue meeting after this krAft project, an indication that they regarded the temporary organization as valuable.

In the model in chapter three (figure 3.2) it can be seen from the theoretical discussion that the learning process was somewhat linear in nature. It is believed that communication would lead to some issues that the participants would actually agree on as important to discuss or include into the agenda. Discussing the issues that are agreed upon it is a sign that joint understanding takes place. When analyzing the empirical material, it is evident that there is a need to change (improve) the model. Firstly, it can be seen that learning in a temporary organization is not as linear as it is conducted in chapter three. Communication and agreement are an interwoven process where reflection and time is important to be able to create a joint understanding. Connected to the discussion are enablers and obstacles that will have an effect on the process. Enablers and obstacles can be seen both internal in the project as well as external outside the project boundary.

It has been positive for the participants to be able to meet for such a long time. By meeting for so long in a context of seminars and discussions helped them to see issues from a perspective different from the one that would have occurred had they stayed for only one day, for example. It has also been a positive way of taking part in a project where the participants got the chance to listen to theoretical discussion and consult with others in the project as well as in their focal companies. By being able to reflecting on theoretical issues with practical understanding, new understanding of their own problems did change their view. So a strong enabler is the philosophy of krAft. On the down side is the fact that there was no project owner. The project tutors believed that the project owner was the representative from the Swedish Foundry Association while the project leaders saw themselves as project owners. This problem led to two different agendas. It can be said that on the down side it was due to the loose coupling between practical and theoretical discussion. How discussions developed can be seen as an enabler as well as an obstacle. Some issues were never discussed, like prices and customers. The positive side was that by having a group of companies in the same industry, discussions between the participants were never a problem as they shared cultural understanding right from the beginning.

This has been an interrelated process of communication, agreements that have led to joint understanding about issues. This process is not something that just happens by itself. In this project the participants needed time to reflect. Reflection was seen as four-folded; individually, with people from focal
6. Analysis of the krAft project

Before being able to create a joint understanding about the problems, individuals needed to reflect on their own (individually), with other employees in their focal company before coming to any conclusion, and reflection can come about when someone with authority outlines and sums up what he/she believes is interesting, (power relations).

Another thing is that when the krAft project developed into being more of a temporary organization by itself, communication got more open and less restrictive. When the participants got more open they developed a stronger "we" identity. It was in the social gathering in the evening that they as peers got the most out of the discussions from a practical point of view. The participants did not devote much time in their focal organizations to thinking about the krAft project. It was only when coming to the seminars and forums and when the krAft tutors came to visit, that they actually spend some time with the krAft project. This led to the fact that there was some lack of connection between theory and practice which can be seen as one of the main learning barriers in this krAft project. Stronger connection would have strengthened the learning process.

Communication is the starting point in organizational learning and it is based on external as well as internal actors that communicate. Communication is not something that happens as an isolated case. Communication comes from the external environment in the form of tacit and explicit information. Communication is also based on the discussions done by the krAft members within the project. Through discussions some issues become more important than others and issues are raised or dropped through agreement. Agreeing what should be discussed will lead to new discussions and new agreement processes. During the krAft project some issues agreed upon did lead to joint understanding while others were not discussed any further and never reached what can be seen as a joint understanding. Issues agreed upon to discuss would not automatically lead to joint understanding. And joint understanding does not have to mean that issues are accepted and will lead to collective action. It could as well mean that there is a joint understanding that some issues should be left alone.

To understand how organizational learning comes about is complicated. It can be said that in the end of the process when the participants created a joint understanding about some issues, it was a back and forth process of agreement and communication. It is a process of reflecting information in different ways in different stages. It has proved to be a long process where time has been crucial. The participants needed to be accustomed to ideas before accepting them as points to consider. Joint understanding could actually come about without any hindrance at all, like the implicit that prices and customers were not to be discussed. The joint understanding that collaboration was important took much longer time. It was not until the last seminar that it became clear that all of the participants had the same understanding that collaboration was
necessary. But the question that remains to solve is what kind of collaboration is possible or feasible, i.e. there is a joint understanding about collaboration but there is a need to discuss further how to collaborate and about what. This new joint understanding needed a new round of discussions and agreement before turning into a joint understanding about what and how to collaborate.

Reviewing the model formed in chapter three, it becomes clear that in temporary organizations where participations come from different organizations, organizational learning is somewhat more complicated than believed. To exemplify learning in temporary organizations a new model needs to be developed:

![Organizational learning in temporary organization](image)

**Figure 6.2: Organizational learning in temporary organization**

Through empirical description it is possible to understand what happened during the project, whether positive or negative in the context of temporary organization. It is important to note that the companies’ suspicions regarding each other’s intentions did decrease. Therefore it became possible for them to discuss more openly sensitive matters they would never have touched upon before. In seminars they got the chance, the time, and the resources to be able to discuss and they learned to trust each other. It is this practical discussion that has brought forward learning in the inter-organizational project. It is precisely the relationships among the participants that advanced the project and boosted learning.
6. Analysis of the krAft project

6.2.1 Explaining the model

The starting point of the model concerns different organizations taking part in a learning activity [1]. The reason why companies want to joint can of course be due to several reasons, i.e. internal or external. What is important is that the companies initially interested in joining the group know the overall aims of the project and show an interest in taking part. In this krAft project the companies that decided to joint were interested in questions related to exports in order to expand customer base by going abroad. To be able to stay in business new markets needed to be explored.

Those companies with an interest in the overall aims of the project responded to their own needs and started to meet [2]. In the beginning the project was only tailored for individual companies focusing on increasing their competences. In the course of time, social relations started to develop and then instead of being an individual company taking part in the project, an organization of its own started to develop. When the participants met for the first time they started to listen to lectures and to each other trying to get new ideas, a communication process started. During communication the participants started to see things differently than before. The next step for the group was to agree upon issues that should be discussed further and what issues should be left out. Being part of a temporary organization and taking part in discussion and agreement process individual learning can also occur. This can lead to individuals changing their mental model which can lead to actions within participants’ focal company [4b].

By agreeing on different issues a new round of communication started, which led to joint understanding [3]. Joint understanding can result in two sorts of changes; mental and action-oriented. As this is learning project with no intention of creating sustainable changes within the temporary organization any real action was not to be found in the temporary organization, [4a]. Joint understanding could result directly in some real action within participants focal companies [4c].

What will have a strong impact on the work done in the temporary organization are factors that can be seen influencing learning, and can be seen both within the temporary organization as well as externally [5]. As has been pointed out earlier several issues can be seen as enablers and several can be seen as obstacle when it comes to creating good communication and a ground for agreement that will or can lead to joint understanding. Looking at the thesis’s empirical analytical discussion some major contributions can be seen in the form of learning enablers and learning obstacles. Both the enablers and obstacles can be seen as practical or managerial contributions.

Learning enablers

Firstly, the participants’ understanding of what was needed to develop their competence grew during the krAft project. In the beginning they did not have
the understanding that the problems they were facing were not due to their focus on strategic issues, leaderships, understanding and customer as well as supplier needs. All the participants had in the beginning of the project their focus on developing competence with their operational staff. By the end of the project, they realized that they were good at molding goods but they needed to be more efficient in other aspects. Important enabler was the fact that they met during such a long time. It gave them opportunity to reflect theoretical issues in relation to practical problem(s). Because of this participants gradually changed their understanding to be able to survive in the future.

