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Mentoring early-stage entrepreneurial learning processes and team dynamics

A case study of the Young Sustainable Impact entrepreneurship and innovation program

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PREFACE

This thesis marks the finalization of my master's degree in Industrial Economics at the Norwegian University of Life Sciences in the fall of 2019.

The study was done in collaboration with Young Sustainable Impact, which has been close to a full-time job for one and a half years. I have learned so much from this rare opportunity to deep-dive into my passion and interest for innovation, entrepreneurship, psychology and people through both in-practice work and academic studies. It has indeed been a difficult, eventful and exciting period of my life. I hope the findings and conclusions can be of value and practical use to Young Sustainable Impact and other entrepreneurship promotion programs. My intention is to test and improve my recommendations for mentors by discussing with experts, practicing entrepreneurs, incubators, accelerators and educators.

I want to thank my supervisors Tor Kristian Stevik and Joachim Scholderer for giving me freedom, deeply valuable insight, support and assistance throughout this challenging project. I also wish to convey my gratitude to friends, family and colleagues who have been there to provide feedback, emotional support and add humour to the process. In a way your help could be compared to many of the mentoring concepts I have studied, and I hope that in the future I can be there for you as well. In particular I want to thank Maja, Olav, Celine, Cyan, Halima, Aleksander and Markus for the time you spent reading through my work and giving highly valuable counsel. I also want to thank my mother, who has been a cliff both throughout my life and through this final period of studies. Finally, my best goes to all participants and mentors who shared their reflections freely and showed enthusiasm for my work. Your good values, interesting thoughts and talents combined will benefit you in your continued journeys, and I wish you the best of luck in current and future ventures.

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ABSTRACT

Business dynamism has decreased in western economies, and this has been related to a decline in the rate of entrepreneurship. Various entrepreneurship promotion programs are supported by governments and other actors to turn the trend around. However, the design of these programs is often described as a "black box", and their impact is unclear. If they are to be effective and bring the expected value to society, this must be better understood. Some key identified parts of these programs are how entrepreneurs learn, develop their teams and get help from mentors. The aim of this study was therefore to investigate how the ability of mentors in entrepreneurship promotion programs to assist early-stage entrepreneurial teams in developing entrepreneurial competencies could be improved.

A serious gap identified in entrepreneurship literature was the lack of a conceptualization that combines entrepreneurial team processes, mentoring and competency development. To address this, a qualitative explorative case study was done on the Young Sustainable Impact 2019 Global entrepreneurship and innovation program. Thematic analysis was used to analyse 15 participant interviews and 3 summary interviews with mentor pairs. A retrospective mentor-survey was used to create an overview of developmental patterns. Other sources of data were used for triangulation. Teams were analysed with regards to competencies developed, stages of the team formation processes, and mentors on functions deployed and mentoring style used.

The study found that the development of entrepreneurial competencies was affected most by the degree to which teams did four identified "required activities for development", or "RAD". Doing more "RAD" gave higher quality and frequency of experiences that could then be transformed into competencies. Further, the teams' ability to do these activities were influenced negatively by *storming* and positively by *performing* phases of team processes. Mentoring style of teams' mentors influenced how they handled phases, but also the outcomes of mentor interventions and functions. High levels of involvement combined with a non-directive and listening approach were beneficial, while the opposite was not. A non-directive and listening style was better than other styles. This was related to more reciprocity and trust in the relationship, which in turn influenced everything else mentors tried to do.

A preliminary mentoring recommendation framework was made based on the findings. It can be beneficial for incubators, accelerators, entrepreneurship education programs and similar contexts that use mentoring schemes for nascent entrepreneurs, including Young Sustainable Impact. By helping entrepreneurial promotion programs empower entrepreneurs and mentors, they can become more resilient to economic complexity and revive business dynamism.

SAMMENDRAG

Næringslivet i vestlige økonomier har blitt stadig mindre dynamisk. Dette har blitt relatert til en synkende grad av entreprenørskap. Myndigheter og andre aktører har økt støtten til entreprenørskapsfremmende programmer for å snu trenden. Designet av slike programmer er derimot ofte beskrevet som en «black box», og effekten de har er uklar. Dersom de skal være effektive og bidra med den forventede nytteverdien til samfunnet er vi nødt til å forstå dette bedre. Noen identifiserte nøkkeltemaer i programmene er hvordan entreprenører lærer og utvikler seg, hvordan teamene utvikler seg og hvordan de får hjelp fra mentorer. Studiets formål har derfor vært å utforske mulige nye sammenhenger som kan bidra til å forbedre mentorens evne til å hjelpe tidligfase entreprørielle team i deres kompetanseutvikling.

Et identifisert hull i entreprenørskapslitteraturen var mangelen på en konseptualisering som kombinerer entreprørielle team-prosesser, mentorering og kompetanseutvikling. For å adressere dette ble det utført en eksplorativ kvalitativ case studie på et globalt entreprenørskaps- og innovasjonsprogram i regi av norske Young Sustainable Impact. 15 deltager-intervju og 3 oppsummeringsintervju med mentor-par ble analysert med tematisk analyse. En retrospektiv spørreundersøkelse av mentorene ble benyttet for å skape en oversikt over mønstrene i team-medlemmenes kompetanseutvikling, og andre datakilder ble benyttet for triangulering. Teamene ble analysert ut fra hvilke kompetanser de utviklet og hvordan de gikk igjennom steg i team-prosessen, mens mentorene ble analysert på utførte funksjoner og benyttet stil.

Resultatene indikerte at den entreprørielle kompetanseutviklingen ble sterkest påvirket av hvor ofte teamene gjorde fire identifiserte «nødvendige aktiviteter for utvikling». Å utføre flere av denne typen aktiviteter ga høyere frekvens og kvalitet på erfaringer, som så kunne bli bearbeidet til kompetanser. Teamenes evne til å utføre slike aktiviteter ble påvirket negativt av *storming* faser og positivt av *performing* faser i team-prosessene. Stilen benyttet av teamets mentorer påvirket både hvordan de håndterte fasene og utfallene av innblandinger og funksjoner mentorene utførte. En mentor-stil med høy involvering og lytting og lite retningsgivning var vesentlig mer gunstig enn motsatt, blant annet grunnet bedre tillit og gjensidighet i mentoreringsforholdet, som igjen påvirket andre ting mentorene forsøkte å gjøre.

Et tidlig rammeverk for anbefalt tilnæring til mentor-rollen ble laget ut fra funnene i studien. Forhåpentligvis kan det være nyttig for inkubatorer, akseleratorer, entreprenørskapsutdanninger og andre kontekster som benytter mentorering for tidligfase entreprenører, inkludert Young Sustainable Impact. Til syvende og sist kan det bidra til at entreprenørskaps-fremmende programmer i å gjenskape et mer dynamisk næringsliv.

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1. Introduction

1.1 Background and objectives

Entrepreneurship is a topic that has enjoyed increased attention in academia, industry and politics in the last decades. A recently published Dutch study (Naudé, 2019) discussed a surprising decline of the rate of entrepreneurship and therefore business dynamism in western economies due to increasing complexity. This rather surprising observation, which countered most assumptions of other research until now, was associated to lower labour productivity growth and increased income inequality[1], which in turn might be part of the explanation for increased social and political instability in western economies. As an example, Amazon has overtaken a lot of the shopping and logistics industries and have kept pushing for lower wages and less worker rights (The Guardian, 2019). Simultaneously the trust to the US government has decreased from 73% to 19% from 1970 to 2015[2] (Naudé, 2019). Naudé (2019) also concluded that the lack of dynamism is likely to leave the economy more at risk of stagnation, vulnerable to shock and less adaptable to external change factors.

As our economies grow larger and more advanced, barriers to entrepreneurship intensify. The literature has explained that main reasons are slower population growth, increased market concentration, more "zombie-firms" that do not create value and struggle to exist, less diffusion of knowledge and complex business regulations. The US rate of entrepreneurship for example has halved since 1970, and it takes 70000 pages of instructions to explain the federal tax system (Naudé, 2019). However, these reasons did not in themselves explain why lower business dynamism was constrained to economies with higher gross domestic product and increased economic complexity. Adding to existing literature, Naudé (2019) added that negative effects of larger scale economies, lower aggregate market demand for products and changes in energy costs also affects this development. Consequently, there is a greater need for innovation and entrepreneurship if the business dynamism is to return[3].

There is evidence that many are already working to turn this trend around, including the EU (European Commission, 2013; Bone et al., 2019). A prominent example is how Norwegian politicians have increased support and recognition of organizations that promote and stimulate innovation and entrepreneurship to, amongst other things, counteract the future decline of the oil industry and to bring

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[1] Naudé (2019) argues that this is a result of increased power and concentration of incumbent companies and their ability to drive wages down across firms. Market concentration increased across 75% of industries in the US in the past decade.
[2] Silicon Valley billionaires are also worried about the arising social issues and lack of socially sustainable growth (Jaffe, 2019).
[3] Effects of less business dynamism is still unclear, and its desirability unknown. Sustainability and job stability might benefit from less business dynamism. The referenced article provides a better view of this discussion (Naudé, 2019).

about new technologies to solve sustainability challenges (The Norwegian Government, 2015; Innovation Norway, 2018). Examples of such organizations are accelerator or, incubators like StartupLab, Katapult Accelerator or Young Sustainable Impact, or universities with entrepreneurship education programs like NTNU[4] and NMBU. They are financed accordingly both with public money, for example through various funding schemes done through Innovation Norway, and through private investors like venture capitalists or business angels[5] (Innovation Norway, 2018).

If these organizations are supposed to have a substantial effect to counteract the diminishing economic dynamism, they must also be effective and add a high amount of value to the economy and society. Despite increasing popularity with both policy makers and other proponents, and start-ups themselves describing accelerators and incubators as significantly important to their development, most studies have had trouble finding robust evidence of their impact (Bone et al., 2019). Furthermore, the majority of research either on accelerators and incubators or entrepreneurship education programs treat the program design as a "black box"[6]. Those who have attempted to look inside the "black boxes"[7] have usually limited their examination to what *existing* measures provide effect rather than investigating why they work or not or finding other possible mechanisms and improvements (Bone et al., 2019). This makes it difficult to do solid research and thereby develop these promotion programs further to make sure they work and serve the purpose they are meant to.

Nevertheless, accelerator and incubator programs are centred around certain topics. They commonly work on idea and business model, team, topic-based coaching, funding, network and so on (Bone et al., 2019). In addition, they make an effort to guide the entrepreneurs' success and development through mentoring. Variation of practice however makes it difficult to study program design functionalities across contexts and with larger sample sizes (ibid.). This issue is similar for research on entrepreneurship education programs, which aims to prepare students for what it means to be an entrepreneur and make more people choose the entrepreneurial way after finalized studies (Lackéus, 2013).

It is typical that business angels are involved with accelerators, incubators and university environments. However, these investors often place more emphasis on the team than the business idea and business model (Smith, 2017). The entrepreneur-teams, their competencies, motivations and ability to grow as individuals is viewed as a stronger indication on whether the execution and new

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[4] Norwegian University of Science and Technology and Norwegian University of Life Sciences
[5] Business angels are smaller-scale investors that often invest in very early-stage ventures and who assist the company with expertise and network (Von Osnabrugge, 2000)
[6] A «black box» is a fiction that is made to understand the behaviour of a system based on inputs and outputs when one does not know what concepts make up the system and how they are related (Bunge, 1963).
[7] The challenges are different based on whether you consider entrepreneurship education or accelerators and incubators

venture creation will succeed in the end, as most ideas change with time[8] (Smith, 2017; DeMers, 2018). Yet, entrepreneurship research lacks integration and understanding of the entrepreneurial team despite its apparent importance. Furthermore, how accelerators, incubators and even education programs can best *assist* and mentor the development of these individuals and teams is under-researched as well (McKevitt & Marshall, 2015). If the intention is to bring back more dynamism to the economy through entrepreneurship and its support organizations, more must be known about how these concepts function and affect each other.

1.2   Problem statement

The aim of this thesis is to get a better view of possible connections and mechanisms within and between how entrepreneurs and entrepreneurial teams develop and how one can assist this development through early-stage mentoring. Entrepreneurs learn by going through processes themselves, understanding how to make their own decisions and run their own business'. The study consequently investigates the developmental effects they experience from mentoring and team processes through their perspective as "learners". The problem statement is as follows:

"How can mentors' ability to assist the development of entrepreneurs and their teams in entrepreneurship promotion programs be improved?"

The problem is investigated in the context of the 2019 Global innovation and entrepreneurship program run by Young Sustainable Impact. The goal of this program is for participating teams to start from scratch with an assigned team of young international talents and end up with a new-venture that has a customer-validated solution[9] and a well-functioning team. This context is further explained in chapter 2.5. Through the investigation of this interesting program, the study will hopefully contribute valuable insight as to how such promoters of entrepreneurship can develop their way of supporting development of entrepreneurs and entrepreneurial teams through mentoring.

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[8] Youtube for example started as a dating service, and many other big brands have changed their ideas (DeMers, 2018)

[9] The program emphasises social entrepreneurship through methods used in most innovation and entrepreneurship environments (Schneider, 2017)

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2.   Theoretical framework

This chapter will review theories and empirical studies from three fields of research that are relevant to the problem. It will introduce theoretical frameworks and concepts within entrepreneurial learning and competency development processes, team formation processes and nascent entrepreneurial mentoring. Together, they make the basis for the conceptualization used in this thesis.

2.1   Entrepreneurial learning processes

The art of creating successful new business has been a key theme through most of modern human history. The ones who make it are often hailed as the heroes (or sometimes villains) of society. Names like Steve Jobs, John. D Rockefeller, Coco Chanel, Elon Musk and Bill Gates are widely known, recognized and viewed as major shapers of their time through their business ventures. They all started out as entrepreneurs. The other side of this coin is that most start-up companies fail (CB Insight, 2019). It is easy to see that both the risks and rewards in the context of innovation and entrepreneurship has made it an attractive field to both academics and business-people and others.

The individual-based focus on successful people also played out in academia's attempts to capture and distribute knowledge of why these people succeeded in the first place. The centre of gravity in entrepreneurship research before the shift of the millennium lay mostly on either trying to define common character traits of innovators, or on formalizing the operational methods they were using. Both approaches explained entrepreneurship from a static viewpoint (Lackéus, 2018), which created a rigid framework for entrepreneurial performance across a whole variety of contexts and disciplines, without considering the constant changes of this world. Early entrepreneurship research therefore struggled to integrate suggested theories and frameworks with the huge variety of entrepreneurship processes, maintaining focus on trying to describe who a successful entrepreneur *is* rather than who this person *becomes* through a process of learning, growth and evolution of approaches used (Gartner, 1989; Rae, 2000; Sarasvathy & Venkataraman, 2011; Wang & Chugh, 2014).

Entrepreneurial learning (EL) has since evolved as a field where an increasing number of researchers attempts to explain this complexity by looking at the combination of the entrepreneurship and personal learning processes over time (Cope, 2005; Wang & Chugh, 2014). In addition, the field looks at the phenomenon of EL as not only experiential, but as contextual and social where the entrepreneur evolves through processes of co-participation and co-creation (Cope, 2005). As an example, Gibb (1997) argued that learning needs to occur from interactions with the external context in which the entrepreneur is situated, and through sharing new learnings within the organization itself.

Other researchers have argued that an entrepreneurial learner can benefit from being exposed to ambiguity through international co-participation (Kubberød & Pettersen, 2017). By this directional change, the field is acknowledging the complexity of reality, and that people can grow and change both their approaches and their being through learning and interaction.

2.1.1 To be an entrepreneur

The concept of being an entrepreneur can be viewed from several different perspectives. The literature commonly uses two definitions of the term. A narrower definition has often been applied that relates the entrepreneur primarily to creating and growing a new venture (Lackéus, 2018). Others have expanded this into what can be understood as developing a business model, gathering and managing necessary resources, being self-employed and having the overall responsibility for the success or failure of the venture (ibid.).

On the other hand, entrepreneurship has been described in a broader, more abstract sense with regards to opportunity creation or recognition and the following exploration or exploitation (Wang & Chugh, 2014). Some researchers how changes should be made to theory to better explain how these could be exploited, due to older entrepreneurship research focusing too much on economic equilibrium theories that were not fit to explain entrepreneurship (Shane & Eckhardt, 2003). Other researchers argued that one can also create and develop opportunities (Ardichvili et al., 2003), describing entrepreneurs as resourceful individuals that decides their actions based on available resources, network and so on (Sarasvathy et al., 2003). In comparison, identifying and recognizing opportunities has generally been related to an analytical, problem solving approach (ibid.). Opportunities in entrepreneurship has been a controversial and heavily-debated issue for decades, and this thesis will not attempt to account for the whole discussion. In any case, these concepts together make up a wider definition of entrepreneurship that shifts the focus over to what it means to be entrepreneurial, i.e. developing oneself as a person with regards to mind-sets, skills and abilities like self-reliance, action-orientation, proactivity and creativity (Lackéus, 2018) so one can better understand opportunities regardless of their nature.

Another definition of entrepreneurship has recently been driven forward by researchers who explain the entrepreneur as primarily being a value-creator for themselves and their context (Fayolle, 2007; Lackéus, 2018). In the context of entrepreneurship education research, Lackéus (2018) defined a temporary term for this new approach as "value-creation based entrepreneurship education" (ibid.). In relation to this approach, the definition of entrepreneurship could be given as "new value creation

for others and oneself", describing the main goals of an entrepreneur – the essential part of why they initially dare to venture into the risks and rewards it entails.

Sarasvathy and Venkataraman (2011) argued that understanding entrepreneurship in itself as a phenomenon affected by economics, logistics and lots of other factors is unfounded: *"Until now, for the most part, we have focused on entrepreneurship as a phenomenon and we have tried to understand how to create the conditions for good entrepreneurial performance whether at the firm level or at the societal level. That is akin to asking "What explains the discovery of penicillin or plate tectonics" […] Only as we study and understand what these people actually do that a more accessible pattern emerges that can then be codified and taught and propagated widely enough to become a viable tool of value creation writ large."*. They say that one can consider entrepreneurship as a method, similar in style to the scientific method, and that people can learn to use this as an approach to solve problems and create value (ibid.). This can be considered in line with the focus of entrepreneurial learning literature on what the entrepreneur does and how they grow.

For the purpose of this thesis, entrepreneurship will be defined in line with the value-creation based approach, but also taking into account the other dimensions, as: "Creating new value for others and oneself through exploring and exploiting opportunities with venture knowledge and skills in a relevant context".

2.1.2   Entrepreneurial learning and entrepreneurial competencies

Researchers stated already in 2001 that "entrepreneurship is a process of learning, and a theory of entrepreneurship requires a theory of learning" (Minniti & Bygrave, 2001). The field of research on entrepreneurial learning mainly revolves around theories of experiential learning, cognitive-affective learning and networking learning (Man, 2008). The theory of experiential learning was the most central in EL research for a long period (Wang & Chugh, 2014), and was first and foremost described through two dimensions: Diverging versus converging and action versus reflection (Kolb, 1984). Many scholars have since formed a consensus that the centre point for learning in the entrepreneurial setting is anchored in how the individual entrepreneur learns through experience or through observation of others and their external context (Wang & Chugh, 2014). Some have also attempted to view entrepreneurship through the theoretical lens of organizational learning. The field of entrepreneurial learning has shown to be fragmented, with lack of clarity on how the term itself should be defined and consensus on what it fundamentally entails (ibid.).

Several contemporary frameworks for EL have been made. Pittaway et al. defined seven dimensions that affect EL processes (Pittaway & Cope, 2007; Pittaway et al., 2011). Summarized, they

suggest that learning happens through "action orientation and experience", "mistakes, crises and failures", "reflection on experience", "opportunities and problem solving", "uncertainty, ambiguity and emotional exposure", "social practice and social engagement" and finally "self-efficacy and intentionality". These were specifically made for exploring the role of social entrepreneurship clubs and their effect on EL and have since been utilized by many researchers in other contexts (Wang & Chugh, 2014; Kubberød et al., 2018).

While the seven dimensions for EL cover many important factors, the framework mixes what an entrepreneur does that triggers learning, what characterizes the learning process and what the output is of said learning. For example, it is agreed upon that learning-by-doing, experiencing critical events and reflecting upon experience are necessary practices that situate experiences which can later be crystalized as knowledge through various modes of transformation (Kolb, 1984; Politis, 2005). Mistakes and crises could be argued to be a possible and likely part of the process, but it would be strange to categorize it as a "learning outcome". On the other hand, self-efficacy and intentionality are aspects of the mind that are bound to the motivation of a person and would likely change through the previously mentioned practices.

Some researchers have made a point of this lack of separation between components of EL and attempted to change the focus over to development of entrepreneurial competencies (EC) (Man, 2008). A previous study done by him and others on long-term SME performance defined EC as "the total ability of the entrepreneur to perform a job role successfully" (Man, et. al, 2002). The components of the construct were defined as (a) inputs as in characteristics pre-ceding competencies, (b) tasks or behaviours leading to a change in competencies, (c) outcomes of achieving new standards of performing in different functional areas of the job role and (d) organizational and environmental factors affecting development of competencies (Man, 2008). While not entirely in line with the link Man (2008) did between EL, EC and performance, Lackéus (2013) recently developed a knowledge, skills and attitudes (KSA) framework that also addresses the development of EC. Drawing upon the work of several previous researchers, he expanded a training evaluation framework from psychology to make it better fit the entrepreneurial context (Kraiger et al., 1993). Table 1 summarises his framework.

Table 1. The defined knowledge, skills and attitudes required to set up new ventures and "be" entrepreneurial (Lackéus, 2013).