Secondly, it is clear that the seminars were one important part of the project was although the participants regarded them as hard to understand because they interpreted them as too theoretical. The seminars were an important prerequisite to be able to discuss and agree on issues that could help them build up a new understanding. If there was going to be a change in people’s mind they needed to challenge with information that was new to them or the information should be put into different contexts other than they were used to. In seminars different topics were discussed by the project leaders and invited guests. It was not until the fourth seminar that the participants openly started to see that there was a need to increase their own managerial competence instead of developing employee’s competence. Their old knowledge had been challenged with new and unknown information.

The third important enabler is that the company with close contacts with the krAft tutors developed the most. The participants from this company had good contact as could be seen during the project and throughout the meetings. This explains the high competence they exhibited in comparison to counterparts from other companies. Only two companies regarded the work with the krAft tutors as valuable. These two companies had rather a positive attitude towards the krAft process as a whole as they could see a connection between what was discussed in seminars and the work done by the krAft tutors. The enabler is that to get the most out of theoretical discussion there is a need to have a clear practical connection to problems the participants face.

The fourth enabler can be gleaned from the krAft philosophy. Overall the krAft philosophy is a good pedagogical framework to work with and it is obvious that the concept should be used and developed. It is important to note that there are no quick fixes regarding learning. Learning needs to connect theory, practice and supervision (project leadership) and this could only be done over an extended period of time. The strength of this krAft project is that it was included peers who developed shared understanding about shortcomings in their businesses. The participants could without hindrances discuss with each other once trust have been established. It is not a single event that is important in a project like this but it is the whole context. Meeting in several seminars, solving problems at home or in groups, and working with tutors have been shown to be a good way to bring about changes.
Learning obstacles

The first obstacle that needs to be mentioned which boomeranged negatively on the krAft project was the absence of a project owner or leader accepted by all those taking part in the krAft project. The participants did not understand that there were two agendas in place in the beginning of the project. It would have been clear from the beginning who was the leader of the project. The krAft tutors and the project leaders did run their own agendas and that did make the participants confused about the connection between theoretical discussion and practical connection. Only in the fourth seminar when the project tutors and the project leaders had actually decided how to carry out the project it started to float more smoothly. If leadership problem had been solved in the beginning of the krAft project, members of the krAft management group would have pulled at the same strings and the direction of the project would have been better suited to participants own problems. The absence of good relationship between the project leaders and the project tutors, and between theory and practice, rendered learning to be less effective. This is mainly due to the lack of discussion and coordination between the project leaders and the project tutors. A great deal of energy was put into the project to keep the krAft management group united. Instead of concentrating on the krAft project and learning possibilities they shifted the focus on the krAft management group and their own agenda, hiding the fact that they actually did not share the same idea of how to conduct the krAft project.

Another obstacle connected to the first was that the participants did not do much in between the seminars. Most of them did not think about the project until the day they were supposed to be there. And as some of them indicated most of the assignments they were supposed to do in between seminars were done on their journey to the seminars, or on their way back home. The project leaders should have been more careful not to let the participants get away with the assignments. Because of tied agenda, nothing was done to dig deeper into practitioner’s solution of how these assignment should done during the seminars. The agenda was too rigid and the project leaders followed it slavishly instead of being more open to what was going on. When the participants did not spend time between seminars to think about the problems and make use of them in their own domain, this hindered learning opportunities or at least delayed them.

The krAft tutors and the participants showed a lack of trust in academia particularly when working with issues they saw as really problematic. This is yet another obstacle. The academics used traditional academic tools to elaborate on problems and solutions. The problem was that it was hard for the participants to see the connection between the theoretical discussion in the seminars and their own reality. The krAft project provided evidence that universities needed to review their theories and teaching methods to make them more relevant to practical situations. This obstacle is connected to the fact that in the beginning of the krAft project more time should have been devoted to understanding
better what individual companies in the krAft project interpreted as problem in their organization. The participants were more of passive bystanders regarding the topics of discussions in the seminars. One lesson learned was that more time should be devoted to discuss and find out what the participants want to do and how to connect it to their own reality. Even if the project leaders knew that it was very important to connect theory and practice, they showed little understanding of how to translate it into reality. A related problem was that the krAft tutors wanted to tackle and solve problems directly without regard to what was normal in a complex world. It was problematic that so little understanding came up to the surface regarding different views between the krAft tutors and the project leaders. To overcome this obstacle it is necessary for the university representatives and the tutors to meet and discuss their pedagogical models and make them more suitable to practical business education.

It is worth pointing out that the krAft management group had a strong influence on how the project actually developed. But it is important at the same time for the project leader or the krAft management group to be concrete and explicit right from the beginning, and involve one way or another the participants in deciding the agenda. Unclear agenda or structure will, as the study demonstrates, lead to weaker learning potential.

Hopefully, prospective project leaders involved in a learning project can learn something by reading this thesis. By shedding light on the learning process and focusing on organizational learning, this study can contribute to better learning processes.
7. Learning in a learning project

In this chapter I will return to the fundamental research questions and the purpose of this research. The focus of the study has been to discover and understand inter-organizational learning in a context of a learning project. The research questions attached to the purpose of the study were formulated as follows:

- How information is generated, interpreted, and understood by the participants within the inter-organizational learning project?
- What does the agreement process look like in the inter-organizational learning project?
- What type of learning happens in an inter-organizational learning project?

I shall now discuss the relation between the research questions and the learning model.

The starting point of the model (figure 6.2) is the participants as an input variable. Companies involved in a learning project need to be there of their free will. All participants had some management position in their respective companies. The participants met in a temporary organization where social relations were important to discuss and change information. The project has been described as a temporary organization because of its character (see chapter 3.4). As shown in chapter six the group identity was somewhat problematic. The participants only saw themselves as an organization when they met and not in-between meetings. All companies were rather similar and no company was dependent on another company in the project. It was also clear at the beginning of the krAft project that the participants saw themselves as competitors though they gradually changed their view to see themselves more as collaborators or peers.

The temporary organization is not a hierarchical organization with clear structure characterized by power relations. It is rather characterized of having unclear structure and unclear power relations. The participants can be characterized as peers and rather homogeneous regarding for example education and their engagement in the foundry business. The traditional organization as a phenomenon was not of that significance here because the structure and organization of the project was different. The project was characterized by inter-organizational relationships – an interesting phenomenon on which this study has its focus. Therefore, an attempt to understand the focal companies as an input variable is important in addressing the three research questions.
The first research question, learning in inter-organizational setting, has to do with information gathering, how it is interpreted and understood by the members. In inter-organizational learning individual learning activities are not in focus, although learning always starts and ends with individuals. It is how the group together makes sense about the issues discussed. It is not only in a learning activity that people learn. Learning is also due to external factors outside the learning activities. But it is always the individuals that learn not the organization and therefore it is of paramount importance to study the participants’ individual understanding of what they themselves see as significant. In the krAft project communication was conducted by the members of the krAft management group, invited lecturers and the participants, i.e. the internal context. Between meetings, the participants got information externally by communicating with people outside the temporary organization. Accordingly, it was not only within the project that people got information. Information was gathered externally as well. Information gathering is not enough to learn as people need to make sense of the internal and external information to be able to interpret data on their own mind. The participants needed to understand information as individuals but as a collective they needed to come to agreement of what issues should be pursued to be able to continue working as an organization towards a common goal. Agreement has to do with that the group together has identified and accepted with regard to issues of importance even if there is not a shared understanding on how to understand them.

The first research question pinpointed the need to understand better the agreement process, i.e. the second research question. Two important issues were in focus when looking at the agreement process, its social phenomena and its political dimension. The agreement process is important because it helps us understand how information results in new communications or as a joint understanding. As figure (3.2) shows the process was initially thought to be linear. Empirical evidence gathered here has prompted the author to introduced drastic changes to the model.

It was important to understand that the outcomes would be a consequence of the learning project, shedding light on the type of learning that will take place in inter-organizational learning activities. This research question and its relation to the learning process occupies the last part of the learning model. Joint understanding is seen to be the outcome of the process. When there was joint understanding two types of changes were noticed; mental changes and changes leading to action within the companies.

The remainder of this chapter will focus on analyzing each of the questions to better understand the problems confronted when conducting learning in a temporary organization.
7. Learning in a learning project

7.1 Learning in temporary organizations

The first research question was; how learning is generated, interpreted, and understood by the participants within the learning project?

Learning is something that happens due to different kinds of stimuli, (Histolop 2005; Davenport & Prusak 1998). Stimuli can be individual, collective or external, i.e. all forms of stimuli will and can lead to learning. In inter-organizational learning the focus is on collective understanding with the assumption that no individual or organization possesses all the knowledge by themselves. There is a need to have a holistic view to be able to understand different meanings connected to a specific context where understanding inter-relations in that context is necessary (Nonaka & Tacuechi 1995). It is important to better understand how a group of people learn, and what they learn.

To facilitate learning there is a need to connect different activities that stimulate learning and to make learning more understandable. In the beginning of the krAft learning project, it was clear that the participants had at least two problems: Firstly, they saw the krAft project as something that would help them get low-priced education for their employees. Secondly, the participants had a hard time understanding the theoretical discussions which they saw as too abstract. It was difficult for them to connect the theoretical discussion to tangible problem(s). From the project leaders’ point of view, it was necessary to use the learning project as a tool to challenge the participants with new and unknown ideas and let them start to think in a new way. This new way of seeing the world is a sign that dialogue was functioned (cf. Örtenblad 2001). It was not a single event that created understanding. It was an event that needed to be seen in a holistic context, echoing Ramsden (2000) and Marion’s (1988) stance regarding adult education in which learning occurs. Traditional business education often only focuses on one meeting during one day where the best learning scenario hardly has time to tackle the surface leaving the deeper structures mostly incomprehensible (Ramsden 2000; Marion 1988). Theoretical discussions, no matter how thorough, will fail to incur new understanding (Kolb 1984; Schön 1983). Kolb and Schön both point out that it is necessary to give individuals time and space before they are capable to taking action on their own. In the KrAft project, understanding occurred through dialogue between the participants and with project leaders, their focal companies, and others external actors. Being a part of a learning project connecting, theory and practice helped the participants understand and create new and different understanding because they were given time and space to think and reflect on new ideas.

It is difficult to comprehend how information is transformed to a new understanding (cf. Huber 1991). In the case of the KrAft project this was due to several factors. The participants did not know what they should look for when the project started. One reason for that was of course the lack of a clear
agenda for how and why to enroll in the project as the companies were lured because they had to pay nothing for the employees willing to join the courses. It was more about inhaling information, hoping that they would get something out of it. Throughout the krAft project, they would wait for the lecturers to come up with problem and answers rather than doing so on their own. The participants’ lack of a common goal before joining made it hard for the project management group to see a shared goal as it was not clear what the participants wanted. But this changed in the course of the project with the participants stepping from what the literature describes as the lower learning stage to a higher one, in Fiol and Lyles (1985), or in Argyris and Schön’s (1978; 1996) words from single-loop learning to double-loop learning. Argyris & Schön show that double-loop learning is hard to accomplish within a focal organization because of its structure and norms, even if double-loop learning is the most desirable condition. In the course of the krAft project there were no structures and norms that explicitly were set to prevent double-loop learning. It was obvious in the beginning that the participants did not know what was going to happen in the krAft project and that they did not make an effort to connect what was discussed in the krAft project to problems in their own companies. The participants were not so keen in the beginning to see and discuss their problems openly. But through the krAft project they started to see their own problems in a different light. They started to question the underlying reasons why they were not as good as they believed (cf. Argyris & Schön 1978). This prompted them to change their view and then discuss differently. But as pointed out earlier the participants did not know what the problem was and they had hard time in the beginning of the project to connect the discussion made in the seminars to their own day-to-day situations. This was the reason why the participants did not discuss the agenda, which was accepted and not questioned. When problems surfaced it was too late to introduce any major changes. Had their been an attempt to single out the problem in the beginning of the krAft project, there would probably have been better possibility to focus the krAft project on that direction, and merge the participants’ day-to-day problems with the theoretical discussions as a tool to solve problems or to help them see problems in a different light.

What happened was that when the participants started to reflect over their own actions (Schön 1983), motivation increased to understand the information they got in seminars, forums and by the two project tutors. Gradually, the participants started to understand that the problems they were facing in their own organizations were not to be seen as unique. They were similar to other participating companies’ taking part in the krAft project. The problems became manageable when the participants started defining them. At that point they were no longer seen as individual problems that could be risky to reveal because of some business secrecy. The participants agreed on some issues that they believed to be important and interesting to them as a group of companies and of course important to their own individual company’s development in the
future. Because the participants started to be able to connect their own problems to what was dealt with in seminars, it became easier for them to understand the situation because it did not require a total change in their way of viewing the world except it helped them modify their own picture of the world, i.e. it was a form of development. The result is that double-loop learning had occurred.

As Bandura (1986) points out behavioral, cognitive, and environmental factors make learning happen. These factors were all felt in this project, supporting Bandura’s discussion. Behavioral factors were represented when the participants dealt with cases or problems they were supposed to solve. Most of them tried to solve the first homework according to the instructions but because of the lack of reinforcement, positive or negative, they did not seem to do as they were told and instead resorted to simpler ways of solving the last two home-works. The cognitive learning factors were illustrated in the change in understanding and seeing things other than those the participants had seen before. They discovered that exports were not the problem they were facing but rather the Swedish customers’ unwillingness to purchase from the domestic market. The environmental change that the participants felt they had not seen before changed the meaning of the krAft project. The participants defined their own social reality differently than they had done in the beginning of the krAft project (Berger & Luckmann 1991; Walsh 1995; Hodgkinson 2001).