Term	Meaning
Knowledge	- Mental models for entrepreneurial activity
	- Declarative knowledge for entrepreneurship and self-insight
Skills	- Opportunity
	- Marketing
	- Resource
	- Interpersonal
	- Learning
	- Strategic
Attitudes	- Entrepreneurial passion
	- Self-efficacy
	- Entrepreneurial identity
	- Proactiveness
	- Uncertainty/ambiguity tolerance
	- Innovativeness
	- Perseverance

In Lackéus' (2013) description of the KSA framework, he also includes some reference to the earlier dimensions of Pittaway et al. (2011) despite re-framing them around the development of competencies. Learning-by-doing, as in action-oriented learning, remains and is perhaps even more of a core factor in the EL process of Lackéus (2013) than what it was in the seven learning dimensions. Self-monitoring, reflection and other types of metacognition is still considered a vital part of learning to be both an entrepreneur and to be entrepreneurial, shown through the framework and multiple models he has created for entrepreneurial education research (Lackéus, 2013; 2014; 2015; 2018). This is in line with previous research on the field (Rae, 2000; Minniti and Bygrave, 2001; Cope, 2005; Pittaway and Cope, 2007).

While the term "attitude" has been utilized in many contexts to describe a more personal and affective part of learning outcomes (Kraiger et al., 1993; Minniti and Bygrave, 2001), the concepts that are defined by Lackéus (2013) within this term could not necessarily be represented as attitudes. In the field of psychology, the concept of attitude is normally defined as an evaluation of a certain

object that in turn affects thoughts and actions[10]. In other words, what one views as good or bad. A better term would be motivational factors. This will be used to make precise the KSA framework, hereby defined as KSM.

Lackéus attempted to evaluate the development of entrepreneurial competencies through looking at the prevalence of critical and emotionally laden events and processes in an action-based entrepreneurship education program that requires students to start and create real ventures (Lackéus, 2014). He found empirical links between the practice that leads to emotional events, which in turn is shown to be key factors in developing specific entrepreneurial competencies. The strongest connections were found between emotional events and development of the (now re-named) attitudinal dimension, namely increased self-efficacy (belief in oneself as an entrepreneur) together with increased uncertainty and ambiguity tolerance. In addition, cognitive self-insight improved heavily, related to the knowledge dimension. One could also observe links between events and development of several other competencies. Figure 1 illustrates his results.
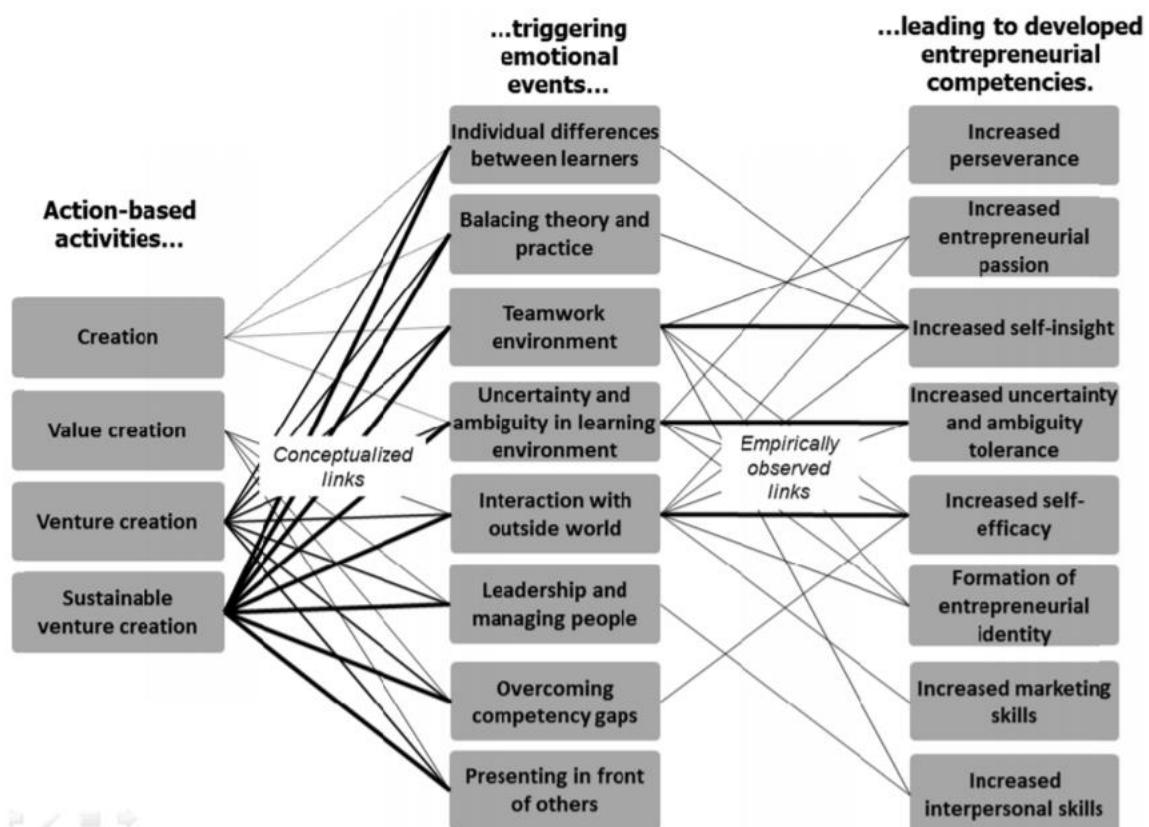
Figure 1. Conceptual and empirical links in the entrepreneurial competency development process (adapted from Lackéus, 2014, p. XX; © Elsevier B.V., 2014)

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[10] See dictionary (*The Oxford English Dictionary*, 1989)

It should be mentioned that the findings were done through an exploratory, mixed methods approach, and as the author himself mentions, the transferability to other environments is unknown (Lackéus, 2014). However, the findings made are relevant to illustrate the point that underlying reasons for changes in competencies, while acting in an uncertain and entrepreneurial context, are strongly connected to the emotional processes that the individuals and teams go through. This shows the relevance of investigating what lies underneath the surface of developed competencies rather than simply tracking that they do change in the first place.

Summarized, entrepreneurial learning will in this thesis be viewed as a process based on doing actions, getting experiences and then transforming those into KSM (knowledge, skills and motivational factors) competencies that are necessary to perform a certain job role in the entrepreneurial context. The resulting increased entrepreneurial competencies are outcomes of the entrepreneurial learning process. Individuals experientially develop them through value creation in social practice and social engagement internally in teams or with external stakeholders and networks. Changes can occur through both incremental, continuous learning from general experience, reflection and self-monitoring, or through transformational learning based on critical events laden with positive or negative emotion.

2.2 Group formation processes in entrepreneurial teams

Entrepreneurs have traditionally been viewed as lone heroes in much of the academic research and popular media (Cooney, 2005). However, Cooney (2005) points to the fact that increased attention has been given to research on entrepreneurial teams, as many researchers suggest fast-growing firms to be either founded or managed by more than one person. He also provides reference to other researchers that were the first ones to show the more complex reality behind successful firms, with an example being Apple, which was driven forth not only by Steve Jobs but also Steve Wozniak and Mike Markkula (ibid.).

The role of the team has been emphasised in the early stages of the venture (Harper, 2008). Researchers have argued that team-based companies are more oriented towards growth and internationality than other firms due to more varied and complementary skill-sets and knowledge, allowing them to more effectively specialise and divide responsibility and risk (Hytti et al., 2010). In a context of learning, teams are therefore likely to positively affect learning outcomes (ibid.).

2.2.1 Entrepreneurial teams

Movements in academic research on entrepreneurial teams varies in focus from simply looking at the benefits of combining talents to looking at more fuzzy concepts like friendship and trust (Cooney, 2005; Mach et al., 2010; Klotz et al., 2014). Cooney (2005) argues that while the importance of teams in entrepreneurship cannot be ignored, the field suffers from a lack of concrete definitions of what a team is in the entrepreneurial context. While some researchers define it through shared financial interests and participation in enterprise development, others have looked at team cohesion (ibid.). A more recent study defined the entrepreneurial team as "*a group of entrepreneurs with a common goal that can only be achieved by appropriate combinations of individual entrepreneurial actions*" (Harper, 2008).

Still, the field seems unable to reach a consensus on the definition, even though some researchers have tried to rally various entrepreneurial team definitions under the umbrella term of "new venture teams" (Klotz et al., 2014). Before they reviewed the literature, chose to define such a team as "*the group of individuals that is chiefly responsible for the strategic decision making and ongoing operations of a new venture*" (ibid.). Other literature that is not specifically grounded in the entrepreneurial context have provided more firm definitions on what a team is. Mainly, this research comes from management theory. One professor defined a team as "*a group of people who are interdependent with respect to information, resources and skills and who seek to combine their efforts to achieve a common goal*" (Thompson, 2008). This broader definition is still applicable to teams in the entrepreneurial context and will be used in this thesis.

2.2.2 Team development

Much theory on the phases that teams go through is relatively old, established and much-cited, as exemplified by the models of Tuckman (1965) and Gersick (1989). Tuckman created the model for "stages of small group development", that was focused around four and then revised to five phases: Forming, Storming, Norming, Performing and Adjourning (Tuckman and Jensen, 1977). Gersick (1989) later formulated the theory of punctuated equilibrium, in which teams have to get past the conflict that arises at a midway-point in their process in order to overcome early inertia. A recurring theme in more recent studies on team development is that conflict and cohesion influence the ability of team members to perform and be satisfied in their work over time. (Tekleab et al., 2009; Klotz et al., 2014). However, the specifics of their interrelation are hard to consider in situations where they might be operating in tandem (Tekleab et al., 2009).

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Researchers have also found another interesting aspect that talks to the type of conflict that arises. Tekleab et al. (2009) categorizes research on teams in two different viewpoints. The first perspective is concerned that the initial benefits of conflict diminish quickly as team cohesion suffers, and that conflict therefore should be avoided. The other perspective revolves around the positive effect on task conflict on team effectiveness compared to the negative effect of relational conflicts (ibid.). In simpler terms, teams that keep things professional and not personal when it comes to conflicts are more likely to perform well. However, he argues that both of these strands have studied the types of conflict and team cohesion in isolation, and without looking at longitudinal data, which makes it hard to conclusively say how these concepts relate (Tekleab et al., 2009).

For simplicity, and since most of the models on team development bear many similarities to the one defined by Tuckman and revised by Tuckman and Jensen (1977), this thesis will utilize his model. The phases of the Tuckman model are grounded in two realms: Interpersonal and task. The interpersonal realm covers how team members act and relate to each other, while the task realm revolves around the content of interactions related to the task at hand. Both realms are simultaneous functions of a group, as members complete tasks while having to relate to each other. The stages of development within both realms corresponded to the level that they were possible to place under the same umbrella terms, creating the conceptual Tuckman model (Tuckman and Jensen, 1977). For the purpose of the thesis, the final stage of adjourning is not of relevance as the teams are not meant to stop working during or post-program. Therefore, only the original four stages are described and used. These are described in Table 2.

Table 2. Description of the stages of small group development (Tuckman & Jensen, 1977).

Stage of development	Definition
Forming	Initial meetings, group concerned with orienting themselves and testing the environment. Individual evaluation commences on the boundaries of task and interpersonal behaviours. Dependency in relations are established between members and other relevant members in the context, and with eventual standards that are set.
Storming	Characterized by various forms of conflict. Some may develop emotional responses to task demands or conflicting viewpoints on the task at hand, others may end up in intragroup relational conflicts. Such behaviours limit mutual influence in the group and create barriers to being effective in achieving task requirements.
Norming	Resistance from the previous phase is overcome, leading to stronger group cohesiveness, new group structures and roles and relevant interpretations of situations are exchanged.
Performing	The improved interpersonal structure provides energy that is channelled into the work on tasks. Roles become more functional and flexible, and structural issues have been resolved and is rather supportive of performance.

2.3   Entrepreneurial mentoring

Practicing entrepreneurs, policy-makers and academics alike have shown interest in the tool of mentoring in the entrepreneurial learning process (Gravells, 2006; McKevitt & Marshall, 2015; Kubberød et al., 2018; Bone et al., 2019). Despite this, there have been difficulties in agreeing upon how to define this concept across contexts, some being very broad and some very narrow (Crisp and Cruz, 2009). In general, entrepreneurial mentoring is quite under-researched and fragmented across contexts of both academia and early-stage venture creation (St-Jean & Audet, 2013; Kubberød et al., 2018, Bone et al., 2019). From the report of Bone et al. (2019) on incubators and accelerators in the UK, it seems that variation of practice and utilized theories on mentoring is in these contexts as well.

Some reviews have been done that compared mentoring functions observed in academia, psychology and management studies. Haggard et al. (2011) defined three core attributes of a mentoring relationship. The characterisations were that it (a) must be reciprocal and have a mutual social exchange as opposed to a one-way relationship, (b) must lead to certain developmental benefits for the mentee and (c) involves consistent interaction over time. Mentors are usually more experienced than their mentees, but generally benefit from being a mentor themselves, which makes it natural to look at the relation as a "learning partnership" (Haggard et al., 2011). One can after all learn simply by teaching. An aspect that is not considered in this definition of mentorship is the amount of involvement, and other researchers the involvement does not necessarily turn out to be consistent throughout different mentor or coaching relationships and can therefore not be assumed (Couteret and Audet, 2012). It would be reasonable to expect that this has an important effect on the outcome of a mentoring process.

Another much-cited literature review on the definition of mentoring found specific mentor functions that characterize such a relationship (Jacobi, 1991). These are visualised in Table 3. The definitions are relatively similar to those of Haggard et al. (2011) but focuses partly on different aspects of the same conceptual process. This thesis will define mentoring as: "A relational and reciprocal process where an individual helps another less experienced individual to develop personally and professionally". Such a process will lead to a different outcome for the mentee than where they started off. This is aligned with the definitions of entrepreneurial competency development in the previous sub-chapter.

Table 3. Mentoring functions of Jacobi (1991)

Mentor function
Assisting personal growth
Direct assistance on professional development
Role modelling
Emotional and psychological support
A personal and reciprocal relation

Literature on how Entrepreneurial Mentoring affects learning outcomes and competencies of nascent entrepreneurs is hard to come by. One such study was done on an entrepreneurial mentorship program in France (St-Jean & Audet, 2012). Like the one of Lackéus (2013), this study also built on the framework of Kraiger et al. (1993) and found connections between the cognitive and affective learning outcomes of the nascent entrepreneur and their mentoring journey. Cognitive and affective learning are practically the knowledge and attitudinal parts of Lackéus (2013) KSA framework. However, what the KSA framework did differently was to develop the "skill" section of the framework to be better adapted to the entrepreneurial context. As such, the research done by St-Jean and Audet (2012) is likely to have missed out on important data connections between skill-based learning outcomes and the mentoring relationship. Nevertheless, their study gives good indications as to the fact that mentoring does have a strong effect on the mentioned learning outcomes.

According to Kubberød et al. (2018), there are also other studies that focus on areas similar to entrepreneurial mentoring, but these often study businesses and ventures that are further in their process than nascent entrepreneurs, and that these focus on performance and success through increased skills and self-efficacy while excluding some other entrepreneurial learning dimensions.

While mentors have been described here through what functions they perform and how they affect learning outcomes, a few interesting studies have viewed mentoring style as a key mediator of how functions and relationships outcomes turn out. St-Jean and Audet (2013) did a study where they hypothesized and tested the effects of mentoring style on nine mentoring functions with regards to their *level of involvement* and *directivity of approach*. Specifically, they looked at the difference in directiveness by separating between a maieutic and directive style of interaction. In simpler terms:

Whether the mentor listened actively and asked good questions or gave concrete and direct instructions on what they felt the mentees should do. As the term "maieutic" is very uncommon, this thesis will describe it as a "non-directive and listening" approach.

The French study was done based on the work of Gravells (2006), who hypothesized that mentoring relationships would be most profitable when the mentor used a non-directive, listening approach combined with being highly involved. On the other end of the scale, he suggested that a relationship where the mentor used a directive, disengaged approach would grow to be toxic and provide little effect. The two other possible combinations were described as risky with regards to the outcome for the entrepreneur mentee. Their findings gave empirical evidence to support the hypotheses: A non-directive and listening approach with high involvement consistently increased the deployment success of mentor functions and led to increased mentee satisfaction, while a directive approach combined with low involvement led to very poor effect. Interestingly, the approaches of disengaged non-directive mentors and involved directive mentors provided quite similar results and were semi-effective, suggesting that the two dimensions carry a somewhat similar effect across different mentoring functions (St-Jean and Audet, 2013).

While this is one of the few studies that explores this specific combination of topics, the dimensions are echoed throughout some other coaching and mentoring literature (ibid.). According to St-Jean and Audet (2013), and Kubberød et al. (2018), authors like Odell, Vonk, Cullen and Barlow and Crasborn et al. have described the level of directiveness as an important factor in mentoring relationships. St-Jean and Audet (2013) also explains that many researchers place a critical focus on mentor involvement level for getting good results out of the relationship. This shows that these two dimensions are particularly interesting to look at when researching the field of entrepreneurial mentoring.

2.4 Research questions

The review of theory and empirical studies have shown that the three considered fields are either quite early-stage or fragmented. Some initial concept development has been done within entrepreneurial learning, entrepreneurial competency development and early stage entrepreneurial mentoring (Pittaway & Cope, 2007; Man, 2008; Lackéus, 2013; St-Jean & Audet, 2013; Kubberød et al., 2018). However, serious gaps have been identified in the literature. First and foremost, team formation processes in the entrepreneurial context are quite under-researched, and entrepreneurial learning also lacks integration of this aspect. Moreover, there is of yet no conceptualization of how team formation processes and mentoring interact in influencing entrepreneurial competency development. This is problematic when considering the importance placed on team and mentoring in this context, as discussed in chapter 1.1. The identified gaps led to the following research questions:

RQ1.   How do team processes affect the development of entrepreneurial competencies?

RQ2.   How do mentors affect the development of team processes?

RQ3.   How do mentors affect the development of team members' competencies?

In the empirical research reported in this study, connections between these processes will be explored and investigated in detail. Results will be analysed with regards to entrepreneurial competency development, stages of team development, mentor functions and mentoring style. Figure 2 visualizes the aspects researched in the study and the connections between them.
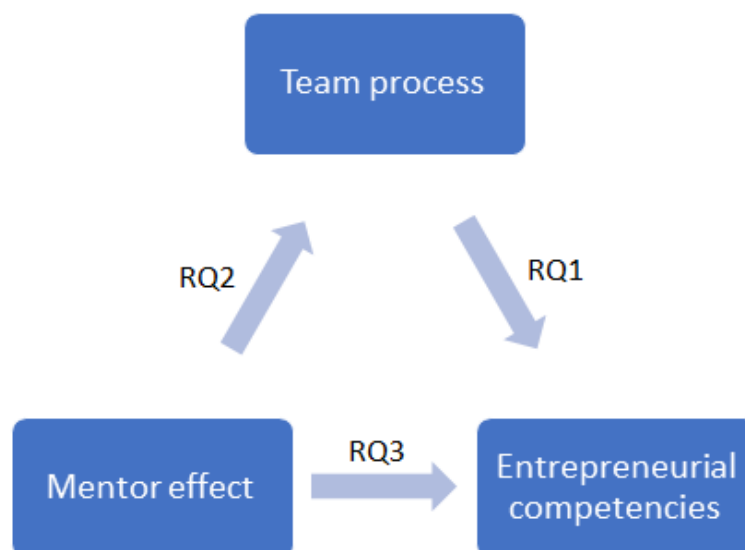
Figure 2. Visualisation of the investigated connections between research questions

2.5   Case context

To generate empirical data for answering the problem statement and research questions, the 2019 YSI Global innovation and entrepreneurship program run by Young Sustainable Impact was studied. The organization was founded in 2016 and is based out of Oslo. From the first to the second year of its existence, YSI went from 50 to 10029 program applicants worldwide. Since then, global programs have been run annually and three new local and regional programs were set up in East and South-East Asia. The organization also works with several Norwegian businesses and organizations[11].

The goal of the program was to create economically viable new ventures from scratch, assigning carefully selected international talents to work remotely in teams within certain topic areas and helping them develop a customer-validated solution and a well-functioning team. One could explain YSI as a solution-generating virtual incubator or a compressed online entrepreneurship program. 25 talented individuals between 16 and 28 years of age were chosen each year to be a part of the program.

The applicants have traditionally been young entrepreneurs or domain experts, selected and placed into teams based on various criteria ranging from motivations, interests and values to skills, experience and time availability. Participants were working together for 4,5 intense months online, from March to August, and ending the effort by spending two weeks in Oslo in an accelerator type of environment, meeting investors and potential customers. Teams are followed up by internal YSI mentors.

The program uses well-known theories and practitioner literature on entrepreneurship, teams and leadership. Together these make up four modules of the program, which are (a) Team and individual, (b) Understand (research phase), (c) Solution (idea-generation and business model development) and (d) Build (marketing, finance etc). The combination of Design Thinking, Lean Start-up, Business Model Canvas and Agile Methods is central, and is widely used in entrepreneurship and innovation context, focusing on understanding the customer and how to create and validate solutions. (Schneider, 2017). The content of the program, while not the topic of this thesis, is created to help those who lack entrepreneurship experience to close their knowledge gaps. There is also a strong initial team-building phase that all teams go through since they are assigned to their team-mates. This is founded in literature on leadership, self-awareness and collaboration, and uses trust-building workshops based on early vulnerability. The period ends with a "test" of the team through solving a case with a corporate through what is called "Insight Factory". Each team gets $5000 from this work that they can later spend on testing and validating the solution they create.

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[11] More information can be found through https://ysiglobal.com/about

3.   Method

3.1   Methodical approach

The chosen research method for this thesis was a single exploratory case study. This qualitative approach was appropriate for capturing the "why" and the "how" of the interesting and complex situations and social processes that requires in-depth explanations (Yin, 2014). By using the case study, the thesis will be able to bring understanding of the processes and explain them in their context, which provides grounds for practical implications and further research.

3.2   Case design

The case tracked teams participating in the 5-month YSI program. An overview of actors involved in the process is provided below. The connection of mentors to teams are shown in Table 4.