Learning is based on cultural factors within organizations (Popper & Lipsichtiz 1998). In the beginning of the krAft project it was obvious that the participants did not trust each other. This mistrust explains the inveterate culture within the foundry business. The participants said they were not used to collaborate with other foundry companies, at least not as partners. During the krAft project this view changed and the participating companies learned to be more open and confident towards each other about issues that could easily been regarded as very secretive such as strategy, future customers and organizational issues. This changed the character of the project as the participants explicitly contributed to the discussion, a prerequisite for organizational learning (Dixon, 1998) and shared cognition (Cannon-Bower & Salas, 2001). The shared cognition helped the participants to share their own experience with others in the group. This was specially notified in the social gathering in the evening. In the second seminar the group-work was done by organizing the companies’ representatives in mixed groups. The group assignments helped them to see common possibilities and/or problems as interesting or perhaps vital for Swedish foundry companies if they were going to survive in the future, in a world that is seen as more complex and dynamic than before. This development was because the information shared by the participants was connected to their own action and reflection (Dixon 1998). The participants discussed fixed problems but working in groups helped them connect these fixed problems to their own experience and then communicate those experiences to others. This made problems clearer and easier to discuss.
An important issue according to many scholars (Schön 1983, Dixon 1998; Döös et al. 2001; Ellström 2001) is the need to connect learning and action if changes are going to last. In this project the participants dealt with different problems in the form of four assignments to solve and to account for in seminars. The idea discussed by the project leaders was that it was important to let the participants get information from employees within their own organizations to be related to the krAft project, and more explicitly to the problems identified in companies and then to connect theory and action (Kolb 1984). But the problem was that the participants did not seek any help from their employees and the solutions provided at seminars were in no way any better than what they themselves had as managers. Discussing problems openly with employees can help to develop learning into a higher level (Dixon, 1998).

According to the participants, there were numerous reasons why they did not choose to take the discussion into their companies. Firstly, they experienced the discussion with their employees as more of a monolog than dialogue, and therefore not that rewarding. Secondly, they thought it was rather hard to go out and ask their employees questions that they could not answer themselves, and in consequence risk losing face. The participants did not pay attention to the individual as well as organization’s accumulative knowledge based on different kinds of information and data (Holmberg 2000; Ellström 2001) which develops when discussed with other people within the focal organization. In any organization no one individual can or does have all the knowledge. The development of which happens in relations with others (Dixon 1998).

Kolb (1984) who proposes a cycle through individual learning progresses, and Dixon (1998) who proposes the organizational learning cycle highlight the necessity of connecting learning as a part of work. When the context of learning is inter-organizational there is a need to connect both to practice and theory. It highlights the need of those leading the learning project to understand better the participants’ problem or wishes before setting the agenda.

In this krAft project it can be seen that it was crucial to connect practical understanding and theoretical discussion. In order to do that those taking part in an inter-organizational context will need to have time to reflect to make these connections. By connecting the time dimension to the learning agenda, trust between participants increases. When trust increases, discussions becomes more open. Only then it becomes possible to the participants to understand the challenging topics that are to be discussed. In our case, the participants would have actually assimilated the information in a better way had there been an attempt to relate the new information given to them to reality or something practical by discussing with peers.

Based on the first research question this study shows that when the participants of a learning project start to open up and discuss more freely, new understanding comes about. It shows that before the participants had learned to know each other and trust has developed not much discussion is expected to be conducted. This study shows that the possibility to understand own problems
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occurs when participants develop the ability to relate theoretical issues to practical problems. When participants can understand their own problems they could make use of the theoretical discussion as a way to solve them. This argument is taken over by Kolb (1984) and Dixon (1998) who maintain that even in inter-organizational learning activities, it is necessary to give participants time to make a clear connection to their own frame of reference before being able of taking a full part in discussions.

As Granberg (2000) and Dixon (1998) point out it is central to see how the collective within one organization identifies, interprets and understands how to solve problems. It can be more problematic when the context is inter-organizational. In a focal organization there is always some power structure that can force some members to act even if they do not understand it or agree on it. In this study it has been shown that learning happens as shown in the learning model (figure 6.2). The time dimension is very important to give the participants the possibility to reflect and then come back to continue discussing, leading to joint knowledge. It is not a question of forcing one’s ideas upon another. The process is more about the collective agreement on something. I do not see organizational learning any different than those scholars discussing organizational learning in chapter three. The main thing that is new or additional is that organizational learning in an inter-organizational context shows that there is a need to be more careful when discussing which issues should be in focus. If one individual is not satisfied, and leaves the constellation, the constellation will be denied that individual’s knowledge with all its entailed consequences that may weaken or perhaps jeopardize the whole project.

7.2 Agreement in inter-organizational context

The second research question is what does the agreement process look like in the inter-organizational learning project?

A contributing factor to how people within focal companies actually come to agreement is the condition that is prevailing in the company, an indication of the presence of a hierarchal system in place (Tomicic 2001). The formal decision-making process can decide whether and how individuals within an organization can reach agreement or not about issues seen as important to the whole organization. What happened in the krAft project was just opposite formal decision-making process. The participants were of equal ranks and standing in their companies. None of them had the ability to dictate the agenda or the content of seminars because of some explicit or implicit hierarchical status. The only ones with the formal ability to influence the agenda were the project leaders regarding the seminars, the representatives from the Swedish
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Foundry Association, and the two krAft tutors. The participants were not consulted and their consent was not sought for the items that were to be included in the agenda. Four of the five seminars were already decided upon. The only change made in the agenda was the decision to move the seminar on leadership close to the end of the project rather having it earlier. The management group did not explicitly discuss with the participants what issues were discussed in the seminars. They were already decided by the krAft management group. To decide in advance on the topics to be discussed and the aims run contrary to the krAft philosophy (Kraftprov 2005), which stipulates that the participating companies should have been involved in setting the project’s aims and how to accomplish them. The presence of the representative from the foundries might have persuaded the krAft management group to acknowledge that there was a sufficient link to the participating companies.

The project leaders used quite a lot of time in the third and the fourth seminars to discuss and develop a common understanding to have the participants agree on how to understand the process. The reason was of course that a long period of time separated one meeting from another and it was necessary to get the participants’ consensus for the krAft process to continue.

7.2.1 Agreement as a social phenomena

Child and Rodriques (2003) say that social identity is important in order to learn in a context that is collective. This has been evident in the krAft project in several ways. What simplified the discussions between the participants was the fact that they were homogenous. Their educational level was similar. Most of them had started to work in a foundry directly after their graduation and worked their way up in the organization. Only two CEOs involved in the project had university degrees in business administration. The other one had a degree in education. The one with education degree took over the foundry after her father fell ill. One of the other two CEOs had moved into the foundry industry from another line of business. Regarding other participants only two of them had some kind of a university education. The majority of the participants were almost of equal level of education and experience with regard to the way they approached the foundry business. This was obvious in the discussions they carried out in the seminars.

Agreement as social and cognitive phenomena has its empirical focus on the traditional hierarchical organization (Bengtsson et al 2007; Wikström & Normann 1992; Schein 1988; Deal & Kennedy 1983). In meetings involving individuals from different departments within the focal organization characterized by hierarchy, it is quite common to force someone to accept an idea by taking advantage of their position on the hierarchical ladder. In the case of the krAft project it has been even more interesting because it concerned individuals coming from different companies all having a management positions in their companies. The participants lacked enough confidence in
each other in the beginning. They were hesitant to say something and how to say it because they came from organizations normally considered competitors, but it is worth mentioning that when they started to form something of a social identity, this lack of confidence or insecurity disappeared and they began seeing themselves as a group with common interests, an in-group, which could discuss issues that were relevant to them not only as individuals or individual companies but also as participants in the krAft project. The participants did not only start by sharing identity as a group but saw similarities within each others’ company regarding problems and possibilities. Thus the agreement process has been a social process (Lave & Wenger 1991) that grew in the course of the project. This is also supported by Child & Rodriques (2003) who maintain that interacting with others is bound to lead to new understanding when participants meet, forming mixed teams, leading to even richer understanding. The temporary organization was mixed but rather homogenized. What would have been the result if the companies’ representatives less homogeneous? That is the kind of question future research might want to answer. The participants’ homogeneity helped them trust each other and discuss rather freely during the process, though this did not cover issues related to customers and prices.

The project leaders understood that some kind of consensus was needed, i.e. consensus about what the krAft project was about. In the third seminar they tried to get a common view about the krAft project because long time had passed between the meetings due to the internal struggle in the management group. The discussion centered on how the participants could be better equipped to define problems and use different tools to define and solve those problems. For the participants the discussion was abstract and hard to understand. It was not the theoretical discussion that helped the participants to understand that there was a common problem. The understanding started to develop in the second seminar in the evening when a member from the Swedish Foundry Assassination raised the issue about imported foundry goods. It was because of this discussion that the participants started to focus their attention on what they needed to do to regain the market lost to foreign companies. When the participants agreed what the problem was, they started to see the issues such as leadership, internal effectiveness, collaboration and creativity brought up for discussion in the seminars as important.

The participants were not able to create joint understanding until they had agreed what issues should be discussed as part of groups. Only then, they could continue discussing solutions that could be seen as common to them all, (cf. Tomicic 2001). This echoes Weick’s (1995) notion of how individuals team to make sense of their world. To structure and organize things that are not known, something that is unexpected or different is needed and then it is possible to start to discuss the solutions that are necessary to enact in the situation. And to be able to act, there must be a meaning to what is to be done. The structure that the participants were seeking was to be able to understand what was important, but they also needed to understand it in relation to their own
context. When there was an agreement of regaining the domestic market, continuing the discussion did not seem as hard since they had a clearer shared goal to strive for. Once they reached a sufficient level of understanding of the problem, the participants began to realize that some form of collaboration was necessary if they were to reach those goals. The direction made them realize that the threat did not emanate from their rivalry over the domestic markets but from foreign competition. It was a cognitive process with a strong connection to the tasks characterizing their day-to-day activities (Granberg 1998) and in that way the participants started to look for solutions to act upon this new interpreted situation.

Another factor that is of interest in this context is that it was within the cognitive processes that the participants started to create trust toward each other. And because they had created, trust they believed it was easier to discuss issues that otherwise could see as sensitive.

7.2.2 The political dimension in the agreement process

One common explanation in the organizational literature as to why people actually reach some kind of an agreement is to be seen as something of a game of political power connected to a specific context (Pfeffer 1981; Mintzberg 1983). Some questions that have come up to the surface during the observation and discussion focused on whether there was someone in the process wielding stronger power than other participants and therefore could have dictated more or less the outcome of the discussions. These power relations emanate when a participating company actually depends on another company as a supplier or customer, No such relations were spotted. No single participating company was in a position to dominate the others due to some marketing or other reasons. Regarding the individuals involved in the project no such domineering positions could be spotted. No participating company was in a direct competition with another company and no one possessed a core competence that the others did not have or were in need of.

However, two factors must be highlighted regarding the question of which in the krAft project had the strongest political power to dictate or decide what was to be discussed and how it could be discussed. The participants had more confidence in the male project leader than his female counterpart. Because the male project leader had an academic degree as well as practical career, he exercised more authority and more often his ideas were discussed by the participants than those put forward by the female project leader. The young female project leader discussed topics such as culture and leadership based on her research and doctoral thesis, with the discussion being focused more on theoretical than empirical issues. Her being a young PhD candidate without practical experience and a female could have had an effect on how she was accepted by the participants and others in the krAft project. It could be that the krAft tutors had some power over the discussion or the agenda due to the fact
that they regularly met the companies as the project proceeded. But there was little evidence of this. Only two companies mentioned that the tutors’ work had influenced their agenda. The rest did not believe that the tutors had any influence.

Of the strongest influence from the viewpoint of political power was the “game” played by different members of the krAft management group. If a group is going to function there is a need of some degree of conflict (Månsson 1991; Hatch 1997; Senge 1990). The conflict in the krAft project management group was of great magnitude and became counter productive.

Among the participants the atmosphere was characterized as one of harmony. They did not reveal any form of dissatisfaction with one another. This could of course be due to the fact that the participants were rather homogenous. It could also be because that some issues were left out and never discussed. But when asked if that was the reason, no one agreed. The relationship between the participants in this krAft project was characterized by being collaborative. Maybe it would have been better to increase the level of conflict between them to stimulate more new thinking, and at the same time decrease the level of disagreement within the krAft management group.

When issues discussed in the project became more practical, the participants started to agree on them and develop a joint understanding of what was important to them and their focal companies. When issues discussed were understood as abstract, the participants were more of bystanders. The empirical data illustrates that was important to have the participants involved early in the process. Once there understanding about the aims, the participants can begin discussing what to agree upon and what to disagree.

To summarize the discussion about the agreement processes the typology of agreements by Bengtsson et al (2007) is worth mentioning. The regulative was stated in the beginning of the project when the participants actually made a formal contract with the krAft management group. The participants were supposed to contribute with fiscal means to be able to attend the krAft project. The cognitive agreement came about when they could actually relate the discussions to their own understanding or practice. As cognitive agreement has to do with shared experience and knowledge, it became clear to the participants that their companies, problems and working methods were not that different. The third typology of agreement is that the moral agreement has to do with sharing values. By being able to meet for such a long time, the participants started to understand that their values could be seen as rather similar. They started to trust each other and they expected the others to be sincere. This krAft project did not have any formal decision power over the participants in the project. There was clearly a lack of commitment within the group to accomplish something together.

Accordingly, the agreement process is characterized by the type of agreement that does not require any action by its members. It would be possible to call this type of agreement a low degree agreement. A high degree agreement would also
involve imaginative agreement (Bengtsson et al 2007). It is low in the sense that never was there any obligation to show some real action because of agreements. The only thing that the participants did promise was to pay for the whole learning project, but then it was not possible to force them to attend if they did not want to. A learning project has its focus on letting learning activities flow and therefore it is important to have some kind of contracts to secure the financial part of the project. This research shows that before attending a project like this there is a need to have more formal agreement in the beginning instead of letting the project develop as was the case in this krAft project. There is a need for strong leadership from the beginning with a clear focus all the time. Accordingly, this project supports the main philosophy of krAft project. Kraftprov (2005) says that it is important to have a clear agenda from the beginning connected to participants own experience.

The second research question discussed the agreement process in an inter-organizational learning project. In the study it can be seen that it was not a problem for the participants to agree upon what was regarded as important to them all concerning the discussions pertaining what should have further focus and attention in order to be able to create join knowledge. It can also be seen that the social gatherings in the evening were regarded as the most valuable part of the project. It was there where the participants could actually discuss issues directly related to their own businesses or problems. It would have been better to have an open discussion in the beginning with regard to the aim of the project and also to let the participants take part when the agenda was decided upon.

Another interesting observation is the type of agreement that was reached in this project. The agreements reached at led to no pressure of action within the group.

7.3 Joint understanding as a change factor

The third and last research question is what type of learning happens in a learning project where the context is inter-organizational? The question deals with outcomes of the krAft project. Anyone occupied with learning, in a practical or theoretical sense (Argyris & Schön 1978; 1996; Senge 1990; Dixon 1998) asks the question of what outcome or changes could be seen in the end of the learning activity.