Teams. The program consists of eight teams with three or four individuals. These people are put together based on a combination of factors, for example motivation and interest, general and specific human capital and previous experiences. For the case design, five teams (originally six) will be analysed where only one team consists of four participants and the rest of three. Reasons for this are explained in sub-chapter 3.3. on data sources. They are the unit of analysis for this study.

Participants. The five teams investigated consisted of 16 people, where 10 of them were part of the study. Participants were six men and four women between the age of 19 to 28 and had various backgrounds and motivations that were related to the problem area they applied to work within.

Mentors and mentor groups. There were eight internal mentors divided into groups of two, that were supposed to follow up the teams. A total of six mentors were part of the study, excluding the program manager. These people were between the age of 24-30, and the gender balance was even. They had various degrees of entrepreneurship experience, while some also had experience with political science, leadership development and leads management.

Program manager. The lead designer and main responsible for the program. In the study, this person's involvement was limited to cross-team mentoring and certain interventions due to the person mainly focusing on two teams that are excluded in the study. This is also explained in chapter 3.3.

Table 4. Overview of teams, team size and assigned mentors

| Team name	Number of participants	Mentors
Team A	Four	Mentor 1 and 2
Team B	Three	Mentor 1 and 2
Team C	Three	Mentor 3 and 4
Team D	Three	Mentor 5 and 6
Team E	Three	Mentor 5 and 6

3.3   Data collection

Several sources of data were used to produce process data both for the purpose of the study and for YSI in general. This strategic choice was made to enable triangulation between data sources to create a more comprehensive understanding of the context at hand. Some sources were collected automatically throughout the process and stored in the electronic storage systems of YSI. Other data were captured through interviews done both during the process and retrospectively. Each one is regarded as a primary source of data to the study and is described below. Relevant parts of the data available will be used to create a holistic picture of the effects laid out by the research questions.

Participant interviews. Six out of eight teams were originally selected to be part of the study. The reason for not including the other two was that these were subject to a pilot of a corporate program, where they collaborated with a larger business on specific domains from the beginning. This impacts the process to the extent that the difference in background for the team processes was too significant to cross-examine between them. One team was excluded due to ethical considerations described in chapter 3.6. Two respondents in the selected teams were randomly chosen to be part of the study, with the intention of gaining more than one participant perspective on the development of the team and competencies at the different time points. Note that there was one change to the final respondent in Team E. This was done due to availability.

Viewpoints on important aspects of their process were captured through audio-recordings of the interviews and then transcribed at a later point. Semi-structured depth interviews were conducted with a duration of 20 to 60 minutes. The focus was split between team development, competencies and mentoring functions. Some participants were more comprehensive in their answers than others and

answers could often be given to several questions at once. A focus was to attempt to not ask leading questions that might give an impression of a "correct answer" to the interviewee.

The interviews were done at three points during the program, visualized in Figure 3. They started with an introduction of the thesis topic and intention of the interview. The participants were then asked several questions in a semi-structured manner. Some questions at first aimed at getting participants to rank certain aspects and provide in-depth explanations of how this was in their context, others were more general questions that also required extensive answers. However, their rankings were not of relevance nor used for anything other than to provide context for the examples and following discussion of how the period had been for the participants.
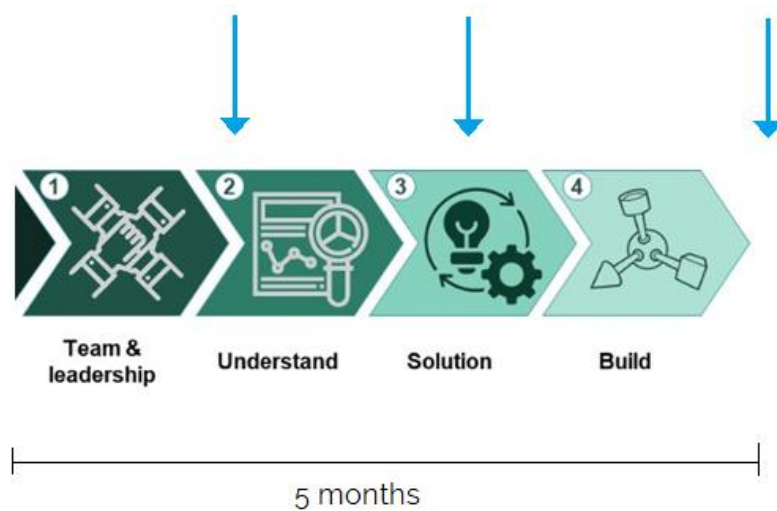
Figure 3. Timing of interviews and modules of the program

Final interviews with all participants. YSI conducted interviews of their own that were based mainly on capturing the holistic progress and perspective of their participants on the program itself and their journey through it. These include aspects that are outside the limited scope of the thesis, such as the application process, innovation program content and logistical Oslo Weeks experience. Questions relevant to the thesis are still interesting to use for providing context.

Summary interviews with each mentor group. Three unstructured interviews with a duration of approximately two hours were done with each mentor group to describe the processes of the two teams they followed. The point of this retrospective interview was to create a focused collection of other primary mentor-based data sources. Based on this a timeline of the team processes was drafted on A3 paper that could later be compared with the developmental phases of the teams. Topics were based in the research questions, namely development of competencies and team dynamics looked at with a focus on interventions done and mentoring style. The focus was on critical events and processes, which

led to interesting discussions and reflections. These interviews used the four data sources mentioned below to minimize recall bias and thereby increase validity.

Mentor journals. Each mentor wrote their own journal in which they described perspectives on various aspects of the teams. These were written as free reflections around events in the team and how they felt they handled it as mentors. A template was made with examples of focal points like body language, strong reactions, general vibes, conflicts or friction, own performance as a mentor and more.

Mentor meeting notes. Meetings were conducted every one-to-three weeks, depending on organizational workload and presence of team members, to discuss how the teams were doing, learn from each other as mentors, reflect and adjust the process. Notes were taken to capture the most relevant aspects of how well teams were doing and what could be done to help them develop further.

Outcome report feedback. After each outcome report of the teams, feedback was written down by the mentors in collaboration with the program manager and sent to the participants.

Electronic support systems. Slack was used as a communication tool to facilitate interaction between mentors, participants and everyone in the community. Includes analytics of message amount, time stamps, names and interactions. Data from Slack were used for providing context and to re-create the team process in the summary interviews with mentors. Google calendar was used as a source with the same purpose of improving the validity of answers provided in the summary interviews.

Competency development survey. To guide the interpretation of the data and make it more easy to find the interesting developments of teams and individuals, an overview was created through a survey that mapped changes in participant competencies from program start to program end. Both mentors rank the participants from high to low on the competencies at four time points, and these were placed at start, end and at the point of the interviews like Figure 3 shows. An average of their rankings is then used to create graphs of development in the teams through three periods. However, Mentor 2 did not want to rank the competencies of Team A due to lack of involvement with this specific team and the argument that it would not be valid.

The survey was based on a contextualized version of the KSM framework for entrepreneurial competencies, which was in turn based on the KSA framework (Lackéus, 2013). The knowledge category was changed to focus on knowledge and understanding of entrepreneurial tools and methods. Communication ability, creativity, decisiveness and receptivity to feedback were added to the skill category. Finally, self-awareness, and three commitment factors were added to the motivational factor category. Another part of the survey was added after these categories which included team cohesion, alignment, practical collaboration and some other factors like cooperation problem handling for contextualization. Mentors were provided with a detailed terminology definition, walked through them and were also able to ask the author if they needed clarification.

3.4 Content analysis

Processing of the data material was done through using a variant of thematic analysis. This tool is a flexible and powerful research tool that provides a way of structuring complex qualitative data material. Insights are uncovered through capturing different aspects of the analysed texts by coding them according to the theme to which they belong. In the case of interviews, an important benefit to using such a tool is that answers belonging to one particular theme can be found on questions that pre-determinedly did not intend to gather data on that theme. In other words, one can identify, sort, analyse and report connections and patterns in data across a rich data set. The process is recursive, meaning one goes back and forth through the data, and is visualized in Table 5 (Braun and Clarke, 2006).

Generated data was interrogated through use of the Tuckman model for small group development (Tuckman & Jensen, 1977), five identified mentoring functions (Jacobi, 1991) and two dimensions of mentoring style (St-Jean & Audet, 2013).

Table 5. The phases of data processing through use of thematic analysis

Phase	Description	Process
1	Familiarize with data	Interviews done on participants in the process. Initial journals done by facilitators. Facilitation meetings recorded. Transcription commences.
2	Generate initial codes	Coding and sorting of gathered data
3	Evaluation and analysis	Interview data evaluated for relevance and analysed towards critical events or processes for each theme
4	Connecting theory to data	Data connected to theory and themes in thesis
5	Accumulate and report	Final accumulated analysis compared to literature and research question. Discussion and finalization of thesis

Phase 1: Familiarize with data. The material gathered through depth interviews with participants and the summary of the facilitator journey was first audio-taped and then transcribed. The resulting work laid the foundations for further work in the thesis.

Phase 2: Generate initial codes. Transcribed material was set up in a well-organized Microsoft Excel 2016 sheet and sorted based on teams and persons. The data was then coded and sorted based on the overarching themes from the theoretical framework. The primary sources of data analysed were the longitudinal participant interviews and the summary interview with the mentor groups. Other primary sources were used for contextualization and triangulation. When coding, relevant codes were kept while others were assigned to a miscellaneous category and kept for contextualization if needed. More than 600 quotes were coded.

Phase 3: Evaluation and analysis. At the point where data was transcribed, coded and organized, they were analysed and examined. Qualitative data must be interpreted, as it does not show clear results and patterns on its own (Johannessen et al., 2016). Working through the data, one attempts to get a holistic impression. As such, extensive work was done to interpret the data with regards to the formulated research questions.

Phase 4: Connecting theory to data. Empirical evidence was in this phase connected to relevant theory and evaluated towards the research questions.

Phase 5: Accumulate and report. The final phase of the thematic analysis was to assemble data, research questions and literature to compare the processes of the teams and structure the presentation of these results in a good way so that the reader can see a clear message through the thesis. For the sake of creating increased understanding of how interpretations and exploration of connections were done, a choice was made to show the triangulation and periodical reconstruction of the complete team picture based on the theoretical conceptualization.

To make the result section simple to "use", graphic visualizations of developed competencies and interpretations of these were created. These were then complemented by a periodically structured section with the qualitative analysis of quotes from mentors and both participants. Finally, these were summarized. The result section extracted the interesting parts of the team data from each period to show how recurring certain topics were, where they happened and how they developed over time. It also showed how topics were discussed by many respondents across various time points. While the choice led to a very extensive result section, it was deemed important for the reader to be able to search for the interesting development themselves and better understand the interpretations and developments they found most interesting or puzzling.

3.5 Validity

Defining the validity of indicators in the thesis was done by using common sense (Johannessen et al., 2016). The study relied on how questions were asked, and whether these led to discussion and understanding of the functions and outcomes of the mentoring relation. Various answers arose from depth interviews, as they were done longitudinally with different people on both sides of the process. These people might have had their own agendas, for example to give a better impression of themselves, or not being aware of the difference between their thoughts and actions. The impression was however that interview objects were honest and attempted to recreate a representative view of the situation. Awareness on the subjectivity of situation recall was considered important (Johannessen et al., 2016).

Before the interviews were conducted, three key informants were met to discuss and improve the interview guide, and ultimately the validity of the study. These three were carefully selected based on their fields of expertise, so that they could beneficially challenge topics and themes in the thesis interviews[12]. The improved participant interviews were then conducted, audio-taped and transcribed, first with the online tool Sonix.ai, and then improved manually to decrease workload and increase the validity of data gathering. The semi-structured style of the interviews allowed the respondents to bring up reflections that were relevant to the context of their team processes in the different periods.

The process of following the dyad of participants and mentors in a longitudinal manner have also increased the trustworthiness of the gathered data. Randomly selecting participants and switching to interview another participant at the midway point also worked well to shine light on the aspects from both individual and team perspectives. This helps the data fulfil certain requirements of quality that are necessary if one is to draw representative conclusions from the study (Silverman, 2015).

In addition, the author is included as a mentor in the case study, leading to a variety of different effects on the validity of findings. A holistic picture is attempted to describe through the qualitative method because of the complexity of the context and the novelty of the theories it is based on. If the researcher stood outside the process itself, they would probably miss a lot of important information and many connections could not have been observed. On the other hand, this also leaves the author open to biases when going through the data (Blenker et al., 2014), of which one must be aware.

However, triangulation between data sources in the thematic analysis was done to eliminate author integration biases and represent a holistic picture of events and processes. Analysis of all the interview data was conducted after the body of data was collected, so the interpretation of findings and patterns would be as similar as possible.

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[12] The author would like to thank Åsa Ravik, Sjur Dagestad and Anita Schjøll Brede for their valuable feedback.

A final mention should be done with regards to contextual limitations of the study. The validity was likely affected by the fact that teams were working remotely for most of the program, and that they consisted of individuals form different countries and cultures. However, the effects of these limitations on results were not considered vital to account for due to the generic nature of team processes. This was also founded on empirical experience of the YSI organization and the feedback from the remote work expert. The assumption was that team processes and competency development would follow similar patterns but lead to increased strength of outcomes, for example from frictions. In this case, the limitation might also have been beneficial due to patterns becoming more apparent compared to if they were done in a context with more similar cultures and physical presence. It would after all be easier to smooth over the issues and fix them in such a context, and poor collaboration cultures or relations and their resulting effects might not have been as visible. Nevertheless, there might have been combined effects of all limitations that were not found.

3.6   Ethical considerations

Data was gathered on a lot of informants during this process, which makes it important to take care of their privacy and data rights. The interviews and conversations that this study is based on are all done through YSI and their data protection guidelines. Therefore, the study has not been reported to NSD (Norsk Senter for Dataforskning). Even though the gathered data and recruited interviewees are under the data protection scheme of Young Sustainable Impact, they are still consistent with the guidelines of NSD:

- **Voluntary participation:** All participants in this study have been informed that their participation is voluntary, and that they can withdraw at any point should they want to do so. If this were to happen, all data on the informant would immediately be deleted.
- **Confidentiality:** The gathered data are anonymized when presented in the thesis, and the team numbers replaced with letters so that they cannot be traced back to the participants.
- **Transcription:** Each interview was started by asking if it was ok for the respondent to be audio taped, to simplify transcription work. The audio tapes are deleted after project finalization.

The exceptions to this were the business experts that were respondents to the validity interviews. For the data protection of these experts, agreements were signed under the umbrella of YSI's data protection scheme that included the right to use their name, but only for the thesis. Their data was deleted immediately after project finalization.

One team was also removed from the study due to the occurrence of several difficult personal events for almost every participant in the team. These happened outside the program context, and the nature of the events were such that the anonymity would be difficult to preserve. This was a difficult decision to make, as the team still delivered despite all odds and developed much through the program.

4.0   Results

This chapter was constructed with the purpose of making it easier to understand the comprehensiveness of the data set and interpretations, and the triangulation between data sources. Each team's development of competencies was therefore initially visualized through a "graph dashboard" based on the numerical scores from the mentor survey. They were then interpreted to guide the search for interesting events and developments. Further, the developmental journey of the team and their respective mentors were explained through three periods of time, each named according to characterizations of the period itself. These sections describe relevant issues to the key topics of the thesis through quotes from the longitudinal participant interviews, the mentor survey and the mentor summary interview. The summaries then gather the key parts of evidence and observations for each team. Finally, a cross-team comparison examines similarities or differences between teams, and if some aspects were recurring or interesting.

It is recommended to read this chapter by *first looking at the graph overview*, then the respective *interpretation*, and finally *compare it to the summary* on the team in question. This will provide the reader with the important observations without having to read too many detailed quotes. It also gives the option to dive deeper into the evidence and interpretations of the data on whatever they might find most interesting or surprising. Finally, the cross-team comparison gives the reader insight on the developments in the case as a whole.

4.1   TEAM A

Person 1

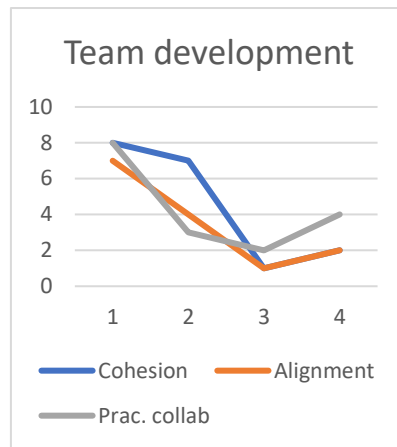**Person 2**

Person 3

Person 4

Figure 4. Team dynamics of Team A
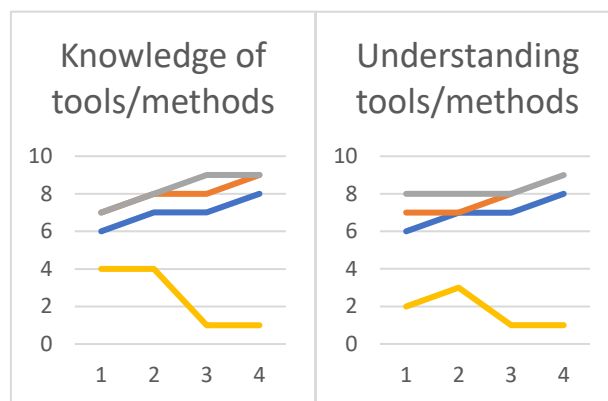
Figure 5. The knowledge development of Team A

Figure 6. The skill development of Team A
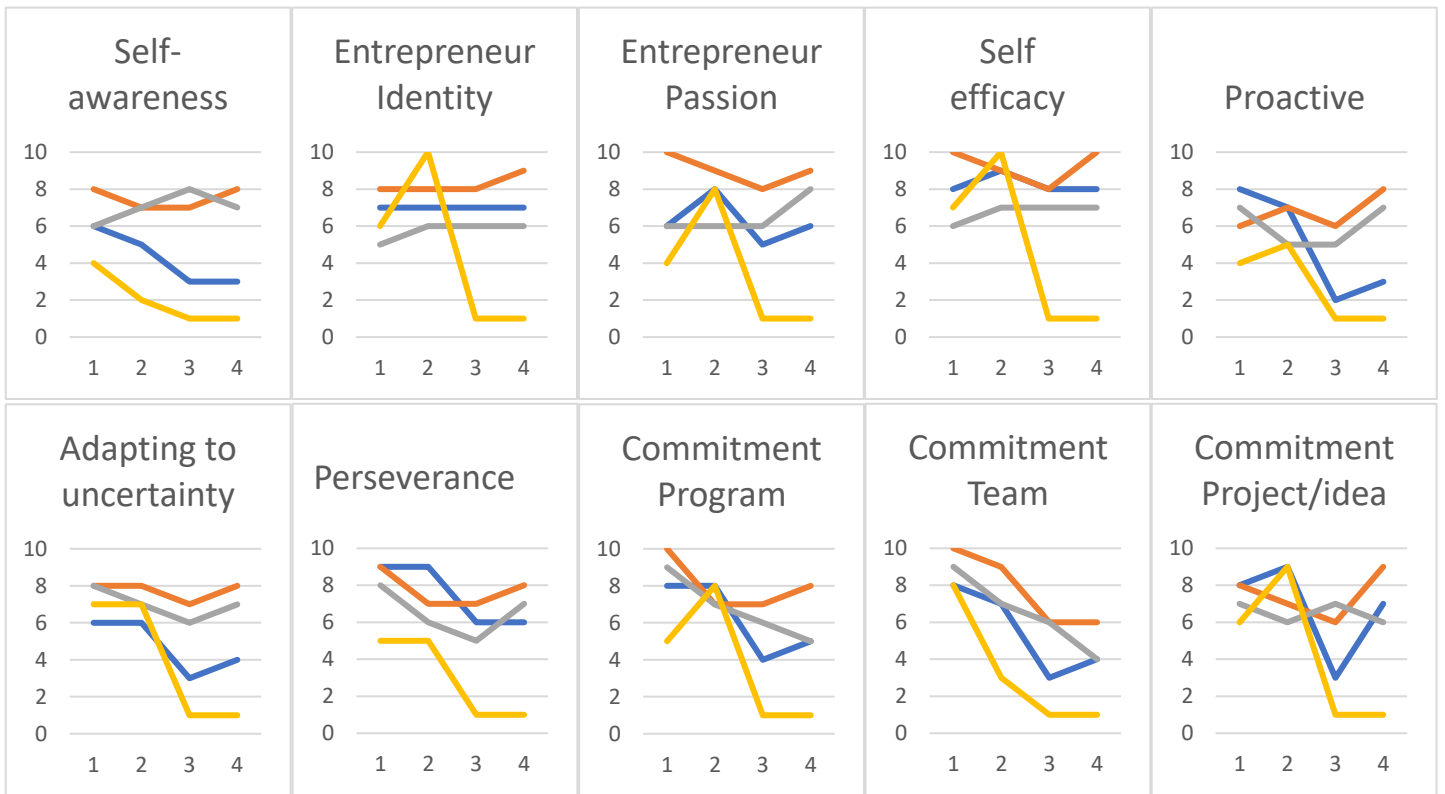
Figure 7. The motivational factors of Team A

From Figures 4-7 one could get the impression that the team experienced an early issue collaborating, collided in the middle and experienced negative development of both competencies and team dynamics. The mid-way collision was characterized by (a) one person leaving the team and (b) the rest of the group struggling to move on from the incident. Person 3 generally developed negatively, while Person 1 and 2 also declined but seemed to recover better from the incident. A spike in decisiveness and several motivational factors might indicate that Person 4 was overly confident and dominated the team from the Insight Factory until the person left the program. All commitment factors degrade through the entire process.

Strengths and weaknesses of this team were somewhat more difficult to interpret. High early rankings on interpersonal and collaborative abilities, communication, commitment and team dynamics show that the mentor had a positive early impression of how they started out. Person 1 was an interesting case, being both very entrepreneurial and partly lagging behind in communication ability. Except some smaller developments in knowledge and understanding of tools and methods, marketing and one person becoming better at communicating, this team did not seem to develop much within any factor.