The basic question is if the project has helped those involved to be better in day-to-day activities of their businesses. This question has to do with the change that has happened within the participants understanding (cf. Prange 1999). It is to be noted that there have been changes within the krAft group but it is hard to see if those changes have led to some definite transformation within their respective organizations. An overall impression of the krAft project is that the participants were more conscious about the need to focus more on managerial
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issues within their organizations. This understanding was quite explicit when the participants as a group started to realize that they were lacking competence regarding effective leadership, understanding what their companies were good at, how to be more effective in order to regain the market of imported foundry goods. One way of understanding this was to observe their interest in the philosophy of lean production as a tool to improve their internal processes and as a tool to force participating companies to start to think in the new direction. The major change occurred first in the change in the mind of the participants by showing that they started to understand that there was a need to adopt a holistic view on the company’s internal businesses if they were going to be able to stay in business in the future.

It was hard to establish a link between the changes taking place in each of the participating companies with a bearing on the krAft project. It was hard to tell whether the companies became more effective because of taking part in the project. My findings support Dixon (1998) who points out that it is hard to establish a connection between learning and changes because it is impossible to isolate the factors other than those learned with an effect on the fact that something happened or did not happen. Being a member of the project only speeded up some processes, but it probably could not be said that it was entirely due to the krAft project.

According to what the krAft management, the group did actually learn some important issues. All of them mentioned leadership as a necessary component in a project like this. Leadership is important if a project like this is going to be successful. Another thing that can be seen is that when doing a project like this where academic and consultants are involved there is a need of clear agenda with aims that all can accept.

As several scholars point out that it is important to connect learning to a dialectic process containing both theoretical and practical issues (Wenglér 2004; Illeris 1999; Ramsted 1992; Senge 1990; Marion 1988; Dewey 1980). The combination of practical and theoretical issue was actually the ambition the krAft management group had throughout the project. It was the underlying pedagogical platform on which the project was based. The krAft philosophy and its aim had this in mind. The plan behind connecting practical and theoretical issues was to help the participants better understand their own limitations in the hope of leading them into new understanding. As discussed earlier the participants had hard time understanding what was said in the seminars due to the fact that they interpreted the discussions as abstract and too academic with little connection to what they called “real live situations”. And because the participants did not solve the home work as the project leaders had demanded, some of the practical connection was lost. But the positive side was when the participants started talking to each other in mixed working groups at the seminars and when socializing in evenings where they got a chance to turn the discussions more “down to earth”. The participants discussed job-related issues through which they could connect what other participants were
discussing to their own framework of understanding. And in these discussions they started to connect between what was discussed in the krAft project to their own company problems or possibilities. This change was more about the participants’ mental model than a change that could be seen or explained explicitly. It was because of the theoretical discussions that the participants actually did discuss issues in the way they did even if they did not believe in them when asked directly. The participants had abandoned the short sight perspective they had when they came into the krAft project. Because the participants had started to realize that foundry companies in Sweden were facing problems that needed long-term solutions not some quick fix solutions, they started to focus on internal strategic issues. This is a more effective and more suitable way for companies in an unstable market to meet the future.

The need to discuss and elaborate on problems to be able to concretize one’s own problems was another feature of the krAft project (Dewey 1980; Kolb 1984; Wenglér 2004). But it was important to be able to reflect the participants’ need to have space and time to do that, (Kolb 1984; Dixon 1998). It was obvious that the participants needed to reflect things that they knew from their own companies and then they could exploit this knowledge, and in continuing work then they could base their new knowledge on the process of building up something new that is to explore something as an individual company or as a group of companies.

The answer to the question if something did actually change during the project is yes. Something did happen, and something did change. It was the participants’ change of understanding.

From a theoretical point of view this supports those theories that underlie the necessity that those who are learning need to have a personal relevance to them (cf. Ramsten 1992; Kolb 1984). This study has shown that only when the participants can relate theoretical information to practical knowledge then a dialectical process can start to take form. Accordingly, practical understanding is the basis if the participants are going to understand theoretical issues.

The krAft philosophy (Kraftprov 2005) stipulates that it should not matter how teaching is conducted with regard to theory, i.e. theory-first then practice or practice-first then theory. In this study it has been shown that theory and practice need to be intertwined from the beginning in a learning project. There is a need to understand the participants’ practice to be able to connect meaningful assignment and lectures to their own understanding. Accordingly practice needs to come first.

An important lesson learned from this learning project is the support it lends to Illeris’s (1999) theoretical model about long-term and short-term learning. Accordingly, learning has to do with two things: know-how and how to carry out this know-how in some sort of action. In this learning project there was a loose connection between theoretical discussions and how to put this theoretical discussion into action. There were no forces from the krAft management group that insisted that something should be done. Because of this the only changes
that could be noticed were mental changes. This learning project was a “know-how” learning project and not about showing results. The individuals in charge of the project needed to be more observant about this fact.

If there is going to be a joint understanding there is a need to have a clear connection between practice and theoretical discussion. Dixon (1998) Kolb (1984) and Ramsden (1992) show that there is a need to transform theoretical knowledge into practice. In this study this phenomena did occur somewhat late in the krAft project. Only in the fourth seminar the participants started to understand their own problems in relation to what was being discussed. By then only one seminar had remained so it was hard for the participants to mentally go back to the first seminar and to realize that it based on their own problems.

This study shows that increased knowledge comes when individuals have the time to discuss through dialectical interaction. It took some time before the participants actually were mature enough to start a discussion based on their own experience to others in the group that they regarded as competitors in the beginning. This backs theories stressing how crucial dialog is to collective learning (cf. Isaacs 1999; Söderström 1996). Joint understanding started to develop only when the participants started to discuss issues openly, partly in the third seminar and more seriously in the fourth seminar.

7.4 The theoretical contribution of the study

This thesis has dealt with learning in an inter-organizational learning project. The contribution is based on the aim that was formulated in chapter one, the theoretical discussion and model that has developed throughout the thesis writing and the empirical context. As can be seen and understood in the discussion and in chapters four, five, and six and in this chapter this is one of the thesis’s main contributions. The method can as well been seen as one contributing factor of how results have come about. By using abduction as a methodological analytical tool the results have grown during the writing and analytical process.

What was found in the beginning of this research was that the literature discussing organizational learning has mostly been focused on organizational learning within a focal organization. It was established in the beginning of the thesis that there is a gap in research dealing with learning where the context is inter-organizational. This was the starting point. The purpose of this study as stated in chapter one is:

*Understanding learning in an inter-organizational learning project, focusing on enabler and obstacles of learning*
The study has focused on one learning project, (krAft). When the krAft project started the focus was on changing the participants’ opinion, and how to develop themselves and their companies. To do that the focus was set on exports as the main theme in the learning project.

From a learning point of view it has shown that if anything is going to happen regarding organizational learning people need to meet and form some kind of a group identity. Group identity was the prerequisite for the individuals to start a discussion about their own organization. As can been seen in this krAft project this would never had happened if participants only had met once and never again. By starting to discuss with other, listening to others’ problem, the participants started to understand that their problems were not unique in any way and that they all share some common ground concerning the kind of issues they faced.