4.1.1 Period 1 - A false impression?

At the beginning of the program, this team impressed the mentors and seemed very proactive and good at collaboration. Team cohesion was also good from the viewpoint of Person 3 after the initial phase. The forming phase and developing friendship also seemed to be related to the high initial commitment, while leading to inefficient meetings. The mentors were either reactive or disengaged with the team.

> "We often have like four-hour meetings where we just talk about things like dreams, fears and then get carried away. We do that a lot and are trying to reduce it a bit, and we know that other teams don't meet that much. […] We're friends, we're not really partners you know?" – Person 3, first interview

> "The trust and awareness that was started on in Module 1 was really important since the following periods were so intensive. We needed to take care of that trust. But then with the mentors that trust sort of didn't end up meaning that much you know, because they weren't really there that much." – Person 3, final interview

There were also signs that the team were trying to split tasks and responsibilities early on. It is uncertain whether they based their collaborative framework on what each team member got energy from doing, or if it was one participant covering for the slack of another. The way of work was based on going out and doing the same things on their own, and then convening afterwards.

> "We had different things that we were good at, so we split up the responsibilities in a sense between team members. One team member didn't like doing trivial things, so I ended up doing it, and I like software, so I was ok with it." – Person 3, final interview

> "Who can do this and do that stuff instead of just like saying, okay, this is what we need to do. And then everybody has like everybody goes out and does the exact same thing. And then we all come together and like find the best idea or the best part of everybody else's idea." – Person 1, first interview

The fact that Person 3 functioned as the driving force of the team was supported by both Person 2 and later Person 3 in the later interviews. Both mention that the collaboration and communication with mentors in the first and second periods have gone through Person 3.

> "I think until now it has been a lot on one person to keep the machine going. She is very good with software tools and schedules and so on. The others, they are decent collaborators but a bit harder to reach." – Person 2, midway interview

> "Usually during the program, I was the focal point of contact with the mentors. Because the others weren't so active in the community platform and check it so much. So, then communication with them came through me since we were talking about everything mostly in the meetings internally." – Person 3, final interview

The interviewees mentioned that there were frictions during the first period as well. These were smaller things that in many cases were laughed away, or not brought up properly, indicating a form of conflict avoidance. Evidence showed that while they addressed some frictions and conflicts, this was the exception rather than the rule. The smaller issues were brought up, but not in a good way, and it started affecting the team collaboration and cohesion. The subtility and humoristic veil disguised underlying issues, making them hard to handle.

> "There have been times where a team member has said, when a mentor has asked "why haven't you done this yet?", and another participant has said "Oh, that's X person's job, and they didn't do it. And like kind of blaming them during the meeting. And we're very honest with each other so we say like "okay, I was kind of hurt by that because even though I do that a lot, it's not like pre-defined or anything. You could have done it, you know, it just takes five minutes instead of kind of making me look bad in front of the mentor." But since we love to laugh a lot and we're all very outgoing and we just kind of breeze through it and the person apologized and said, I'm sorry, I shouldn't have assumed that." – Person 3, first interview

> "There has been friction for maybe a month, a month and a half, especially from two members of the team. But it has been more subtle, it wasn't direct. And this was a big problem because instead of asking what is wrong and just handling it, it became passive aggressive and led to frustrations building up." – Person 2, midway interview

All participant interviews referenced an issue that arose during Insight Factory as well, but they viewed it from different perspectives. The graphs showed that the alignment in the team started decreasing already from the first moment, and this was reflected in the observed "sides" that formed in the Insight Factory.

> "During the Insight Factory there was definitely a conflict. The guys were focusing on a map and I was focusing on a bot. They didn't really listen to the advice of the guy we talked to in the business. I spent like tens of hours working alone and I had to do it alone since my idea was not the same as the others'. So, I had to work after school and try going out talking to experts because just research wasn't enough for me. But it was all good because it actually worked out." – Person 3, final interview

> "I'm quite stubborn and for example when I had an idea in Insight Factory, and it was an AI idea. They dismissed the idea, and I also then said that they were right to dismiss it. But I am so stubborn and curious, and always have to push myself. So I continued looking into it. For example, I went to an expo on my university and stayed there until later on the evening just to get some minutes with a machine learning expert. I waited for hours so they could hear my idea and validate it and say like this has potential. That is probably just my personality, I don't like to leave things unanswered in my mind, I just have to try it. Don't want to have regrets in the future you know?" – Person 3, first interview

In addition to the development of sides in the team, they also had issues cooperating well with the company they were assigned to in the Insight Factory. A dip in receptiveness to feedback was also observable from the graphs, correlating with this observation. Person 3 explained that the mentors knew some of their problems but didn't really understand them because of a lack of involvement.

"During Insight Factory we had some frustrations with the people in the company that we were working with." – Person 2, midway interview

"The mentors weren't really critical with us when we did certain things or screwed up. For example, in the Insight Factory, the guy from the company told us to go one way and then two of the guys in the team would go the opposite way. And the mentor knew because they were in the same meetings. But they didn't really understand what we were doing since they weren't involved in anything outside that." – Person 3, final interview

An observation that might be linked to the team covering up their shortcomings was found when the mentors explained the early phases of the team. The team were consistently giving a false impression of how they were doing. For context, the mentor's own journals explained that they did not intervene despite having a nagging feeling about the team because there were many signs that they were still doing ok, for example their work tools which on the surface looked good.

"The team were very good at pretending that everything was going well." – Mentors, summary interview

"The whole research period seemed very blurry to me. The team fumbled around, could be explained as "doing good, no results". Seemed like they tried to avoid being confronted about not having either done enough or done things well. You could see on them that they were stressed, at least Person 3, but they tried to stay independent. But it came back to them acting as things were better off than they were." – Mentors, summary interview

Another early issue mentioned by the team was the lack of reflections they managed to do, for example on how they worked as a team. The focus seemed to be on simply doing one task after the other, and not reflecting and aligning on why or how to do it in a particular way, or who should do what. Their communication style led to inefficient meetings.

"To be honest, there hasn't been much thoughtful reflection on our part. I think that's something we just missed, that I don't know how. But I think with us there could have been better understanding and better discussion on everything. Like when we had to do a task, it was always like: "Okay, we need to get this out of the way. Let's just do it.", instead of asking ourselves: "Okay. Why are we doing this?" […] We didn't really do reflections until last night. Last night was the most reflective that we've been so it was really enlightening for us to go through that

whole journey. It was obvious that it was difficult for us because we hadn't really thought about it at any point in the journey … then we had to say, like "okay, here are your strengths. I would have liked to see more of this when you were doing this. And during Insight Factory, doing more of this and that." So, it was really great. We're going to continue doing that. […] We spent a lot of time talking, like out of the four hours that we spend on meetings, maybe like an hour and a half will actually be doing the work. And the rest of the time was just like talking about random stuff. So, if we could have used that time to really reflect, the journey would have been, I think, a bit more meaningful. And it would have just given us a better awareness in the group." – Person 3, first interview

The mentor approach was described as directive but ineffective. Yet again, the veil of humour was present, and the mentors struggled to handle it.

"The mentors weren't having some dominating approach, not at all, but they were kind of directive. I remember one person being set on a task in the start with setting calendar meetings, since we were kind of slow to form as a team. The person didn't do it for like a month and the mentor kept bringing it up, but the other person would just laugh it off. I ended up doing it. I think he was directive with us but not strict in following it up. So, it was not so effective." – Person 3, final interview

Another observation was that the team seemed to have a major misunderstanding of what the mentor role entailed. They compared their impression of the general mentor structure to be like having a boss. The mentors were also yet again seen to be reactively involved. There were some indications that the very directive approach could be what led to the misunderstanding of their role.

"I think after we have made the decisions, we tell the mentors. So, they are not very involved, but at the end they sort of have a final say. And based on what they say we proceed. We ask if it is ok and that we're moving in the right direction. So you could say like, they are the boss and we ask them for like a go-ahead. And once you hear back from them you move ahead […] The mentors aren't that involved in meetings and stuff, but they tell us like "involve us if you need anything, we are here if you need stuff". So we know that they are there for us […] Basically, what the mentors usually did was to just show up and tell us what to do. But in terms of actually giving us their input and helping us reach a better outcome that's not really what they did. Maybe they'll do that in future sessions, but not the ones that we've had so far. And it has been like that throughout the journey." – Person 3, first interview

In any case, the trust and reciprocity seemed to stay at a high level early on. This first interview somewhat contrasted the statement from the final interview where the same person said they hid issues from their mentors. Therefore, it is hard to say what was the actual situation.

"I'm very comfortable sharing everything with the mentors. So, I don't hold anything back, I mean, we discuss everything openly. There's no secrets. And it's really great to see them because they're always cheerful no matter what. You know, even if we don't deliver the way they may have expected us to deliver, you know, it's always like, hi, how are you? How've you been? And they're very caring and empathetic." – Person 3, first interview

4.1.2 Period 2 – A crash of two sides

According to Person 2, the team's style of handling problems developed with time. It caused confusion on whether the issues were actually frictions, or just a strange sense of humour that had developed in the team.

> "We didn't handle our conflict well. But it was also really hard you know, because it was so subtle. First it was hard to spot whether it was friction or just like comedy, you know, jokes and banter. And then there were some aggressive messages, some smaller things not going as they should. And then it came out and it was unbearable."
> – Person 2, midway interview

The work in itself suffered as poor team dynamics kept developing in the wrong direction. Mentors explained that the team kept giving the impression that things were going well, but they had a bad feeling about it.

> "The whole research period seemed very blurry to me. The team fumbled around, could be explained as "doing good, no results". Seemed like they tried to avoid being confronted about not having either done enough or done things well. You could see on them that they were stressed, at least Person 3, but they tried to stay independent. But it came back to them acting as things were better off than they were." – Mentors, summary interview

An example of things not going as they should occurred when Person 4 and Person 3 confronted Person 1 about not being present enough. Mentors however explained that Person 4 was doing the same things that Person 1 was accused of. The team experienced a shift towards an increasingly confrontational handling of cooperation problem. Mentor involvement was observed to be somewhere between reactive and disengaged in this period based on the comments of both Person 2 and Person 3.

> "In the second module I think there was some interrogation from part of the team to one of the other team members because the person was not available enough. The mentors did not help out. But it was not because we asked them, and they said no. It's just that they were not involved at all in what we were doing. So, some of the team members were asking themselves like, what are we supposed to do in this part of the project? Because we were just alone […] During the second module we were mostly working on our own and the mentor did not really notice the points where we needed help. And perhaps we didn't either, at least we didn't say anything. But it wasn't that they weren't willing to help, they just didn't really contribute that much." – Person 2, midway interview

> "During the first few months they didn't see when we were arguing about different things, slacking or taking different paths. So, they didn't know that any problem was there, and they would just check up on us, see that we were fine and then move on. But they didn't really understand that there were other things that caused conflict between us." – Person 3, final interview

"Our view on how they did things in the final period was that they were scapegoating. There were issues, and then some of the team members found out that the problem was Person 1. It was quite strange because Person 3 and Person 4 decided to have an intervention on Person 1. This is just guesswork, but it seemed like the goal was to get Person 1 out of the team, if you would look at it cynically. The interesting thing was that everything Person 1 supposedly did was also done by Person 4 who was going to conferences, missing meetings and so on." – Mentors, summary interview

Another example that Person 2 explained was that Person 4 had not been honest with YSI from the start and had an idea in their mind from early on. The mentors mentioned the same issue. This rendered the team unable to have good meetings to decide direction on which underlying problem they were actually solving and which idea to go for, with two people on each side.

"One decision making discussion led to the huge conflict that we had. There was a misunderstanding of the steps to take for the ideation process. And some of the members were getting a little bit too stubborn in their misunderstanding, so the effectiveness in our discussions suffered. Those discussions were not deep enough, and that ended up dividing the team in two halves on which direction to go." – Person 2, midway interview

"It seemed like Person 4 went into the program with one idea. Nobody else was talking about this idea than Person 4, the others tried to do some research. After a while they tried to make the research work with the idea they had, which is the opposite of the purpose of the program." – Mentors, summary interview

The situation concerned the mentors. While the underlying reasons for the team's lack of progress and alignment had not yet surfaced or been noticed properly by the mentors, they were visible in the delivered results. Person 2 mentioned several times that the Mentor 1 talked to the team about this.

"The mentor tried to warn us several times on how we did things, but maybe they should have been more specific. Because they saw that something wasn't good. Mentor 1 told us later that they saw that it wasn't feasible or real, like way too big problem for us to handle and based on a very fuzzy problem statement and market analysis. He tried to tell us to just be more precise in this and this thing, and go the smooth way, but it didn't work." – Person 2, midway interview

Everything the team experienced led to a large conflict with a lot of bad blood between the team members. Both Person 2, Person 3 and the mentors described the outcome of the underlying friction and minor conflicts as a disaster with extensive consequences – first and foremost that Person 4 was expelled from the program. The mentors explained the situation going so far that the program manager hadto intervene. Both Person 2 and 3 explains why the situation was so bad that the program manager had to get involved.

"To be honest, from my perspective our relationship was fractured a bit, because when Person 4 left it wasn't just conflict in the team, it was also conflict with the mentors. At the point of conflict, we brought them on and said

what had been happening, being honest and asking for help. We had an intervention but didn't really get the response from them that we wanted. We wanted them to sort of step in and dominate the whole situation and say it like "Okay, this is what's going to happen." But they just sat quiet the entire time while we were arguing back and forth. They should have stepped in and said like: "OK, enough, now I'm going to speak and all of you are going to listen to me. And this is what's going to be done about this and this and this." You know, the program manager didn't have to be involved if the mentors took more responsibility at that moment, which they didn't." – Person 3, final interview

"There was definitely a reaction from other team members when we had the conflict. I mean from both of them, both of team members, because they felt like the mentors' feedback and opinions were biased. So, they weren't happy at all. They didn't feel like the mentors' opinions really mattered." – Person 2, midway interview

Attempting to fix the situation, the program manager hosted separate meetings with both sides of the team, where Person 3 and 4 represented one side and Person 1 and 2 the other. In the first meeting, Person 1 got a heavy warning from the program manager on not being present enough. Person 1 apologized several times and promised that everything would be much better from his side and agreed on measures to be taken. In the other meeting, Person 4 was told that an apology would have to be given to Person 1 because of the many bad things that was said about and to them, for example telling Person 1 to "Shut the … up". The situation ended up with Person 4 leaving the team, expelled by the program manager. The reason was that the person first refused to apologize and then made an ultimatum to the program manager. After getting told that they were out of the program, Person 4 reverted and said they would apologize, but it was too late. Person 2 reflected on this mid-way.

"In the first two modules it is not hard to not have any discussion, because everybody is going in the same way. But then it comes to ideation, and then there are those who are fixated on this idea, and this idea only. Even if it might not be the right way to go." – Person 2, midway interview

Person 3 was of a different impression of the situation and commented on the fact that everyone had different expectations and understanding of what an intervention would look like at the point where they called the mentors in to help solve the situation. Another comment was made on the fact that interventions should be done in a certain way and Person 3 explained that the mentors were not competent in how an intervention should be done.

"In the situation where we called them in to intervene, Mentor 1 afterwards said that what they did was not an intervention because he just said "like all of you are yelling and blaming each other". Mentor 1 was supposed to facilitate that and make sure it didn't happen but was just shocked by it happening and just sat there muted almost the entire time. All six of us, participants and mentors, had different ideas of what an intervention meant. So, it is important when you are having this kind of thing to talk about "why are we here today, what are we supposed to talk about, what is the outcome of this meeting?". Because Person 2 said they expected something else, the mentors

said they expected something else. Me and Person 4 didn't feel like we got the outcome we wanted because we just felt like Person 4 was getting blamed for everything." – Person 3, final interview

Person 3 went on to talk about another interesting point, explicitly stating that the team hid problems from the mentors, and that the mentors were not involved or listening well enough to find them early on. She later compared the supposedly poor intervention to other interventions done by other mentors later in the process.

"I think the mentors have to be ready to have a fully effective intervention when it is absolutely necessary and unexpected. Because they didn't know the problems we were having, and we hid it from them. So, when we called them in to intervene, they didn't know what to do or how to structure it. It just became messy and ended up with one of us leaving. Interventions are so necessary when you are a mentor. Because if anything goes wrong you should be able to get everyone together and ask the right questions, like "why are you feeling this way" or "what is your reaction to what the other person just said", while also getting everybody else to shut up [...] In the conflict itself, I think the mentor was mostly telling us to stop yelling at each other in some way. But they were sort of passive in it too. Instead, they could have asked like "why are you feeling this way, what happened?" and stuff like that. Which another mentor did with us at a later point." – Person 3, final interview

While this situation obviously took most of the focus for the second period, there were also other mentions on the relationship, mentor functions and mentoring style. In one intervention, Mentor 1 attempted to motivate the team in several ways, some working and some not. In most cases, the mentor used a directive approach.

"The mentors demotivated us during the ideation process. We were doing something and then our mentor was not at all feeling it. When we came to them with something we thought could be really good, and they were just saying that this cannot happen and that we are going down the wrong path. We felt like we were doing a lot of work for nothing. But it was also on us, because from start our idea was not good, let's be honest. On the other hand, when we reached milestones in like the outcome reports and so on, they were motivating. Like they hailed our achievement and were preaching that we can do it. After recognizing our achievement, the mentors were like "Ok, so target acquired. Now you have to go forward and just start with this, and I am going to send you this, this and this so you can have a little bit of insight". So, they tried to motivate us for our achievement but also make sure we didn't become complacent and stagnate." – Person 2, midway interview

Person 2 explained that the first mentor also used a directive style at different points of the second period. This was combined with what the respondent felt was a severe lack of trust in their team and idea before Person 4 left the team.

"In the second module he said like "you have to ask this question in this way, you need to look into this thing to understand how you look for information, how do you validate that information?". So, there were a lot of resources. In module three, the mentors mostly helped us if we were stuck. Sometimes Mentor 1 also told us that

we were stuck and not doing things right. And if we asked then it was like "try this" […] I think trust-wise the mentors did not have a lot of trust in our team, more like a complete distrust to our idea before the divide and the other participant leaving." – Person 2, midway interview

The second mentor on the other hand kept being quite disengaged from the team's process, except being partly mixed up in the main conflict.

"We didn't really talk much to the Mentor 2, who didn't really get the team dynamic and just went into a role of offering emotional support. […] At the end of the intervention, I had a problem with Mentor 2 because they said something like "if you're not serious about the program, then you could just like leave or something." I was very upset, and Person 4 was also very upset. So, when that person left the program, I had to confront Mentor 2 about it but I kind of didn't, I later just told the program manager. And then the program manager had a meeting with all of us there where everything was laid on the table. Mentor 2 said they didn't remember saying those exact words but said sorry for hurting me. So, we repaired that relationship, but it was still a bit weird after that." – Person 3, final interview

Finally, the answers of Person 2 showed that the team lacked understanding of entrepreneurship tools and methods. They did not "get out of the building" in the research process to any noticeable extent, and the mentors did not notice nor intervene. Other parts of the data showed that they were demotivated by having to step back and pivot when testing their assumptions, and also didn't manage to align on what they were to test in the first place, possibly due to the idea-rigidity of Person 4.

"We didn't feel like we needed to talk to experts during the research. And I don't know, maybe we actually needed them. But yeah it was only a couple of interviews with some people that Person 3 found about the problem and how to do stuff. In general, there wasn't much help or pushing to get from the mentors on that point." – Person 2, midway interview

4.1.3   Period 3 - Picking up the remnants of a shattered team-work experience

With the relationships in pieces both internally in the team and with the mentors, the team had to halter on with heavy baggage. The graphs showed that Person 3 dropped off in many factors, while Person 1 and 2 were trying to carry on after the incident. Both Person 2, 3 and the mentors explained this development from different viewpoints. Person 2 was quite positive straight after the incident and program manager interventions, while Person 3 and the mentors explained a different story evolving until the team reached August and the Oslo Weeks.

"I think we handled it good, but it was with the help of YSI. They were like ok, let's try this way. And they did a good job in calming the anger, the egos, that just exploded three days ago. Thanks to that I am actually more

confident about what we are doing now, which is impressive because the situation was unthinkable a week ago. But now the motivation and willingness to go forward has come back." – Person 2, midway interview

"After the incident where Person 4 left, I sort of stepped down from my focal point position in our relationship with the mentors and wanted Person 2 and Person 1 to take that position. That didn't really happen, so again I had to step up." – Person 3, final interview

"I had to drag Person 3 along to cooperate with the others. The person was mostly answering yes or no, or just being angry and not wanting to really say much. Person 3 is extremely efficient when they know what they're doing, and the other two are not as efficient. So that was the issue after the conflict, getting them to at least try to move in the same direction. Which wasn't easy because Person 1 was just too much, like "we can try this and this, and how about this", while Person 3 by all means wanted to pull another problem area into the whole thing. There was just no agreement on what they wanted to do" – Mentors, summary interview

The mentor quote also indicated that the highly entrepreneurial Person 1 tended to go in many directions at once. Person 3 echoed this in the final interview.

"We all usually had a lot of ideas. I think for example Person 1 would come up with 10 different ideas on how to validate our idea during the Oslo Weeks. But the thing is you need balance, right? If you want everything to work out well." – Person 3, final interview

While having described each other as friends earlier in the process, the team did not want to continue in the same manner after the incident. The cohesion kept degrading, and the focus was increasingly on tasks, while the mentors tried and failed to stop this from happening.