There are though some obstacles that could make learning less effective. If there is not a clear agenda accepted by those leading the project, this can result in poorer motivation for the participants. This study has also shown that once theoretical issues are connected to practical solutions, the participants will experience the project more valuable than in the absence of such connection. If learning is to come about it is necessary to connect practical and theoretical issues.

Meeting for such a long time in a learning project is bound to help the participants to learn something new. There are actually two things that can be seen in this study regarding meeting in a temporary organization like this. Firstly, in the course of the project the participants are set to develop trust and confidence in each other, one of the reasons for them to continue attending and discussing. Secondly, during the learning project the participants will start to see themselves as part of the organization and bolster their social relationship with it. Stronger social relationships make it possible to discuss issues that would otherwise have been regarded as sensitive.

Learning in temporary organizations like KrAft’s takes place mainly in the participants’ mind. The participants’ agreeing on some issues is not solely a question of acting together. This study supports theories that support the notion that it is hard to see if changes are due to the learning program or factors outside it.

7.4.1 Inter-organizational learning

The thesis furnishes a new model of understanding and analyzing learning in temporary organizations where the context is inter-organizational, (figure 6.2). Learning as a collective is a complex phenomenon and is discussed differently by different researchers (Granberg 2000; Dixon 1998; Ohlsson 1996, Argyris & Schön 1978). It is always individuals that learn and it is individuals that decide if individual knowledge is transferred. In this study organizational learning occurs when individuals reach joint understanding
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about some issues, the action which can be described as collective learning. Based on the model, presented in chapter six (figure 6.2), joint understanding has to do with how problems are communicated and agreed upon. Then joint understanding can be developed about this problem. Inter-organizational learning is defined as the concept that deals with ways on reaching joint understanding. Most of the research, up today, has been focusing on inter-organizational learning within the focal organization. This research takes the research-work on organizational learning further by studying and understanding collaborative learning better in an inter-organizational context.

Organizational learning as described in this thesis (figure 6.2) is rather different from that in the organizational literature. The focus has been on inter-organizational learning processes while the literature focuses on organizational learning process within the focal organization. This study is important because collaboration outside the focal organization is considerably increasing without the theoretical discussion that normally accompanies an inter-organizational learning perspective. This study should be seen as a part of the development of the understanding learning in inter-organizational settings, clarifying and understanding complex problems emanating from it.

This study also provides a new theoretical perspective to examine organizational learning using temporary organizations as a model to understand different inputs that contribute to organizational learning, such as communication and agreement. By having a process view this study shows that learning in collaboration takes time. The new model or framework can help us better understand organizational learning in inter-organizational context.

As pointed out in chapter one, this study does not try to simplify the understanding of the theoretical discussion about organizational learning. In the beginning of this thesis it was shown that organizations are constantly working together with other organizations, and this way of working has escalated during the last years. It shows that there is still a lot to do to better understand the phenomenon on organizational learning and this study is one puzzle in the brick.

7.4.2 Organizational learning in temporary organizations

There are several theoretical explanations that can help us understand how a project looks like and what it should contain in relation to resources, time, etc. (Lundin & Söderholm 1995; Packendorff 1995; 1993; Ekstedt 1999). Projects are most often described as a standard according to the normative approach to the project definition (Packendorff 1995; 1993). Instead of seeing inter-organizational learning as projects, it can be more fruitful to see them as temporary organizations, because of the lack of social complexity in the normative project discussion. Temporary organization is characterized by more social continuity rather than a normative development curve.
Participants in temporary organizations, aware of the problem from the beginning, will make it easier to come up with a strategy. Knowing how to conduct the project initially will make easier for the project leaders to see if the aims have been accomplished. Generally speaking, in all projects that are inter-organizational there is a need to focus on real problems participating members are facing (cf. Eksted et al. 1999 and Kraftprov 2005). If members of a temporary organization, that has its aim of learning something together, can’t relate discussions to something that has a strong relation to their own businesses, members will leave. This pinpoints another problem that leaders of learning project need to be aware of – flexibility and dynamism. If there is a risk that problems and discussions are not focused on member’s interest, it is more important to be flexible and not follow an agenda that has been decided in the beginning.

An important finding emanating from the discussion above is that this study supports the krAft philosophy (cf. Kraftprov 2005). There is a need to spend more time focusing on participants problems in the beginning so that they will be in a position to understand the agenda early in the project. In a learning project like this the focus should have a clear strategy in the beginning (cf. Lundin and Söderholm 1995). It is important that a learning project is not only formed by outsiders: it should be a co-creation between members and project leaders.

7.4.3 Collective development in social context

To understand and analyze a temporary organization as a social group or constellation, one can draw on Lave & Wenger (1991) and Wenger (1998) who give a good understanding of the social complexity that can be seen in a project like this.

What is the starting point when discussing CoP? It is essentially the presence of common interests and similar values by those involved in the CoP. The basic assumption is that the aim of collaborating around some issues with others must be made clear (Lave & Wenger 1991; Wenger 1998). When meeting in a constellation that is going to make some contribution, there is a need to have some kind of consensus by the participants when joining. If there is going to be trust and understanding within the group then some shared aimed must be in place. My results support Lave and Wenger’s basic theory that some common values or interests must be in place. It is the starting point of being able to contribute something and to be able to understand the discussion that is conducted.

Lave & Wenger point out that when CoP is created it is important for learning to be situated and contextualized to make it practical and easy to understand. In a temporary organization which is inter-organizational in its character, where everyone is there by their own free will, it is an important issue to take into account.
With regard to CoP it is important to understand that temporary organizations that are a learning project, not focused on conducting a common action, there will be no “old” timers and “periphery” members (Lave & Wenger 1991). Participants will directly be accepted as old timers or equal in status and together they will develop by deciding on the issues that are to be discussed and focused on. This would be in line with Teigland (2003) who explains how groups develop into social communities because of the feeling of having to perform similar work assignment. This is the main difference between the way CoP is defined in the beginning (Lave & Wenger 1991) and how it is understood as it develops (Teigland 2003). Participants need to develop a common platform as a basis for their understanding on in order for them to see it as interesting.

The participants in a temporary organization’s growing and developing engagement can be attributed to three reasons (Brown & Duguid 1991). The first reason is related to narration in the form of discussions with others in the core group. Different problems and ideas will be brought up during discussions when coming together. Regardless of how and why issues are raised, the discussions need to be based on what the participants are interested in. Second, the participants will develop because they understand own problems better in relation to the different problems brought up in the discussion. Collective understanding develops because the participants are a part of social communality. Third, as the participants continue to discuss, and listen to each other new collective understanding emerges, and the study supports this trend.

Collective learning is complex and it becomes even more so in an inter-organizational context. Learning is a human action based on how people act in a meeting - how they get the time and resources to discuss and understand each others’ viewpoints. People in inter-organizational settings have the possibilities to form and reform their own thoughts and their own assumptions in a dynamic environment where the CoP can be seen as a good tool to meet and discuss, stemming from the fact that within CoP trust will develop with those acting as old-timers while others will be moved into the periphery or even further.