"The internal meetings have changed now because we kind of realize we cannot go on like "friends-friends", and we see that it is enough to agree on the project. Now the meetings are shorter. Also, the work is more independent since we are trying to do individual research and talking to experts." – Person 2, midway interview

"After the incident it was all about the start-up. It was kind of a roller coaster ride. I don't think we actually took the time to know each other that much. I mean I didn't know that my teammate could speak another language and found out through other parties when we were in Oslo. Just because we didn't socialize you know? We were mostly focusing on the work and doing it for the sake of doing it. We weren't really enjoying it that much, the things we had to do together. But we got to do a lot of individual work." – Person 3, final interview

Person 3 explained the post-conflict relation with the mentors as strange. The trust was no longer what it used to be, but over time it gradually becomes better.

"Before the conflict I think the trust in our mentor relationship was good. Afterwards it got a bit weird since we were recovering from what had happened. We just kept this strange friend/professional relation to just push it onwards. The first mentor was trying to be like cool with us again and I wasn't really feeling it. I remember telling the mentor "everything is so fractured in our relationship; can we just keep it formal?" And I think that bothered

them a little because they said like "No, what's so great about our relationship is that we're all friends with each other and we actually care about each other, we laugh and things like that". I said that I didn't see us being friends after the mentors didn't stick out for us when Person 4 left. Because I trusted them to be there for us on it and even though they knew that what was said about Person 1 was true they just said nothing. But whether I was upset with them or not, I still had to work with them the next months, so a level of trust had to be there. And in the Oslo weeks I think it got better. Because like we travelled together and spent time talking to them about like their job, their family." – Person 3, final interview

When the team met for the first time in Oslo, the issues they had not properly handled came up yet again and started making trouble. There were also aspects that showed there were still personal issues between the participants.

"During the Oslo weeks, I think the problems we had gone through before manifested themselves more. We had a meeting with an actor I thought was important, and then another person didn't and had some sort of bias towards the organization that I was unaware of. So, they had not been paying attention. I thought the one guy was taking notes, but just written "This meeting is boring" like 20 times on the pad. We had an argument on the way back and that was intense. […] We pivoted a lot during the process. We also disagreed on pivots we wanted to make and how we explained our idea. […] In Oslo I think everything that Person 4 warned us that Person 1 would do did happen. For example, when you present a problem to him, he will laugh it off. Or going off and doing random stuff at random times. […] There were disagreements and things that didn't go as planned, but then we got it done because we had to." – Person 3, final interview

The YSI crew tried to handle this together in the Oslo Weeks, and the general involvement level increased. The effect of these interventions was unclear in the data.

"The involvement from the mentors, and also a lot through other mentors, was better during the Oslo program. Because they were more on top of the issues we had and we were confronted with it several times, especially one other mentor." – Person 3, final interview

Despite the conflicts that happened, Person 3 argued that they learned as a team. The mentors on the other hand did not agree.

"I would say that despite the conflict and everything that happened, we grew as a team. We learned new things all the time. I had no idea about prototyping, interviewing, research. These are all skills you need, and I think we developed that as a team. And it is also great because we made mistakes along the way and we have helped each other grow. I've seen Person 2 grow more confident since the beginning. And Person 1 I think has improved their communication. In the beginning, Person 1 would always be muted and the other three of us would be talking. I asked why and it had to do with confidence in their English level. I think we helped each other overcome some of these personal barriers and be more confident and develop more skills in entrepreneurship and communication."
– Person 3, final interview

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"This team hasn't learned that much, nor have they really shown any desire to learn." – Mentors, summary interview

The final interview with Person 3 revealed that the mentor relation might have been affected by jealousy from the participants from an early stage. Yet again, the veil of humour on frictions was observed.

"Early on we had this joking relationship with the mentors with me, Person 2 and Person 4, like we said "haha you guys are always helping your other team, and you want them to succeed with Insight Factory more". But I think they believed in us and always supported us. They were always cheering us on." – Person 3, final interview

"I saw in Oslo that the mentors were more involved with the other team they mentored. I guess that would have been useful for us as well." – Person 3, final interview

Another finding was that the mentors did not perform the function of professional development throughout the process. This is partially explained through the lack of involvement.

"I think that the mentors haven't really helped me increase my capabilities and competencies until now. For them to have to do that they would have to know me well enough from before, my strengths and weaknesses, skills and so on. And that was basically Module 1, but they weren't really around for that. So, if they did have a foundation on what I was aware of and not, they could push me and challenge me. But they didn't have it, so I think they haven't had so much effect." – Person 3, first interview

"The mentors haven't really changed much in me with regards to how I see options around me, you know like how aware I am of them, nor my confidence to act on them." – Person 2, midway interview

"I don't think the mentors taught us anything specific on knowledge and skills to be honest, they didn't do workshops on like networking, prototyping and things like that. They were more witnessing us in our journey and aiding, but never teaching us what we needed to know other than like their specific domain knowledge on project management. But they directed us to other mentors who did know if we asked for something. […] I think most of the things I learned about start-up management or entrepreneurship I got from experience or Novoed, especially the videos on Novoed. Or just talking to people, talking to experts." – Person 3, final interview

The final and key insight observed was the lack of role clarity from the participants point of view. This critical observation showed that both the mentor and the team might have fundamentally misunderstood what their role was towards each other. This final quote also supported the finding that some of the team members were not as committed as they perhaps seemed.

"I guess I didn't really have a clear outline of all the possibilities of the mentor relationship and what it was meant to be in most of the early parts of the program. Because different problems pop up in different domains, and it is hard to know with what and when to reach out to them about. So, the clarity of the role itself was a bit bad. For

me personally, like I said, I was very much in contact with the mentors. Like when we were talking or when they asked questions on like the group chat or anything, I would be the one replying and trying to get them answers. Because I, we felt that if we didn't show up to an Outcome Report meeting or we didn't act on any of our deliverables that would come down on them and they'd be responsible, you know. So, I carried that burden. Even though it was like that in theory, reporting to them, our relation wasn't like that in practice. So, the other team members kind of got used to it and just didn't really talk to them outside meetings. There were times were the mentors would be joining a meeting and the others wouldn't even know because they didn't read the stuff that was posted." – Person 3, final interview

"I think I saw them as a coach, or a peer, but not really as a mentor. Because I think a mentor is someone who is sort of always consistently helping you and being on your back to help you improve. And being more active in a way. Because being a mentor is a very big deal on my part. But being a coach, I think they have more a specialized skillset, and then they do their job very effectively. And then once the job is done, they leave. And also, as a peer, especially the first few months it wasn't just work, they were also supportive and caring." – Person 3, final interview

Summary Team A

Development. This team went through a lot of issues from start to end, which generally hindered them from developing competencies. The team gave a very good first impression and tried to uphold this by covering up shortcomings for mentors. Frictions were consistently present but started out subtle because the team members used humour as a veil to not have to deal with the issues directly. An early example happened in Insight Factory where the team became misaligned. A large conflict midway then split the team in two sides, where conflicts became increasingly interpersonal, and Person 4 was expelled from the program. Person 4 was at the centre of this process due to a dominating style and extreme perseverance on their own idea, which they were fixated on from the start without YSI knowing. Person 1 also got a warning from YSI in this situation due to not being present enough. Person 3 was a driving force and focal point for contact with mentors until the conflict. The other team members were active at the start but not as much over time. Person 1 and Person 2 took somewhat more responsibility after the conflict, as Person 3 pulled away from the focal point role for a time. Meetings in Oslo triggered issues even more due to the level of collaboration intensity. Several smaller conflicts came up, and the team varied between being very confronting and very conflict avoiding.

Key recurring issues were miscommunication and a lack of reflection on actions and mistakes. This had various consequences. For example, inefficient meetings were mostly due to the team trying to chat a lot and create cohesion, which does not work as intended. After the midway conflict their relation becomes almost exclusively task-focused and meetings become efficient. A relatively low ability to listen and receive feedback was observed in several situations, including the Insight Factory and with the mentors. There were also recurring instances of blaming others than themselves for their troubles.

Mentoring style and deployed functions. The mentors were not particularly involved with the team, taking a mostly reactive or disengaged approach. Mentors were recurrently observed using a directive approach towards their participants, despite not taking a dominant or involved position. This combination created a barrier for the important mentor function of developing a relation of trust and reciprocity. While trust was initially high, it degraded over time. Trust and reciprocity suffered heavily during the conflict as well, and the mentor-team relation in the final period was described as strange. The final participant interview also showed the team's dissatisfaction with the utilized mentoring style, especially compared to another mentor who helped them at a later stage.

Effects of this were that it (i) hindered their ability to notice the team's shortcomings and stopped them from acting in time to solve them, (ii) left them unable do the right interventions as, even if they

noticed the issues, they lacked the background understanding and listening ability to know which actions should be taken and (iii) hindered their ability to deploy other mentor functions like professional development or emotional support.

The final point was suppored by observed uncertainties from mentor on whether the team members have learned and developed, and from participants on whether the mentors provided effectful assistance to their personal development or not. The mentors argued that the team did not learn too much because they were not willing to learn. Participants on the other hand were split on how much the mentors did help them develop directly and were inconsistent on what help was useful or not while being certain that it was too far between. As an example, the mentors did not help the team reflect enough, but the times they did were described as valuable by both participants. This general lack of interventions was observed from start to finish.

Additional interesting finding. A possible major source of problems was a lack of role and expectation clarity between the team and mentor. Person 3 seemed to have misunderstood completely what the mentor role entailed, explaining them almost as a "boss" they would report to but that the role was not like that in practice. Many activities they did together, such as sessions or interventions, also suffered from a lack of clarity of roles and expectations between involved parties. In total, all the issues led to situations where the program manager and another mentor had to or tried to intervene at two different points in time, once during the conflict and another during Oslo Weeks, but both interventions came too late.

4.2 Team B

Person 1

Person 2

Person 3
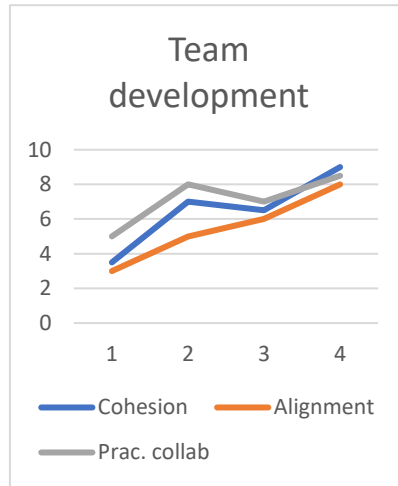
Figure 8. Team dynamics of Team B
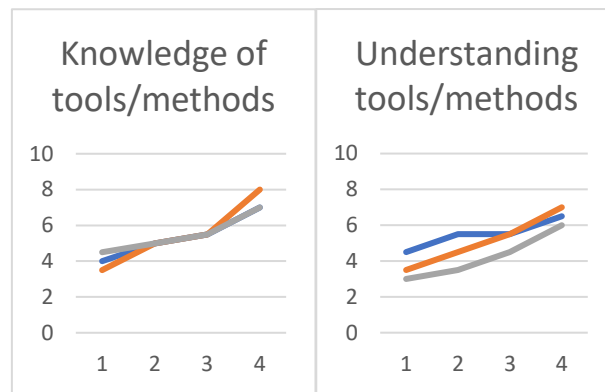
Figure 9. The knowledge development of Team B

Figure 10. The skill development of Team B

Figure 11. The motivational factors of Team B

The graphs in Figures 8-11 show that the team experienced a steady developmental journey through the program, with a peak during the first and last periods and a dip in the middle. The dip seemed to mainly influence (a) creativity, opportunity recognition and marketing, (b) strategic ability, decisiveness and perseverance, (c) self-efficacy and commitment to problem area and idea and (d) collaboration ability, team cohesion and practical ability to collaborate through splitting task responsibilities and so on.

Strengths of the team were to take feedback and learn from their surroundings. Weaknesses were a lack of creativity, indecisiveness, a bit of a grey start on commitment, entrepreneurial passion, communication and collaboration and recognizing/acting on opportunities.

4.2.1 Period 1 - The early peak

The team developed rather slowly in the initial phase. Mentors described the first impression of the team as quite grey and in many ways lacking initiative from the participants. Some of the observed team weaknesses were also explained in the first interview. There were early indications that Person 1 applied a relatively balanced but confronting style in handling the team's cooperation issues.

"This team sort of seemed grey in the start, and it was hard to know whether they were actually doing much, but then they performed really well in the Insight Factory." – Mentors, survey response

"I'm very communicative. And in the beginning of the process, the others weren't so communicative. But during all the workshops and the meetings, I exposed to them that I would like more quick approach and responses other than and just seeing the message or reacting to it with an emoji." – Person 1, first interview

Insight Factory represented quite a challenge to every team in the program. Team B rose to the occasion, delivering well and gaining a positive experience early on. The graphs showed their good performance through a development in most skills and motivational factors. In addition, their ability to take and act on feedback wass singled out as a key ability of the team. Interestingly, the experience also led to an initial friction. They handled the issue and thereby improved team dynamic.

"They were a bit slow until the first check-up meeting with the company. The company person at that meeting was very clear with them at that point on what they expected, and then the team started acting much more focused and driven. It ended up with the team delivering perhaps best on the Insight Factory out of all teams, with the company jaw-dropping when they saw the result." – Mentors, summary interview

"They took the feedback from Company X and used it in a really good way. This also helped them later in the process, when they got a feedback that they indeed are good at listening and then acting on feedback, and that they should use that ability even more by increasing their search for it." – Mentors, survey response

"During the final Insight Factory presentation, we started the presentation without a person who was missing at the request of YSI and the company. The reason was because we were starting the meeting earlier than expected. And during that time, we thought it was not a problem, and the feedback on what we had done was good. But afterwards the person was sad and didn't understand why we had started without him. This person had the first part of the presentation and since we started, the person could not do anything in the presentation. I felt guilty and the other one did too. So, we have now agreed that we are starting to behave more as a team." – Person 1, first interview

The participant explained in the interview that their style of collaboration was mainly about the work, and not that much on the relational part after getting to know each other through the first

workshops. They were struggling with meeting effectiveness at times. And some early insecurities on collaboration were also observed.

> "So far it has been like the majority of the meetings are for structured work and keep like each other in the flow of what everything everyone is doing … The depth of our meetings depends on how long the meetings last and who is available for being in a conversation without having limited time. Usually when we have shorter meetings where people have to go relatively soon, this make meetings unfocused and shallow. The meetings are deeper and better structured when we have more time." – Person 1, first interview

> "I was thinking of it last week and I was wondering like how much am I applying to this and how much like are my teammates applying as much as I am, or are they applying more to it? But I also remember YSI was saying that you have to apply something like 30 hours a week to do this so the final applicants would know of this." – Person 1, first interview

The team showed several signs of poor understanding of the entrepreneurial methods and tools. The first was that they were not getting out to customers in the Insight Factory and the early research phase. The other was that they lacked decisiveness - particularly when their goal was unclear, and they had to find out what to do on their own. They seemed to slavically follow content provided by YSI. For context, a quote from the main interview of Person 2 was also used.

> "In the Insight Factory we delivered something specific for the company and got everything that we should know from them. They were providing us stuff so there was no need to go outside the company and try to find research different than what they have provided us." – Person 1, first interview

> "We haven't gone through many meetings on like making decisions and deciding which way we are going to follow. We basically tried to follow all of the structures that you were sending to us." – Person 1, first interview

> "When we have a goal, we work really well just doing it. But when we needed to do all the research and brainstorming, we were not so good." – Person 1, final interview

> "Before this moment we were doing research and weren't really looking so much for external opinions." – Person 2, midway interview

In general, the team seemed to have a good relationship with the mentors at this point. Person 1 referenced the early workshops as important to create trust, and placed importance on the effect of mentor feedback.

> "I can't speak for the other team-mates, but I think in general we have a very good level of trust and openness with our mentor. It is something that is still building of course. But I feel like, you know, them being part of our early sessions with life-story and culture map and so on was important in establishing trust. So, they know about us and we about them, and that connection was made." – Person 2, midway interview

For the most part, Person 1 described their recieved mentoring style as directive, trying to guide their actions but also giving space. The level of involvement seemed reactive, and the mentor was somewhat present. In addition, some frustrations arose on how the directive suggestions were given.

"The mentors have mostly early on been helping us to structure our next two weeks at a time and what we have to do. Also, how we apply tools we are supposed to use and who will do which tasks and so on […] In our conversations with the mentors I felt like they were mostly giving us a direction to go with regards to what we should check out. And I feel that if you give a direction just by talking, we might forget something that's important after the meeting is over. It would be better to have at least a list of what was mentioned afterwards." – Person 1, first interview

"I think the mentors do trust us as well, but we do not update them so much, so I feel like they are a bit unsure of whether we are doing things maybe. But they also give us a lot of free space to do stuff, so I feel like we have their trust as well, like they are not sending messages "are you doing this, are you doing that", which is nice." – Person 1, first interview

Person 1 brought up that there was confusion between the mentors on when and how they should react to the needs of the team. Three variants of confusion were observed. Each of them pointed to a lack of clarity on expectations to interaction, level of reciprocity and so on.

"The mentors seem to have a mix up on who is going to answer things when we ask them. And it is also a little unclear when they are only reacting to things on Slack whether they have read it and agree or if they have anything to add and so on. If they are aware of what you have said." – Person 1, first interview

"Sometimes the team does feel confused on when the mentors are going to participate in the meetings, and we are sometimes not sure if they want us to be more in contact or if it's good like how it is." – Person 1, first interview

4.2.2   Period 2 - The dip in the middle

After the team peaked in the Insight Factory, they experienced a period of real confusion where they did not manage to mutually agree on their problem area and idea. The graphs in Figure 10 and 11 visualized this through a decline in collaboration, creativity, commitment and decisiveness. Team members effort level dropped as a result of this, leading to a storming period.

"We were really slow in finding a good problem and understanding it, and also on choosing idea." – Person 1, final interview

"Creativity was great in Insight Factory, but they stucked way too much on the problem when doing the transit from problem to idea. But generally bad on creativity." – Mentors, survey response

"When we were at that point where we were stuck, we had a very serious meeting. I felt that I had a bit more friction with the guys in the sense that I like, I'm very active of doing and getting something done in a very practical sense. And the guys were like, really slow. And then I needed to push them all the time. They were not like doing it by themselves. I think that was one of the frictions we had. And then in that moment it kind of changed … then we worked well and then we kind of went back to the same problem. I felt it and then we did a second meeting and they didn't feel it. So, there was like a disagreement on that." – Person 1, final interview

Their storming phase led to increased understanding of each other both on a personal and a professional level. Person 1 and 2 both explained the importance of these meetings and how they experienced better collaboration and commitment to each other as a result.

"And I think we always like try as a team, we always try to understand each other's like way of working as well. So, I think it went well because we understood, like I understood that they have a different way of working than I do. And they understood as well from my side." – Person 1, final interview

"After the second module all of us were really stressed because we were not up to par and were pretty much lagging behind. So there came a whole storming phase and I am really happy that it came! We had long conversations on WhatsApp on how only two months are left and how we aren't really doing anything. That was the time where all of us were reflecting and ruminating on what has happened and how we want to take it further. But it was really constructive, it was a dark moment that we had to push ourselves through and everything has been better since then." – Person 2, midway interview

Person 1 explained that the team were generally quite independent on reflecting and deciding. The mentors worked more like a sounding board for what they did. The quote also showed an indication of a reactive involvement level from the mentors.

"I think that our team has been more independent, generally speaking. Usually when it was important meetings and decisions it was only the three of us. Some meetings, the hardest ones perhaps where there were some team strategy issues, we still did those ourselves. And then we went to have some feedback from the mentors on it, but it was also sort of handled by then. More like informing them." – Person 1, final interview

The level of involvement was explained as reactive or even disengaged by Person 2 as well. On the other hand, the reciprocity and trust in the relationship was on a quite high level.

"Mostly how our mentor relations work is that we don't speak so much to them at the start of each module, they just ask us in the few meetings we have like where we are going with everything and if we have made some progress. Then when we have decided on stuff, we go to them more for feedback and reflection." – Person 2, midway interview

"We had a lot of sessions with the mentors when we had issues doing research, but other than that we haven't done so much with them. It is not so much flat like us communicating with our mentors, it just happens more in some areas and less frequently in others." – Person 2, midway interview

"I would definitely say that we experience a lot of trust from our mentor. The first mentor called us the wonder team - I hope he is correct hahaha." – Person 2, midway interview

Mentor functions seemed to change from mainly focusing on structural, directional and professional aspects in the first period, to include more motivational and emotionally supportive aspects in the second period. Feedback and help to reflect was brought up as a key element for both. This seemed to help the team get through the dip they experienced around this point in time.

"Usually, especially in module 2, the mentors had a really motivating effect on us. I would say it was extremely useful, we had a lot of discussions together and they motivated us a lot in those meetings. Like, we would have a down moment and then have a meeting and the spirit was back up. […] In some points along the process we have had very nascent ideas, and the mentors have served as a great sounding board for us on those as well. […] I think we have gotten pretty good help from the mentors, also since we are the water team. Both our mentors have sent some interesting and relevant material, and especially the second mentor has sent us case studies and ideas and been open to meetings and brainstorming if we wanted it." – Person 2, midway interview

"There were at least two or three situations where we needed some specific things from the mentors and got it, which speeded up our process a lot. We had a tendency to get stuck in confusion, for example not knowing what to do or how to apply a thing, and then they gave us something that could help us which it did." – Person 1, final interview

However, the ability of the mentors to motivate the team was called into question by Person 1 in the final interview, countering what was said by Person 2. While the main source of motivation for the entrepreneur usually comes from themselves, Mentor 1 in this instance tried and failed to motivate the team in a way that could be described as directive and forced.

"I think as well that the mentors were not good in motivating us, I would say. They were also not demotivating, it was more like kind of just nothing. You know, I think our team has felt more motivated when we had some meetings with several other mentors in the program. Like when we spoke with one mentor that was really good because they always had like a new contact to give us and are like really excited about someone they spoke to on an event or something like that. And our concierges I think they were not really good at doing that. Maybe sometimes they tried. I remember the times they were trying to help us and motivate us, but I'm not sure if it worked […] I just like remember like for example the first mentor always, not always, but sometimes if he was trying to keep like, to say some stuff that was In the sense of getting us to do more and get more excited, like, He usually said, like: "Hey, guys, you like water, you need to, you want to create a start-up in the field. You're all connected to it, you need to feel more ownership and passionate about it." Because I think we generally didn't feel passionate about the topic itself. And many times, he was always saying like you need to feel passionate about it

so that you can spend a night doing researching online, you know, then when things come out. But I think it hasn't had any effect on us, just like for the teenagers who came here. I think results motivated us more, like delivering something great. But like, a mentor saying: "Oh, you need to do it, you love it, you need to get this done", you know, it doesn't really work." – Person 1, final interview

The evidence above also showed a lack of commitment from the participants to the problem area they were working to solve. Mentors expressed in their survey response that they had been concerned about the team's source of motivation.

"Their passion was sort of related to getting good external feedback. Which I guess can be an issue long term." – Mentors, survey response

4.2.3 Period 3 - A better endgame

With a stronger alignment on their project, problem and idea, the team could move forward faster. It did not however take long for them to enter a new period of confusion. Early July, they met the same indecisiveness issue as before.

"Prioritizing what we have to do was a little hard. Stayed probably a week of doing almost nothing." – Person 2, main YSI interview

Because of their standstill, two other mentors came in to assist the team development and push them. Progress became more rapid as a result, correlated with their increased development in the following period. Previously, a quote from person 1 mentioned that other mentors motivated them in better ways than their assigned mentors managed to do. This was visible through their increase in progress. The mentoring style was more involved from the new mentors, while one was directive and the other non-directive and listening.

"On an outcome report in the middle of the program, another mentor sort of called bullshit on us when we didn't really present anything of what we had done. And then he and another mentor started following us up more than our assigned mentors." – Person 1, final interview

"… We had the shortest OR and hard to decide for us where to go. Think we really needed the shake that the program manager gave us. Next three meetings we had with another mentor and the program manager was what accelerated everything. Very correct interventions at a crucial time that pushed us forward. In our team we tend to get confused and then do nothing. Confusions lead to paralysis. Hard to integrate the viewpoints for us and develop consensus. When you are talking about confusions it becomes more confusion." – Person 2, main interview

"At some point we had two other mentors come in and help us a lot, and their activity level was different. I think they were faster and more involved, and also the whole picture went faster with like identifying what we needed and so on. I don't know if that is the characteristic of the mentor or because they came in with a relatively fresh perspective, could be both. For the most part when those mentors took over some of the follow-up, I think we just went to both and if one did not answer early then we went to the other who could complement." – Person 1, final interview

With the other mentors helping a lot, the team started working hard on getting in touch with external stakeholders, testing with customers and polishing the solution. They did not pivot much, but rather improved the idea they had. Both before and during Oslo they worked hard and finally got to a prototype stage. This is evidence that they did learn about and act partly in line with entrepreneurial tools and methods.

"This is the time when you start spamming emails, seeing what everyone is thinking about it. That was helpful." – Person 2, main YSI interview

"Very good that we got a prototype. Final version of what we were thinking. Significant development between the end of M2 and M3. Traction building was pretty helpful." – Person 2, main YSI interview

The main interview of Person 2 also reveals that the team might have had trouble to fully understand entrepreneurial tools and methods. During the final period they did not feel comfortable using and relating to them, and the quote showed that assumptions and testing were not done properly even though they were talking to external stakeholders about their solution, making it harder to understand how they could create value for their customers.

"Personally, I find iterating and pivoting really scary. Don't think we did so many assumptions at first. Just got lots of feedback and then created assumptions. Did not test it as much. Did not pivot much either." – Person 2, main YSI interview

Person 1 also shared a reflection on how the collaboration and commitment played out through the process, and how people think and work differently. The respondent explained that commitment in hours is understood and interpreted differently by participants. This mirrored what was mentioned by the same person in the first interview, and what the conflict incident revolved around.

"I know you guys ask for a lot of hours, but it is very interesting to see how that developed. Putting it into a schedule is hard and sometimes not everything goes after plan in life. Sometimes you are also just thinking, like about problem and solution. And that was a big difference between Person 2 and me, I would just count my work hours on whatever I did practically, while Person 2 would also count the time spent thinking which they did a lot. But they were also doing so much and were super overloaded." – Person 1, final interview

Person 1 had many good reflections on the relationship with their mentor throughout the program in the final interview. The involvement level seemed to mirror the previously explained reactive engagement style. While this had been ok enough according to the participant, it could also have been better.

"I think the mentors have been involved to various degrees in different parts of the process. It might have had something to do with how we were handling everything, like being more active when we were also active and sending stuff. It could be better for them to be faster and more ready, but in general it was quite good." – Person 1, final interview

"In the beginning we were not talking so much, I would say it was like low, high and low again, in the end. So, it was like in the beginning we were not talking almost nothing ... But that didn't work. And then we established that we would talk a lot with them after that, asking them to be in more meetings, maybe a few times a week, which we didn't have before. Our communication peaked through that, but I think it was also too much because we have different ways of working in the team. I liked a lot when they were present and maybe the guys didn't like it so much because it was too often and we kind of got saturated. Then it went back again to less meetings. And then in the end probably a bit more also, just like for the final steps that we needed to get everything fixed to Oslo." – Person 1, final interview

"We talked to the first mentor about the independency of our team during the Oslo Weeks. In the beginning he didn't know how we would work since we didn't reach out so much at any time. And then we still delivered, and he saw we were independent, and we got that independency from him. It worked sometimes, and other times it did not work so well. But mostly it was the three of us on our own there." – Person 1, final interview

"I think the mentors trusted us as well, but we didn't update them so much, so it was like alternating between "We trust them, but don't know what they're doing, but trust them, but don't know what they're doing". But they told us we were doing a good job, so I think they had trust." – Person 1, final interview

Throughout the program, the mentors seemed to have contributed in complementary ways. Mentor functions provided were appreciated, but in many cases not enough according to Person 1. The respondent was also split on how they thought the help was compared to how it could have been.

"The mentors complemented each other in many ways. One gave more methods, another gave more knowledge." – Person 1, final interview

"While we did get some information and knowledge links from the mentors, I am split about it. Because on one hand I would have wanted even more, but on the other it was sometimes too much information as well, and so you cannot see the relevance of the article or something in the moment it is given. Maybe I would want more follow up on that." – Person 1, final interview

"I think while our mentors did not put us in touch with probably anyone during the process, other mentors in YSI did which was very helpful. So not getting connections from our own mentors did not affect us THAT much, but if we didn't have the supply from others that would have been really bad since we would have been entirely on our own." – Person 1, final interview

"In the sense of us seeing more options around us and having confidence to act on them, the mentors did help us to a certain extent. It was not extreme, but their perspective did help in many cases." – Person 1, final interview

Furthermore, another key observation was that the mentors' abilities to both understand and intervene on underlying issues were criticized. The respondent describes them as not being good enough at listening and asking the right questions to understand underlying problems and barriers. Their actual interventions and lack of interventions were also questioned.

"I don't think the mentors were so good at listening and trying to dig into what lay behind the different decisions and problems that came up. In some ways they became better at it when we had some individual conversations later on, but not when we met as a team, no." – Person 1, final interview

"For our mentors I think that in the team meetings they were also a bit lost. In example like they seemed uncertain on whether they should intervene more or less than they were, since they didn't know if our style of work was good or not and what it would lead to in the end. And that confusion just led to that they didn't do it." – Person 1, final interview

Finally, the lack of coordination between mentors and the resulting confusion was repeated as a frustration by Person 1.

"Sometimes I think there was a bit lack of coordination between mentors on who were supposed to answer, which meant it took more time. Seemingly it was because they also sometimes didn't know the answer and had to coordinate with other YSI mentors or do some research." – Person 1, final interview

4.2.4 Summary team B

Development. Team B were in many ways closest to following the Tuckman model. The mentors explicitly mention that they do as well. They learned to collaborate better over time as they did not hesitate to deal with conflicts or frictions as they came. Examples of frictions were differences in participation and work styles. Mutual understanding went on to grow in the final period, even though they at times had to deal with the same work style issues. The team was also quite coherent.

Other recurring issues that arose were linked to repeated occurrences of "confusion holes", which caused paralysis. Possible sources were that (a) the team had their greatest strength in taking and acting on feedback and their main weakness as indecisiveness, creativity and handling uncertainty, (b) passion seemed to be lacking in the team, and their source of motivation was called into question by mentors and (c) the team's knowledge and understanding of entrepreneurial tools was decent and growing, but never truly reached a high level. It was poor initially, and at every period they showed a lack of understanding in one way or another. They were not particularly action-orientated and did few interactions with external stakeholders early on. The team started consistently started developing more whenever they were pushed to do such activities.

Mentoring style and deployed functions. Mentor engagement was generally somewhat disengaged and reactive, but proactive in certain periods. Intervention approach was directive in most cases. The combined style was mentioned to work ok in periods but often have less effect than the participants desired. The mentor function of trust and reciprocity performed to a certain extent. Other observed mentor functions were sporadically observed. Early on there were indications of the professional development function, but this transformed into emotional and psychological support in later periods. However, their ability to provide the latter was criticized, especially when it came to motivation as the Mentor 1 tried to tell the team that "they had to be more motivated for the field they were in". They also criticized their mentors for not being good enough at listening and intervening and described them as "a bit lost" and confused on whether they should act or not.

Interventions done with this team include (a) some early structure and collaboration sessions, (b) some reflection sessions both on team and as a sounding board, (c) smaller interventions to push the team on from confusion and paralysis, (d) some direct interventions on getting the team to be more in touch with external stakeholders and (e) some interventions on business development in the final period. There were a few interventions that did not have much effect. In addition, there were occasions where participants in retrospect were frustrated about a lack of interventions from the mentor, often related to the low level of the mentors' involvement. Often, interventions came from other mentors

than the ones that were assigned to the team. The issues they had with paralysis and confusion led the program manager and two other mentors to come in during July. They did interventions and pushed the team in ways that the designated mentors could not, increasing speed of actions, reflections and interactions with external stakeholders.

Additional interesting findings. While not explicitly observed in the data, some indirect implications were found on a lack of clarity of what the mentor role entailed and the expectations they would have to each other. Furthermore, the mentors lacked coordination several times, causing confusion and uncertainty with the team.

4.3 Team C

Person 1

Person 2
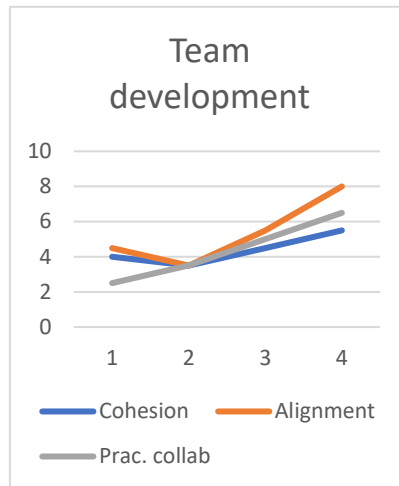
Person 3

Figure 12. Team dynamics of Team C
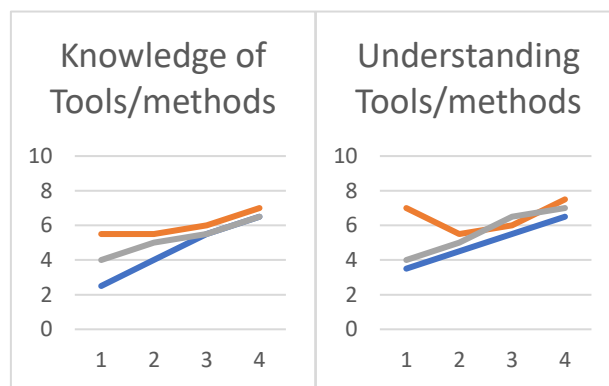
Figure 13. The knowledge development of Team C

Figure 14. The skill development of Team C

Figure 15. The motivational factors of Team C

The graphs in Figures 12-15 indicate that the team experienced a steady developmental journey apart from a dip in the first period and some stalling in the middle. The early dip mainly influenced (a) decisiveness, adapting to uncertainty and proactivity, (b) self-efficacy and commitment to their project, problem area and idea and (c) the team cohesion and alignment. The lack of proactivity in the first period might have led to skills and knowledge being less visible to the mentors. The team was also quite slow to receive and act upon feedback until the final period.

Strengths of the team seemed to be marketing and commitment to problem area and idea. Weaknesses were low interpersonal and collaborative ability, possibly related to a very high degree of perseverance and a low receptiveness to feedback. In addition, the team were not proactive in the first period of the program, but this changed in time. Finally, their ability to learn was also relatively low initially.

4.3.1 Period 1 – A barrier in the start

The mentors explained that this team had some issues early on. Their struggles were mainly on integrating well with program processes, for example making the team run smoothly or using the tools and resources that were available to them.

"They weren't really proactive initially and didn't really seem to or want to use tools. Didn't read Novoed and had a general reluctance to use new tools. We didn't know how they were working. They said they spoke together mostly every day. But there was a real lack of structure, for example on when they should meet up and so on […] Neither did they take initiative to go out and get new knowledge. They just did stuff based on what they thought of themselves or reacted to what we sent and said to them. The first presentation where they showed their team building phase was not that good. They were a bit all over the place, lot of words with little meaning." – Mentors, summary interview

While progress in the first period seemed somewhat lacklustre, the team had good reason. One person was unreachable and did not join the program at all. Just before Insight Factory begun, another team member joined. Most of the early workshops ended up being rushed or neglected due to this inconvenience.

"My team had a rough start because we lost a member in the start and then another one had to come in late." – Person 2, first interview

"There was uncertainty in the team due to the early lack of a participant. They had to decide whether they would bring on another person, since they had already done the team building." – Mentors, summary interview

Person 2 reflected that they initially had collaboration issues, but stated that they were improving on their mutual relational understanding and practical collaboration ability as they went along.

"At first it was difficult to reflect properly and take decisions together because we didn't know each other. But in time you develop some trust, and decision making needs a lot of trust. Now that we are starting to move into the research phase, we have a lot of deep conversations about what we want to work with and not. And that is an important decision we have to make." – Person 2, first interview

Person 2 seemed to take more responsibility in the early phase, pushing the others and being the main point of contact with the mentors. The graphs in Figure 14 reflected this through Person 2 scoring higher on resource planning and receptiveness to feedback. Some frictions occurred as Person 2 had to drive the team on, but they were not major.

"Like we haven't experienced much problems or conflicts. Sometimes like Person 1 is missing some meetings and stuff like that. And I always send these angry emojis to him. But it's okay it's not like we have a fight, and he

usually says like "okay sorry I had problems with the Internet". […] I feel in my team I'm the one that motivates the others. I say for example: "Today please work on this". I don't feel much problem with that, only if the others are not attending a session or something. But when this person answers and I see that the person is actually working I am okay." – Person 2, first interview

It is also interesting that while Person 2 initially was the most receptive to feedback, this ability declined through the first period. Person 1, who entered the team late, ended up becoming the most receptive team member. However, the lack of proactivity hindered the person from utilizing the listening skill. This was explained more in detail by the mentors.

"On that note it was crucial that Person 1 entered the team, because he was the only one who actually listened to what we said and did something with it. Or, Person 2 did that a little bit too, but he was mostly defensive. But Person 1 listened. And we gave him a feedback on that as well, that he should use that ability more and take more space. Trust more in it and use it in the team." – Mentors, summary interview

"Generally, Person 1 had high level of understanding and was a good listener but was not really proactive enough to use the potential of it to create progress for the team." – Mentors, survey response

Pushing through a slow start, the team did well in the Insight Factory. Due to their slow start, this caused surprise with the mentors. Mentors were also not particularly involved with the team despite the early difficulties. The data showed the combined result of this. Person 2 was dissatisfied with their involvement level, and the relational reciprocity and mutual level of trust was questioned. The utilized intervention approach was observed as somewhat directive.

"During the insight factory our second mentor didn't know much about what we were doing. She told us at the end that she was worried and stressed because she didn't know if we were doing a good job. After that she said she was relieved. I don't know, it seemed almost like a lack of trust in the process, but it's ok because she didn't know us, and she didn't know how we work. But I don't know if she was expecting a bad outcome or something." – Person 2, first interview

"We were really impressed, suddenly! Don't know if that was a good delivery or just better than we expected. But it was quite good data, a nice presentation etc. We worked a bit with them on that as well to give feedback on their presentation and message etc." – Mentors, summary interviews

"It's more like we talk about how we made decisions, but they don't interfere directly. More often they are like: "Okay did you remember to think about this topic or this other thing"." – Person 2, first interview

The mentors described that they felt their role was to handhold the team in the early phase. This could be related both to the lack of development in trust and reciprocity. Their intervention approach was yet again observed as directive in this early phase.

"We had to try to get them going in the start. It might be best described as handholding. Somewhere in the start we said to the team that they had one week to get going with Scrum, and when we got back, we wanted to see that they did it. They did a good number of things on their own, but they didn't really get in depth on how to make their team collaborate or plan better. Or get more coherent." – Mentors, summary interview

Directiveness was a recurring topic in the abovementioned situations. Generally, the mentors confirmed through the summary interview that their intervention approach was deployed in such a manner. Special attention was placed on the "us versus them" situation that developed between mentors and participants.

"In the start they just did "top of mind" work, not really research. If we asked some control questions, they just had a poor answer. They mostly tried to explain it away with more of their own thoughts. It became an us versus them situation." – Mentors, summary interview

Regardless of the trust and reciprocity between mentors and team, there were indications that sessions with mentors provide some value. Person 2 mentioned that the talks with mentors helped them see new perspectives and changed the way they saw things. In addition, they had a reflection session after Insight Factory.

"For example, we had a session with Mentor 3, and he would say like "OK what do you think everyone did right on the insight factory?" I was like "OK I think Person 1 did this thing this way, and I learned that Person 3 is good at research", and all that is things we can use now." – Person 2, first interview

4.3.2   Period 2 - Catching up, but not without trouble

Frictions arose when the team moved into the research and solution phases, as they struggled to do it properly. This development was not captured well in the graphs. Few signs were visible except the increasing but still low levels of receptiveness to feedback, collaboration and learning ability and a stall in some motivational factors in Figure 14 and 15. However, Mentor 3 explained in the survey and the interview that this could not be captured in their ratings.

"The frictions started once we were on the ideation phase. The three of us have strong personalities, and we wanted to put our ideas first. Stubbornness didn't help, but we managed the situation by defending our ideas with facts." – Person 2, final interview

"There was a period when selecting between three different directions they just stood still for a long period without being able to take any decisions and moving forward." – Mentor 3, survey response

"In the start of the research phase they just said things and didn't really have backing. When they started using Miro, that helped them a lot in getting more solid arguments and structuring them. But then they met another

hurdle because they were splitting their focus poorly. They had three problem areas they checked out, and each person just worked quite individually and gathered arguments for their own area and agenda. Ended up almost in a conflict because they were selling to each other rather than trying to understand and compare areas." – Mentors, summary interview

The team's storming phase was also explained by Person 3 around the time where it happened. Experiences they drew from the situation led to an improved ability to collaborate and align.

"In ideation phase everyone had very different points of view. And we didn't have so much ideas at the point where we perhaps should have had them, because we were not doing ideation right. That led to some friction in the team. First when we had frictions, we just used to be quiet: "If he thinks this is right and I cannot convince him, then just leave it". But after that we started saying no, everyone should convince the other one. If they think it is right or wrong, then they must show why. So, this got better." – Person 3, midway interview

The mentor's involvement seemed to become somewhat lower in the second period. The mentor relation and reciprocity suffered, almost to the point of distrust. A link was observed between these developments as Person 3 explained how they were not proactive in their approach.

"I am the kind of person that would never ask for anything, but if they reach out to me, I will be very happy to hear. I think they should be more active and more present. Maybe they think a team is doing OK, but that doesn't mean that they are doing OK. So even if they are not asking for help, that doesn't mean that they don't need help."
– Person 3, midway interview

"I think the mentors think we are not able to do it. They seem to not trust us to be successful." – Person 3, midway interview

Both sides explained that continuous poor trust was the result of a recurring defensiveness from the team during meetings in the research and solution phases. Evidence again showed links between the involvement level and intervention approach of the mentors, proactivity of the participants and the receptiveness to feedback shown by the team.

"The mentors were saying that we need to get validation of our idea and we were saying that yes we talked to the people and they have given this idea, so we think it is going to work. I think they should have understood that we were clueless on HOW to do it since we always gave the same answer. In our meetings we were always defending our idea and saying that it will work out. The mentors asked us why we are always so defensive, and that they were there to help us. But I don't know, with the program manager we did not have this feeling of defensiveness"
– Person 3, midway interview

"In the end of June, we talked to them and they were ready to defend themselves. They literally said to us in the start of a meeting "We are here to defend with sword and shield". We laughed at that and tried to say that this is not why we are there for them." – Mentors, summary interview

"The mentors were often like "oh you have to get out of the building". But they never really explained or showed what that meant. Maybe it was some motivation to go out and talk to people but not really that relevant." – Person 2, final interview

To a certain extent, the team blamed the mentors for pushing them into defence mode. Both Person 2 and Person 3 quoted the mentors to show how they tried challenging the team. The quotes indicated that they utilized a directive approach. Person 2 also mentioned that the mentors did not help them much in their learning and reflection processes.

"In ideation phase we were confused because they used to give ideas on what we should do and they were always saying: "This is not something innovative, what makes you different?" Every time they repeated the same question and every time I gave the same answer, because I didn't know what else to do there." – Person 3, midway interview

"I think the mentors did not really help us learn or reflect that much. Instead it was more like controls and checking. How we are doing and checking if there was anything, we needed help with. The mentors never really called us out on anything, but they were often critical in a sense that they were asking us "are you sure?", "where did you get that info from?". But yeah it was ok anyway." – Person 2, final interview

Person 3 further argued that the lack of involvement led to a lower ability of the mentors to provide proper assistance, and that they failed to live up to the expectations. However, there were also indications of poor clarity of both expectations and roles when the respondent mentioned that they should be forcing them to do necessary activities.