To summarize, the findings concerning CoP support those obtained by Teiglands (2003). A group of people can be developed into social communities (CoP) if individuals are able to create similarities about issues. Wenger and Lave (1991) say that one prerequisite to start a CoP is the participants’ interest in some specific issues. This study shows that this interest can be created, initially by external actors and then by the individuals themselves, which will lead to the forming of a CoP. This study also shows that being away from the focal organization and meeting with peers is valuable. It helps the members of the temporary organization to gather and develop new ideas about themselves and their companies. This study also shows that it is rather suitable to study social development with individuals on the framework of CoP as an analytical tool.
7.4.4 Joint understanding as a social constructed process

Two aspects are going to be discussed regarding joint understanding as a constructed social process. Firstly, it has to do with communication, how it is conducted and how it develops. Secondly, it is a question of if and how communication is interpreted by groups and as a result it turns into something of a cognitive change within the studied group.

According to Dixon (1998), meanings are of three types: private, accessible and collective. Those meanings that are private will never lead to group learning, because they are private. Group learning will only happen when meanings are made available to others which make it possible to have them developed and shared and understood by the collective. When being in intra-organizational relationship (Argyris and Schön, 1978; 1996; Dixon, 1998) some structures and methods can be used or forced upon the members of the organization to make meanings that are private accessible to others. When meanings can be accessed by others collective meanings can be formed by standardization, rules or regulations. According to Nonaka and Takeuchi (1995), it is about taking tacit knowledge into explicit knowledge. In other words learning has to be collective for the participants to enter into open and unhindered discussion (Ekström 2004). But in organizational learning within a focal organization there are many issues that can be seen preventing an open and honest discussion (Dixon 1998; Argyris & Schön 1978; 1996). Political considerations in the form of hierarchical structures within the focal organization are one of the reasons why individuals feel that they cannot say what they want to say or need to say.

In this study inter-organizational learning is different as if the organization were intra or if the goal of coming together was clear from the beginning, like developing new products where all participants should contribute with their own core competence (Powell et. al. 1996). In a learning project that includes individuals from different organizations, there is not a possibility of forcing participants to make their meanings accessible to others. This process of coming to joint understanding has to be seen as a process of development where thrust and understanding need to be in place. Where there are no hierarchical structures or power relations members need to have time to learn to know each other. Dixon (1998) says that if there is going to be success in organizational learning it is important that the individuals within organizations are given both time and space to be able to learn. Trust will lead into dialogue which can lead to finding common problems to focus on. In a dialogue one begins to create meaning about problems that could be seen and understood by all (Leonard-Barton 1995). Neck & Manz (1994) agree. They say that in a dialogue, structure of collective consciousness will happen. According to Weick (1995), what happens in relations like these is that some kind of a group culture starts to develop where there is unspoken interpretation and roles of how individuals act to be able to be understood by others and themselves as a group.
An important part in temporary learning project is the fact that there is a need to start to think differently than before. deBono (1990) would call this new way of tackling problems lateral thinking or creative thinking. To be able to change the course of thinking there is a need for enablers in the form of project leaders that can help members of the temporary organization to challenge old thoughts. Söderström (1996) and Leonard-Barton (1995) suggest that if there is going to be a collective learning, those involved must have a role through their own initiative. The study supports this but we need to add strong leadership as a form to keep the project focus on track.

Organizational learning is of three different levels: individual, group and organizational (Crossan, et al. 1999) with four specific general processes: intuiting, interpreting, integrating and institutionalization.

Intuiting is when participants, individually, start to discover that there is probably something wrong (or that something can be done better) within their organization that they had not seen or understood before. It is a conscious process that occurs through the development of cognitive understanding that comes about through discussions with others, i.e. interpreting new information. To be able to understand that collective learning has taken place, new concepts and understandings must be integrated within the group. The last issue discussed by Crossan et al. is how the process can be institutionalized. This process, the authors say, has to do with intra-organizational learning but not inter-organizational learning, a finding this study supports.

In all communication where the aim is to learn something, learning must not be confined to individuals. It is important that issues are discussed openly by all and the aim of the communication should be joint understanding (Cannon-Bowers and Salas 2001; Ohlsson 1996; Wilhelmsson 1998). It is important to get shared cognition within the group if there is going to be a cognitive learning. Shared cognition (Cannon-Bowers & Salas 2001) is based on the understanding that there is a built-in understanding among participants.

The discussion of organizational learning has had its focus on the focal organization (cf. Dixon 1998; Argyris & Schön 1978). In this study the framework of analyzing inter-organizational learning is similar to analyzing intra-organizational learning. In intra-organizational learning there is always some kind of power relations and structural aspects that can influence how learning moves from being individual to group and then organizational. This study points out that inter-organizational learning needs to focus more on agreement by the participants. If there is not an agreement there will be no joint understanding towards different issues.

This study also points out that transparency of information is necessary if something is going to happen. But transparency can be seen in different levels. Firstly, it must be a clear agenda of how to carry out the project and so that the participants grasp the real focus of the project. Secondly, transparency between the participants needs to be high before creating shared cognition. Accordingly,
more understanding is necessary early in the learning project. Those managing such projects need to know better their participants’ problems.

To summarize this study supports the fact that learning is socially constructed and occurs as part of a cognitive process. To be able to understand what is discussed has to do with making sense of what is happening around us (cf. Weick 1995). Also from an organizational learning perspective this study has showed that participants need to build up some kind of trust before being able to discuss and agree on issues they regard as important to them or reject issues that they believe to be of a sensitive nature or of no interest.

This study shows strong similarities between intra-organizational learning and inter-organizational learning. There is a need to make meaning accessible to others in the group. But in inter-organizational context that does not have any visible hierarchy or power structures, there is a need to create in-group mentality before being able to create joint understanding.

7.5 Future research

It is obvious that today we are seeing more and more collaboration between companies. For SME’s that do not have superfluous of resources collaboration should be, if it already is not, high up on their strategic agenda. Collaboration is always about learning and joint understanding. By following this learning project, listening to lectures and discussions this understanding has strengthened. Most often when organizations are discussing collaboration it is not done in a learning project like this krAft project. Based on this understanding it seems to be natural to study collaboration projects where companies start to work with each other. This could be done by using the same model that has been presented in this thesis, looking at the collaborative project as a temporary organization by focusing on communication and agreement to understand the creation of joint understanding. When seeing a project as merely a composite of companies then the theoretical discussion of power need to be added.

Another research area to pursue is the teaching the academics carried out and the help the tutors and consultants offered. The study shows that there is a significant difference between the way the tutors and the people from the academia approached the krAft project. It is obvious that we need to learn more about those differences. Two things are important; firstly the academics accused of causing too many problems. Secondly, the tutors were accused of using simplified solutions with little consideration of the world of the problems they discussed. There is a need to study the way academics work on the one hand and the way the tutors and consultants worked on other hand. This could be done by conducting two parallel studies using the learning model. These two studies need then to compare both the process and the outcome of the teaching
7. Learning in a learning project

and how the participants interpret the project’s usefulness. Such a study will help both the academics and academia to refine their learning models.

Thirdly, it would be interesting to do a follow up study by investigating the companies that were involved in this krAft project. As can be seen from this thesis, learning can have a delayed effect. Something that is learned today does not bear fruit until some time later. By focusing on what has happened after the krAft project, more understanding could be obtained about the outcomes of a project like this. A study like this could be used to find out what the participants have learned and what they still lack. Then a new project could be established where the focus should be on the participants’ wants, i.e. clear agenda from the beginning, and not merely focusing on what tutors or people from the academia would want to deliver.
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