"I think mentors should be there often and push us or force us to do certain things like workshops. I think if they interacted more with us, they would know more about what we need and also be able to help us better." – Person 3, midway interview

"I expected more of the mentors. Now that we are working on finding the idea, they send us some links to websites. It could have been more, especially before even when we didn't perhaps need it so it wasn't as apparent, it would have been nice with more involvement. Especially since they know a lot more about sustainability and start-ups. I guess they could have said more examples from their own country and so on." – Person 3, midway interview

The mentors brought up another viewpoint that on one hand supported what Person 3 mentioned about lack of involvement, while on the other showing that Person 3 had a too dominant role in the team communication. They explained an intervention they did while reflecting on their involvement.

"I don't think we did enough to intervene when Person 3 was dominating the team communication. The only thing we pushed on was that the team would have more feedback sessions, which we did several times. Also pushing them on structure. We didn't take too much of a role in it. Pushed them on having feedback sessions so that stuff would come up through those sessions. We had one feedback session that was very good, and then we said "Ok,

now you have to continue doing this". Maybe we should have taken a more active role on that issue." – Mentors, summary interview

In addition, the mentors talked to Person 2 midway about the team's practical collaboration. He explained that they helped him overcome frustrations and issues with team-members not putting in equal amounts of work.

"Also when we felt someone wasn't doing the same amount of work, I personally felt mad but our mentors told us to talk directly with the person and ask kindly to change the situation, and actually it worked." – Person 2, final interview

Several other attempts were made by mentors to improve the situation. First, they tried giving the team advice on how to get past their differences. With regards to the increased collaboration ability of the team that was mentioned by Person 3, this seemed to work. Another was to improve structure on how much they would be involved. The final one was to call in the program manager to help solve the issues, break down the defensive barrier of the team and help them find out how they could better combine their research and ideas.

"When the team were stuck in their own agendas, we advised them to change up who did what. One person would research the area of the other and so on. It was hard for them, mostly they kept going back and forth, because they disagreed on what they wanted to do and what was important. This lasted until the program manager came in and said to begin with ideation." – Mentors, summary interview

"We did not support the path they chose. So, we were stuck and that was when the program manager came in. He showed them a different direction, with more focus on a platform service. They were really excited about this direction for about a week, and then they went back to the original idea. They've always ended up going back to what they wanted to do and somehow getting it to work. But we have like not been on their team on the idea itself." – Mentors, summary interview

"A lot of the communication from our side was very ad hoc. When we felt like we didn't have control, we would suddenly say "We have to meet". We tried to change this after a while, like in the summer, so we could meet like once a week." – Mentors, summary interview

The poor relation between participants and mentors also led to a certain level of jealousy among the team. As the program manager helped, they started thinking about how other scenarios could have looked like. When Person 3 explained what happened in the period of help from the program manager, they also showed a momentary lapse of perseverance that was not captured in the graphs.

"I think another mentor we talked to gave us more energy. Like he also gave us an idea which we changed to but then we went back to the original one, but still compared to the other mentors it gave more energy. I was thinking that maybe if he was our mentor, we would have been speedier." – Person 3, midway interview

4.3.3 Period 3 - Growing and performing better

In the time leading up to the Oslo Weeks, internal frictions were starting to smooth out and the team worked mostly on their solution prototypes. Other mentors also came into the picture to help them with other aspects of their business, like financials, while their assigned mentors took a step back from their process, partly due to vacations.

"The team collaboration was kind of self-made. We didn't say "OK, your job is this", but everyone was working on what they were best at. On the points of conflict, we got help from YSI" – Person 2, final interview

"At some point, two other mentors helped them on Financials. Before we took a step back, we pushed them on other stuff. Mostly about getting out to customers and experts, testing assumptions and willingness-to-pay and so on." – Mentors, summary interview

"…Then no talk for almost three weeks until start of August when they showed prototype pictures and video. Other people came in during July, which was very good for them." – Mentors, summary interview

The team themselves were somewhat displeased with the mentor's absence, even though they continued working on their own. Frustration carried on through the Oslo Weeks, as the mentors did not have enough time to help the team.

"Before the Oslo Weeks we were really motivated but also confused […] I think one of the things that was disappointing was that there were some things we asked the mentors for which we did not get, and then we had to do it ourselves. With or without help." – Person 2, final interview

"Our mentors did help a lot in the early phases, but I think that by the end we were doing everything just us, and we felt a little bit neglected. The thing I didn't like was that when we were stressed and wanted to do a lot of stuff, there was not too much help to get, and later during the Oslo weeks we didn't felt a lot of support from our original mentors." – Person 2, final interview

"They were frustrated when not getting the things they asked for in Oslo. They also were frustrated that we did not prioritize them in Oslo. We tried to get time to come by them but did not really have the time necessary." – Mentors, summary interview

The mentors explained that the participants showed more proactivity and increased abilities generally in the Oslo Weeks. They also functioned well as a team. For context, this was also mentioned by the participants in their final YSI full-program interview.

"In Oslo they also got more done on what we tried to tell them often. How will they scale things, what are costs etc. They have had a strong desire to find out of stuff. As a team they were good together. Asked many good questions, got feedback and worked well. For example, Person 3 went out and talked to a lot of potential customers and even previous colleagues about the prototype products. Person 3 also asked really good, explorative questions, which surprised us! Seemed to have taken more from Person 1, listening more, trying to ask questions to become better." – Mentors, summary interview

Another note was made on how the team got increasingly proactive with time. The mentors interestingly linked this to their own role. Their impression was that the team development was affected by them being sort of a "common enemy".

"It is cool to see how they started out quite reactive, and then became more and more proactive as time went on." – Mentors, summary interview

"They got a sort of grit through the us versus them approach. It affected their team development through having sort of a common enemy." – Mentors, summary interview

Finally, the mentors disagreed a bit on the learning of the team, with Mentor 3 thinking that they lack some communication and collaboration ability at the end of the process even though it did develop.

"…maybe that is where they have learned a lot, on how to go about things with better entrepreneurial attitudes. I think they've learned a lot about how it is to work well as a team. They are very different people, so learning to work together is important." – Mentor 4, summary interview

"Maybe they did learn about it, but they also were stuck a lot because of it. They haven't worked on it throughout the process. Not usually fully honest with each other, was quite superficial from the start. And that held up until the end in some way or another. They are still quite bad at communicating to each other, partly also knowing what to communicate to each other." – Mentor 3, summary interview

4.3.4   Summary team C

Development. Team development partly followed the Tuckman model. They went through several phases of storming but got through it with help, and then started to work well together. The graphs do not capture all the storming phases, but they do capture the general development of competencies quite well. The team was also hindered by an early situation. One team member was completely unresponsive, and a new member had to be onboarded midway in the first period, making progress and team-building harder. Generally, the team also had problems integrating with program processes until the final stages.

Examples of the observed frictions were (a) early issues due to a lack of equal participation and one participant under-communicating what tasks they did and not, (b) trouble aligning on problem area in the research phase, where participants showed poor ability to listen to each other and collaborate, (c) idea selection process because of the same team mechanisms and lack of listening ability and (d) that the quite dominant communication style of Person 3 created some trouble in the team dynamics. However, the person improved communication and collaboration ability over time. Likely sources for the experienced issues could be that Team C were both very perseverant on what they wanted to do but were also avoiding conflicts early on.

They overcame frictions when they started being more confronting. This helped them learn and progress better, doing a lot of actions through intense prototyping. They acted better on opportunities, was more strategic and better at using their resources in the final phase, exemplified through improvements done on the business side and how they talked to potential customers about their product in Oslo. This correlated with a formation of stronger entrepreneurial identity and self-efficacy.

Person 2 is initially the most proactive and receptive to feedback. However, this declines, and Person 1 becomes the most receptive to feedback while also lacking the proactivity to use it to the team's advantage. Both abilities and motivation increase during the final phase including the Oslo Weeks. Team cohesion and alignment also improved. One important observation of development is Person 3, who became a better listener and asked good questions in Oslo. Mentors suggest that Person 3 took after Person 1. However, it is interesting to see that Person 3 was also very decisive in the final period, possibly suggesting that the person took more of a leading role as well.

Mentoring style and deployed function. The mentor's level of involvement was generally reactive and leaned towards disengaged in the final stages of the program. Mentor intervention approach was highly directive, exemplified through mentors (a) describing the early phase role described as handholding, (b) indirectly and directly criticizing the team on several occasions and (c) trying to

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"check" and "control" their progress to a large extent. Trust and reciprocity in the mentor-mentee team relationship suffered continuously as a result.

The observed effects of this were that (1) the directive intervention approach caused defensiveness and an "us versus them" scenario with none of the parties listening to each other and repeating the same questions, answers and topics in meeting after meeting, (2) lack of involvement hindered the mentors from being able to deploy mentor functions more often, (3) participants felt like their mentors did not live up to their expectations, but that they at least provided some value through reflections and feedback at times. However, one should also mention that the receptiveness to feedback and proactivity of the participants was quite low, especially towards the mentors. Participants described themselves as the type of people who would never ask for help but gladly receive it.

Some interventions were done by the designated mentors. Firstly, Person 2 recalled the mentors giving effectful help on how to deal with a situation of non-mutual commitment and equal participation with another team member. Another example was that they attempted to indirectly intervene on the dominating communication style of Person 3, hoping it would come up in the feedback sessions they set up. It partly did, but they were self-critical on not taking a more active approach. Furthermore, they tried helping the team overcome differences in the research stage by telling them to switch area of research so they would learn about the viewpoints of the team members. They also tried improving their own structure of assistance and involvement level but did not keep it up.

Additional interesting findings. The lack of role and expectation clarity has been observed before and created issues with this team as well. One participant seemed to want the mentors to take a dominating role towards the team, more like a leader who would push them, which is an indication that the role of the mentors was not clarified well enough. As a result of the combined observations, a jealousy developed with the participants as they grew more trust and reciprocity with other mentors than their own. These other mentors, including the program manager, were more involved in the final period of the process. The designated mentors viewed this as healthy and positive for the team, but it left the team feeling sort of neglected.

Another interesting point was that there were indications showing the importance of mentee characteristics in these relationships, especially when it came to proactivity and a receptiveness to feedback. And while they were not that proactive and action-oriented initially, they became more so in time. Mentors made the interesting remark that this might be a result of wanting to prove them wrong. In their words, the team united against a sort of common enemy.

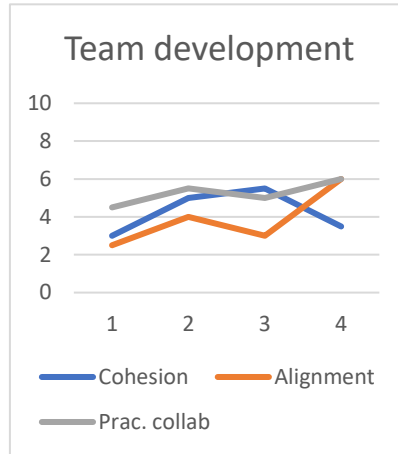## 4.4   Team D

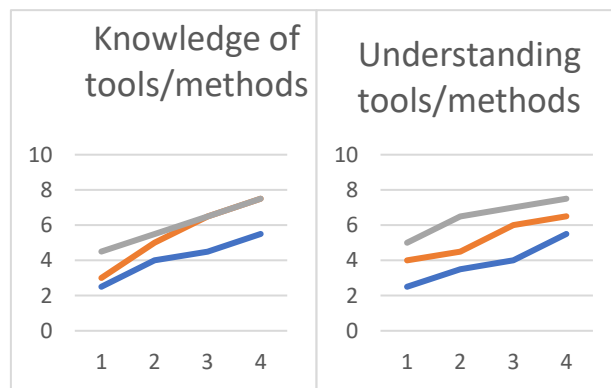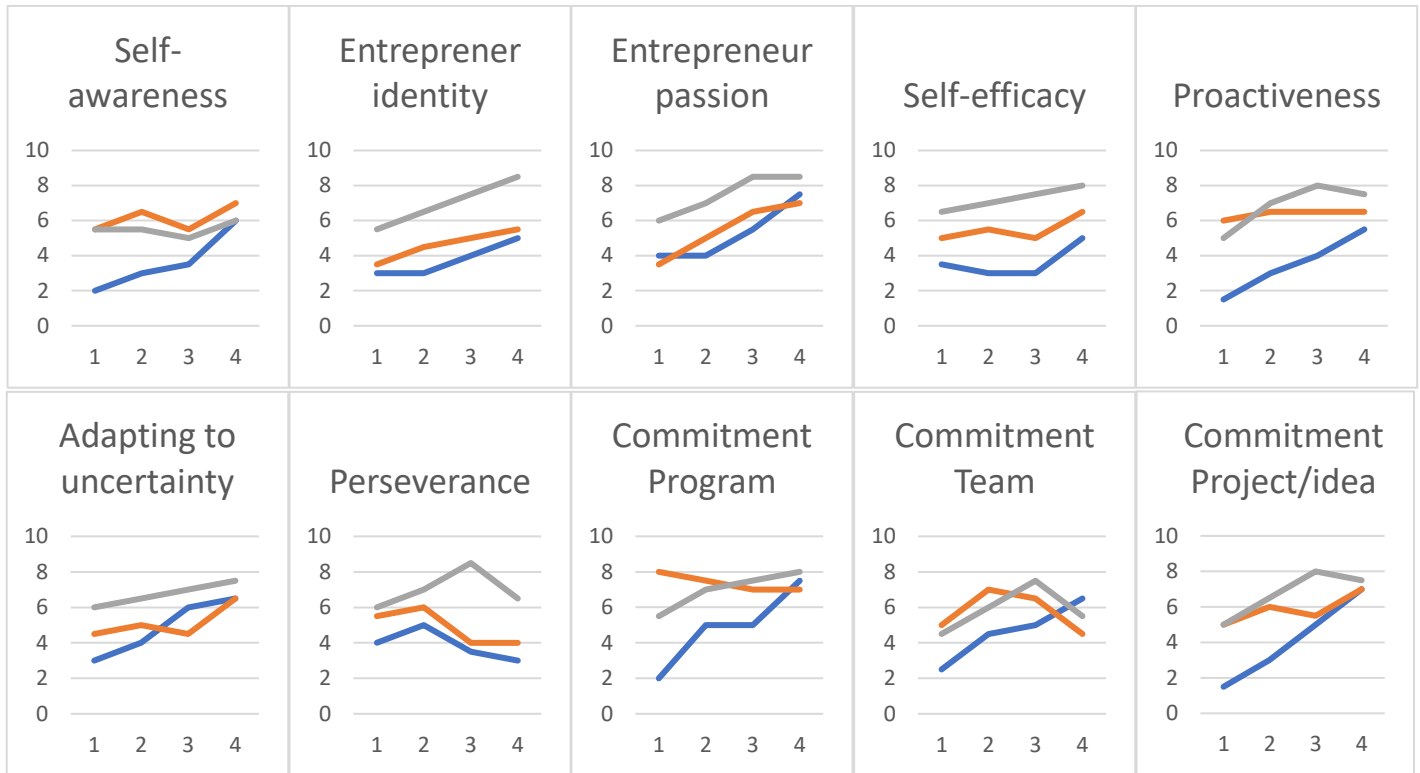**Figure 16.** Team dynamics of Team D

Figure 17. The knowledge development of Team D

Figure 18. The skill development of Team D

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Figure 19. The motivational factors of Team D

The graphs in Figures 16-19 show that the team developed steadily in most factors, with a peak during the first and last periods, a dip of collaboration in the middle and a dip in commitment to each other as a team at the end. The dip in the middle is characterized by (a) a lack of decisiveness and a lapse of perseverance, (b) one person being overly creative and perseverant compared to the others and (c) poor collaboration ability, team alignment and practical collaboration through splitting task responsibilities and so on. The final period on the other hand had (a) two participants turning on the other one, who had finally committed more to the team, (b) a high degree of pivoting or other ways of adapting to uncertainty and in turn another lapse of perseverance, (c) an increase in self-awareness for every participant, (d) an increase in decisiveness and (e) a return of good collaborative and interpersonal skills compared to the dip in the middle.

Strengths of the team were to recognize opportunities and learn rapidly. They also had one very entrepreneurial person that had to learn how to communicate better in English through the process for his skills to shine. Weaknesses were observed to be difficulties in collaboration, low early phase entrepreneurship competencies in general. Person 3 was particularly uncommitted and lagging behind in many aspects.

4.4.1 Period 1 - A slow start followed by an early peak

It was not easy for Team D to start with one person being less committed and present than the other in the team work. Person 3 was very hard to reach and communicate with, and the mentors had to do an intervention. This worked out, even though the person continued to struggle for a while.

"Person 3 was neither present nor managed to plan and use resources well in the start. Had very low confidence and had strong barriers from not wanting to bother people or seem better than others, so often hid skills and knowledge in public communication. Mentor 6 did an intervention where expectations were made crystal clear and the person was held accountable to their own motivation. Their commitment improved after that. […] As confidence grew and the person got role modelling plus tips from us and others, this got much better. But the initial intimidation of the challenge magnitude might have led to this person's struggle to truly understand and use entrepreneurial tools and methods early on." – Mentors, summary interview

Despite the hiccups in communication and presence, the mentor intervention seemed to work. The team got off to a better start as they went on. Another function that the mentor played in this case was to create a stronger early-phase trust in the team, and to be a role model for them in how they could run workshops.

"I think that from day one with the intensity of the backstories the psychological safe space was already set, and as we moved forward it just kept growing. And wasn't forced so it was really nice." – Person 1, final interview

"I think that the workshops with mentors on the start was useful to show us example of how we should work at workshops, how we can cooperate. I do think that the result of the first workshops gave us much on teamwork. When you don't know other team mates from before, it helps to build some beginning of cooperation. It's a way of learning how you can start to communicate with each other and understand each other better." – Person 2, midway interview

"It was really nice, like the mentors were in the presentation for the workshops because we didn't know each other, and we didn't even know where to start. So, them being there and setting the standards in the beginning was awesome. Afterwards, thanks to those first meetings with the mentors' present, the next workshops were more profitable, and we gained more from them because we were already going in a style of how to do things that worked really well. I really think it was important. […] Module one, like getting to know each other and getting to like how we work, and our framework wasn't too challenging actually because there were kind of already some similarities on the way we do. So, it was easier. I think that whatever issues are there are coming more now." – Person 1, first interview

The team did all the workshops and got to know each other quite well. But there was an issue at the first one when two of the team members did not go below the surface. This was best exemplified

through the mentor summary interview, but Person 2 also explained in the main YSI interview that people were more focused on showing the best side of themselves in the beginning.

> "In the first workshop about our life stories, both the mentors and Person 1 went quite deep on a personal level. Person 3 did not share anything though and seemed to be a bit scared of doing it. Person 2 also tried to keep to the work done professionally, rather than follow the example of the mentors and Person 1. While this was an initial hurdle for the team to create rapid trust, they had 6 more workshops where they did manage to build trust better."
> – Mentors, summary interview

> "We got to know each other, but people did not tell about their weak spots. Everyone tried to look good." – Person 2, main YSI interview

The team went through Insight Factory and managed to deliver well despite taking on a very heavy workload. They showed great creativity, and their skills and collaboration ability worked well. A side note was that they failed to present it in a good way, which related to the skill of marketing. This was a possible explanation of why this peak was not higher than it was. Also, the period left the team at a point where they lost capacity and got off to a bad continuation of their early peak period.

> "I was like "what?!" when I saw that the team managed to code a solution for their company including a database and a decision map in just 10 days. That was super impressive. It was therefore a bit of a turn-off when they didn't manage to present it well and take our feedback on presentation; they were reading from the slides. But we found out that it was because they worked around the clock to get everything done in time as well." – Mentors, summary interview

> "We did one intervention when the team did not come to us with problems they had after Insight Factory. All three were sick or absent in some way, one had to go to the hospital and so on, and we did not get to know until all of it was over in a sense. At that point, they got a little "shake" that they need to come to us with these kinds of things so we can help them. Because they didn't really answer either." – Mentors, summary interview

Heavy workload and reduced capacity could have resulted in a storming phase, but this team was mostly avoiding conflict. Person 1 self-critically observed that the team's ability to reflect on things together was not that good, relating it to the lack of friction situations.

> "I think in module one we got a good background of who we are. However, the bad thing is that nothing challenging came up. We didn't have a situation where we had to think about where to go from there. Maybe that would have been good … And the bad thing is that we haven't really reflected that much because we haven't had any confrontation or any situation. So, we are actually not very good at reflecting and put a lot of words on stuff. It's hard for us because mostly we are really good at decision making. Like for the yes or no part as in who does different things, like giving tasks to each other is super easy. It just comes naturally. But really reflecting on the stuff or why something is happening is hard for us." – Person 1, first interview

"No, to be honest there's no friction. But maybe we've just realized we need to talk about this stuff. We got to talk about this stuff as much as we should. It is not a big problem, but we have realized we have to deal with it." – Person 1, first interview

While the mentor relation seems to be good, and the help and interventions effective, there were also uncertainties on how to use them. One respondent was unsure on when and on what to reach out for.

"I also don't know in which situations we are supposed to keep some things to ourselves or we should say them to the mentors. And another thing is, I think that when they have helped us it has been really effective. But something we have been failing to reach out in important times." – Person 1, first interview

This effort on helping the team and individuals reflect and focus on alignment was echoed by the participant early on. The first mentor tried to help both the team and the individual team members to reflect on themselves.

"And then on reflecting as a team and the feedback and everything, Mentor 5 pushes us a lot. Because we wouldn't be talking about actually how we're feeling this or trying to get aligned again if he hadn't pushed and talked to each one of us and help us reflect on ourselves." – Person 1, first interview

4.4.2 Period 2 - The semi-lone ranger

Miro was a tool that a lot of teams used, but few managed to get more out of it than this team. Both research, idea generation, solution selection and business modelling were done through the powerful visualization tool. The mentors were impressed by how the team used it to create mutual understanding of complex topics. They also showed a relatively good knowledge and understanding of the entrepreneurial tools and methods.

"We have a lot of discussions about like finding the problem. And discussion was really very deep, because we discussed almost everything. Looking at Why is this problem, why doesn't it work? And others want to try to solve it." – Person 2, midway interview

"The team were crazy good at doing in-depth research and getting it into Miro. At some point, Person 2 made lists of 50 companies and organizations in each sub-industry for their problem area. And their mind-map was just huge." – Mentors, summary interview

Despite their mutual understanding and increasing domain expertise, the team experienced a dip in the middle as they developed two issues. The first was a struggle to converge on problem area, the

second was an idea-misalignment. Both were related to each other. The mentors did an intervention on the issue as well. A non-directive and listening approach was used by the mentors.

"At some point in the middle of the research process, the team was struggling a lot to converge from their huge amount of information and possibilities. An intervention was done by providing them with a method for better decision making, called choice metrics. It worked to a certain extent, and after a while they moved on to idea generation. We tried to help them in part by asking what they viewed as important in the short and long term personally, professionally and with regards to other things they might find important." – Mentors, summary interview

"When you chose a problem, I think that the biggest challenge is to find problems which all team members will be passionate about. And because you can choose like a very nice problem, which one of the team members will be passionate about, but without the help of other teammates, you will never get success. So, I think big discussion and the biggest challenge is to find a problem to be suited for everyone." – Person 2, midway interview

The idea misalignment happened when Person 2 went off in a direction that the other team members felt was unrealistic. With a lot of creativity and perseverance, the person tried to convince the others of this idea with a lot of solid facts, visiting a lot of national experts on necessary topics. This led to a conflict that had to be resolved with help from the mentors. The problem was fixed, and the team cohesion and alignment became better after this period. However, the mentors think that the issue was mainly task-related, and there were few signs of interpersonal conflict.

"The first real situation where our mentor had to intervene was Person 2 being like Super obsessed with one idea and we wouldn't be able to change his mind alone. And this change didn't happen that fast. But in the end, the help from the mentor was efficient, because Person 2 changed his mind-set and not just the idea, which was really helpful in the rest of the program; it never happened again." – Person 1, final interview

"Interesting part on perseverance is that the person tried to go two ways at once, where one was his idea that he loved and also went for trying to explore. For example, by discussing with experts, but also with me, the mentor with some peer-based domain expertise - we were at approximately the same level of understanding of the area. He also did explore other options including the one that the other team members were looking more into, but not as much. So, persevering on his own idea, to the frustration of the team-mates. And without alignment and decisions taken it was hard for them to get somewhere." – Mentors, summary interview

The struggle to align also affected the team in the sense of slowing down their ability to create solutions in a quick manner so they could test them in line with entrepreneurial tools and methods.

> "Making solution is easier for my part because if I know a well-defined and specific problem, I already know a couple of possible solutions, and it's easy to check if this solution will not work. Then I will just try another one. And so on. But when you're looking for a problem and this problem is not like something specific, it's like finding a needle in the haystack." – Person 2, midway interview

As the team went for the other main idea, they also did a lot of outreach in line with entrepreneurial tools and methods. They had some experiences with experts that made them understand that they had to step up their game. In addition, they got a partner which led to the team adapting their solution.

> "The funny thing is how their initial idea was quite bad, and they went to some experts who basically slaughtered it. But suddenly they found this organization of researchers who in many ways did what the team wanted to do but lacked another service on top of it that could use their data. The team pivoted to making a service more in that direction and got their first partnership." – Mentors, summary interview

In this period, the team seemed to keep developing a good relationship with the mentors, but still mainly with Mentor 1. Evidence showed that the mentors performed the function of professional development in this period, particularly through being present and giving a lot of feedback. Emotional and psychological support is also observed.

> "More with the first mentor than with the second. I don't know why. But I felt that from the beginning that we have more conversation with the first mentor than the other. I think we have a feeling of being closer with this person. (Why do you think that is?) I think because from the beginning the first mentor wrote a lot to ask. Asking how is our work, how is our progress, how are we doing as people? So, we answer and start to share more information with him. Maybe it's feeling that for the first mentor it's also very important and he is more proactive. […] Responses are very, very fast. You can write something and get the response in a couple of minutes. So really good, don't need to wait a long amount of time." – Person 2, midway interview

> "The mentor feedback was very valuable when we were trying to decide on things and improve our work. Because they gave a lot of help and were present. […] When we have a talk with our mentor, I mostly feel some lift of the spirits. It's like feeling that something can start working better because we can discuss interesting things. And it's also fun. […] It's hard to explain, but hmm. OK. Maybe because every time we talk, I have a feeling that I will get wise advice. And if you will do it in practice, it definitely will help for your progress. Feedback also helps you move further and faster." – Person 2, midway interview

4.4.3 Period 3 - Pivot, perform and crash

After the team managed to figure out their differences, they hit another hurdle. The midway pitch gave them an emotional barrier. Mentor 6 went in to intervene and provide the mentor function of emotional and psychological support.

> "After the midway pitch, nothing really happened on their part. They were quite depressed because, out of all the teams, they got the least feedback and only one question from the audience of external people. Mentor 6 had a session with them, perhaps one could call it an intervention, where the team was given a lot of emotional and psychological support. Tried to make them feel a bit special because the field they work in is hard to understand. The outcome was that they were more ok with doing stuff without doubting themselves because they could not yet explain stuff well enough." – Mentors, summary interviews

Their progress became faster after the intervention. They then went on with finding potential partners and talking to experts until the Oslo weeks and the end of the program. Mentor 5 was also helping out with several solution and business modelling aspects in the final period, related to how they were trying to create value for their customers.

> "Whether or not it can be called intervention or not, I (Mentor 5) was helping the team a lot on their business modelling and their understanding of the customer journey before and during Oslo." – Mentors, summary interview

> "During the Oslo weeks, the connections to experts was great, we got so many connections." – Person 1, final interview

At this point they were having big trouble explaining their idea. Mainly, interactions with external actors and industry helped them specify more what their solution consisted of, the value it created and their alignment on how to make it.

> "Until the team talked to three experts in two days, the team struggled to specify and explain their thoughts and ideas. They had a very strange circle of pivots happen during these two days. First, they did a pivot away from the idea they had worked with until that point. Straight after their pivot, they talked to two external experts in meetings set up by Mentor 5. This led to the team pivoting back to their original idea. They talked to another expert the next day, who managed to understand their idea better than anyone previously did, which helped them specify and pitch better." – Mentors, summary interview

Regardless of the team's final performance, their cohesion degraded through the Oslo Weeks, with two people forming very strong relations and, in some ways, not including the final team member. As observed in previous periods, this was the person that started out at a lower point than the others with

regards to skills, commitment and other motivational factors. It turned into a conflict the day after the program ended, when every delivery and pitch was no longer putting pressure on them. A conflict on underlying difficulties quickly surfaced after having been avoided for a while.

> "We have had some frictions and conflicts in our team. And it's mainly been, I think, for cultural and background reasons. So, hard to control and hard to predict it will happen. Thing is that it happened in person. First, we tried not talking about it. That was really bad. One should never not talk about it because it's only grows. And then people start like going through this stuff on their mind and building their own stories and their own situation that is not the reality. Each one has their own reality in their heads. I think that when we started talking about it, even though we were a bit uncomfortable, we could figure out that we are different and that it's not easy. But maybe if we had haven't built up like those stories in our heads, it would have been way easier." – Person 1, final interview

Mentor 5 had to do a sit-down with the team to understand more about the conflict and intervene in whatever way was deemed necessary. In this situation there was some evidence that the mentor generally listened deeply and used a non-directive approach with the team. From the quote of Person 1, it seemed like this approach contributed to the increase in self-awareness of the participants that were shown in Figure 19 for the last period.

> "The dynamics and cohesion in the Oslo Weeks were weird. Two participants spiked in friendship (10/10) while the general cohesion was perhaps 8 in my view. But in the final few days of the program it plummeted as the divide became increasingly apparent and made the cohesion worse. It ended with the two coherent team members more or less stating that they did not want to work with Person 3, and they asked mentors to help fix the situations. I (Mentor 5) had to do a sit-down with them." – Mentors, survey response

> "The mentors asked us questions and tried to dig into underlying reasons in those friction situations. It helped us see things through the other's glasses and try to see ourselves from their perspective as well." – Person 1, final interview

The effectiveness of the intervention was so that the team chose to continue their journey together and attempted to keep working despite their differences. However, Person 1 explains that there were still doubts in play.

> "So, what I still haven't figured out Is that I still don't Hundred percent agree with how Person 3 does stuff. I don't know if that can have a fix. If you could ever get to really combine and accept, I don't know, someone that does things really different to you in the start-up. But when we'll have the answer we will succeed. But the personal stuff, we handled it completely. Just more about work style. I don't know. There's like a chemistry builds in work settings or it doesn't. So, it's not flowing completely yet." – Person 1, final interview

In general, the respondent placed a lot of focus on the mentor relation and effect in the final interview. There seemed to be a high level of involvement from the mentor's side except in the Oslo Weeks, where both mentors were particularly busy.

"Time was really good. On the Oslo weeks it was slower because one of our concierges had a really big workload with the logistics and the other one was helping all the teams. Mentor 5 still connected us to important stuff, but was a bit distracted sometimes. But during the online program it was fantastic." – Person 1, final interview

The mentor functions seemed to be generally quite complementary between the mentors involved with the team. Motivation to act through emotional and psychological support was discussed as well.

"There was a big difference between the mentors in the sense of everything. I think of skills, of personality, of ways to approach things. It's like we had the first mentor who we went to more for the idea stuff and to work on things and on the program itself, methods whatever. Then we had the second mentor who we went to for other type of stuff. And who during the Oslo Week also did a lot of logistics and answering questions. But she was like a super cheerleader. Every time we did something she was like: Guys, don't forget you did great. And then we are like: Is it really? Hmm, well… So, they supported us in that manner […] It's like from the second mentor, sometimes it's actually like things where we are really self-critics, and it was nice to hear that from her sometimes. She has like good support. And then from you is like you inspire to concentrate and to do stuff, so it's more like an action orientated motivation." – Person 1, final interview

A high level of reciprocity and trust between mentors and participants was observed at the final point as well, reflecting the solidity of this finding. The respondent explained that the mentor had more of a peer mentor role as well, when asked a follow up question about role clarity, involvement level and intervention approach.

"I think when looking back the first mentor did definitely perform sort of a peer mentor role for me. More like that than a coach for example, and they were very active through the process. We interacted a lot and became good friends […] I like the second mentor, that person is awesome." – Person 1, final interview

Finally, the mentor function of professional development was observed again. In this case one could also observe that interventions were done to help the team interact with external stakeholders.

"The mentors really opened my eyes on seeing options and being able to act on them. I was for example not even aware of how interesting it is to talk to people, like experts and so on. I feel like I could reach out to anyone. Think the team also learned so much on this part, maybe our biggest learning from the program and mentors […] I think the mentors helped us develop skills and stuff, especially because we are, I don't know, the team members, maybe we all are like super logic and super orientated. We kind of learn more skills on the listening part and the understanding the other one's mind part and also realizing everyone is just people and you can reach anyone. And you can get insights from everyone. You just have to go for it." – Person 1, final interview

4.4.4 Summary team D

Development. Team D experienced a steady developmental journey, but had some issues spread out across periods. Cohesion and alignment followed a somewhat similar line as the Tuckman model, but the time aspect was different. Person 3 had a very slow start and was lagging behind the others. However, this got increasingly better over time, the first instance being their strong delivery in the Insight Factory and early research phase. This period showed indications that the team had many good but also developing entrepreneurial competencies. And the importance of interacting with external stakeholders was observed several times.

Key struggles were a task-based conflict in the middle and a conflict intertwining task and interpersonal aspects at the end. The first struggle happened when the team were converging on a problem and an idea. While some competencies like collaboration ability declined, the team seemed to learn from their mistakes through help from mentors and grew to collaborate better. The final conflict had been somewhat underlying, and Person 1 and Person 2 criticized Person 3 and were unsure whether they could work together after the program. The conflict was partly solved with the assistance of the first mentor. A source of this conflict might be the observed conflict avoidance that was present for personal issues, so that they did not handle this earlier.

Mentoring style and deployed functions. The involvement level of the mentors was generally proactive. Mentor 5 was very proactively involved, while in the Oslo weeks both became more reactive due to working with other organizational activities or helping other teams. Their approach was observed as mostly non-directive and listening. Reciprocity and trust in the relationship started out quite high and developed to become even stronger with time, to the point of close friendship. The main effect of this was that all mentor functions were observed at several points during the program. Participants were generally satisfied with the mentor support, with a minor exception due to being more reactive in the Oslo Weeks. An example of this was how both mentors provided different functions, one providing a lot of help on professional development and another being very supportive on the emotional and psychological aspects of their development.

Another important mentor function that was rarely observed anywhere else was role modelling. This happened both in the start of the program and during the conflict resolution in the final days. Participants explained that the mentor role modelled how they could run their workshops early on. And the effect in the final days was that the participants became more self-aware due to the mentor helping them see themselves from the perspective of the others and understand how one should not assume intentions and word interpretations of the others. A note was also made that the team was

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motivated by the mentors to focus on action-orientation and reflection. Participants explained that they were good at making decisions but struggled to reflect on themselves. Mentors helped them do this.

Interventions done include (a) getting person 3 up and running early on, (b) telling the team to be more forthcoming with issues after hearing about personal issues after they happened, (c) helping them overcome emotional barrier after midway pitch and (d) help with conflict resolution on final day of the program. There is also uncertainty on the actual effect of the final intervention, as the team is not observed for a long enough period of time to know this.

Additional interesting findings. The role of the mentors seemed to be clearer with Team D than other teams, with participants describing their mentors as being more like peer mentors than coaches, leaders or similar roles. But there were indications that expectations and roles were not made clear in this case either. This was exemplified through the team not knowing when to reach out to mentors and for what, at least in the first period.

4.5   Team E
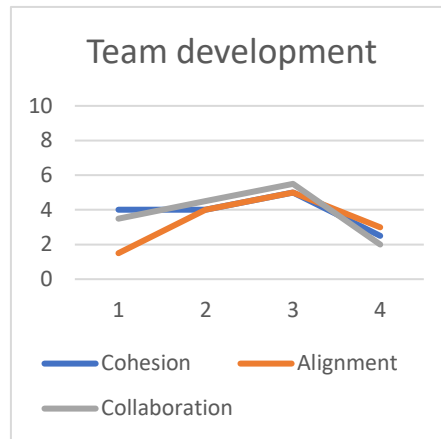
Person 1

Person 2

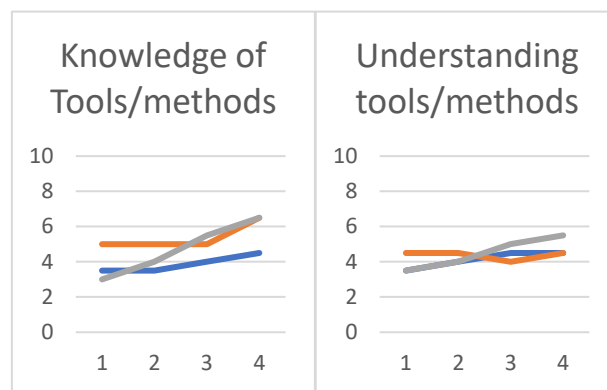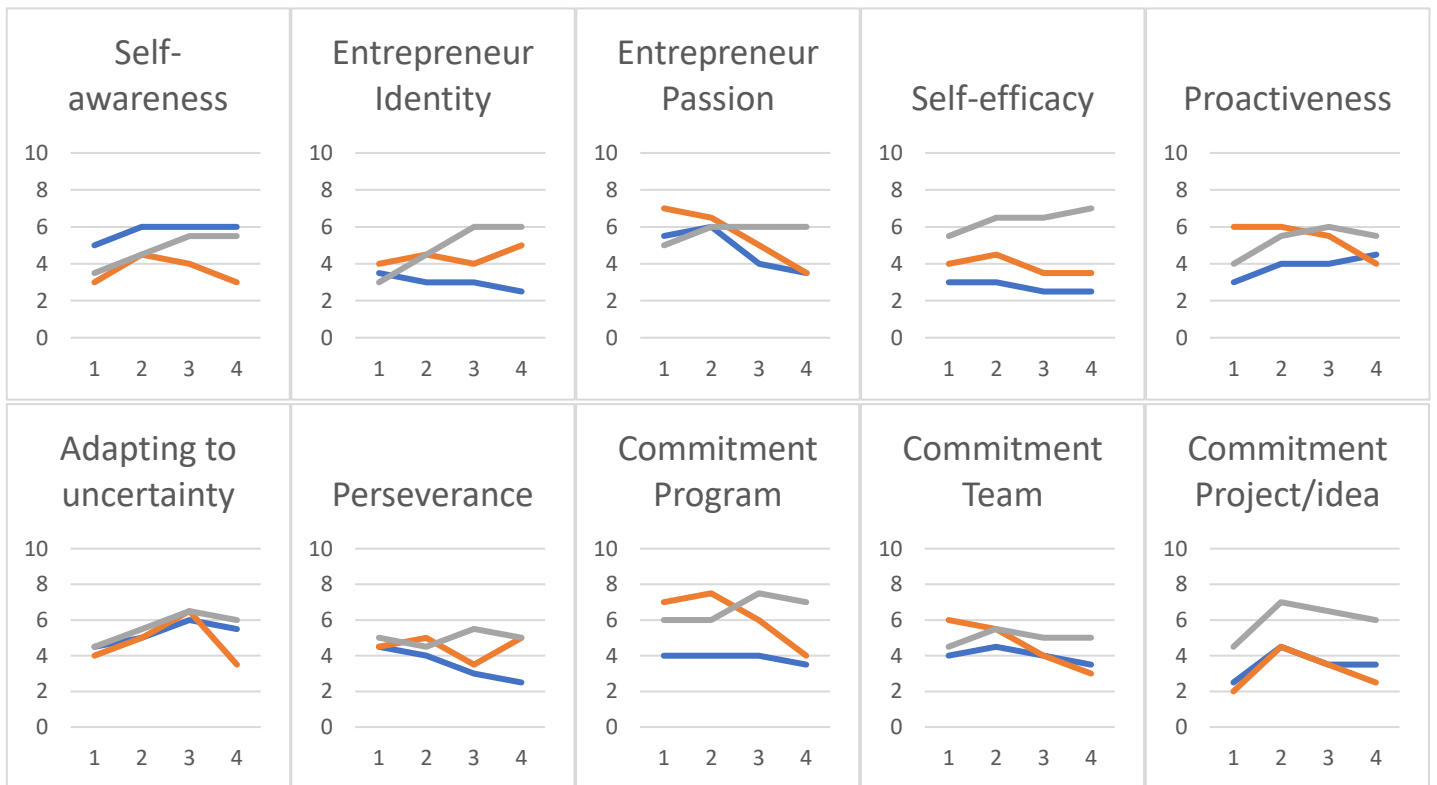Person 3

Figure 20. Team dynamics of Team E

Figure 21. The knowledge development of Team E

Figure 22. The skill development of Team E

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Figure 23. The motivational factors of Team E

The graphs indicate that the team incrementally developed at most of the things they did while starting off very low on most factors. Development of both team dynamics and general competencies seemed to be quite stagnant. They went on to experience significant issues in the final period of the program. This period was characterized by (a) all team development and collaboration factors degrading from being decent to being at a very low level, (b) proactiveness, passion and commitment declining heavily and (c) most of the skills not coming into play during this difficult period. Person 1 seemed very committed at the start but then lost that commitment quite rapidly. Person 2 seemed generally demotivated for doing what the program required during the whole process. The third person grew with time but was often lagging behind in important communication and collaboration abilities.

Strengths of the team were that they were quite good at learning, creativity and collaborative skills in the beginning. Weaknesses were that one person had issues communicating well enough with the others at the early phase, and later that the team were indecisive and lacking commitment.

4.5.1 Period 1 - Off to a poor start

This team went through a rocky phase initially. The data showed that the team struggled to properly understand each other's work and communication styles. A storming phase was triggered by the Insight Factory case, where person 1 felt bad and reached out to get help from Mentor 5. An intervention was done with focus on clarifying expectations to each other. This led to a somewhat increased understanding and ability to collaborate, but the team still faced issues on it.

"There was a point in the middle of Insight Factory where Person 1 sort of broke down, and all his expectations went through the floor. Basically, there was disappointment in the team members ability to contribute. I (Mentor 5) had an intervention with the team that focused on the fact that they must clarify expectations to each other and know beforehand how they will split responsibilities. During the meeting it also became clear how there were large differences in work style and problem solving between Person 1 and 2 because they had work experience from different industries." – Mentors, summary interview

"In one-way Person 3 is a very nice person. Like always trying to make the communication and our group discussion flow very nicely, and always gives good comments. So, I don't think I will have any conflict with her. But with Person 1, it's not a conflict actually, but we have a different approach to the way we are working. Person 1 is very pace-oriented, fast and likes to put out a lot of information and communication. But I'm more of a reflective person in approaching a task. I would like to take some more time to really learn about important things and really comprehend what we have to do and what the final result is. So, I think these differences make me a little bit… Yeah. I think a lot about this process, about like how we approached this Insight factory problem. It's a very different working style, so... It's not a friction, but it's just still a phase to understand our differences on how we can work better in the future project. […] I think we are still to find the pattern of working together in a better way. For example, during Insight Factory case where we only knew each other a little but not really how each of us face the problem and do their work." – Person 2, first interview

Early misalignment and poor cohesion between the team members continued after Insight Factory as well. Both mentors described the team communication as being dominated by Person 1 and Person 3. This left Person 2 with a problem getting through due to not being as fluent in English and not wanting to take space in the setting. Person 2 also explained their own hesitation, and that the presence of the mentors in reflective settings helped the person to be more outgoing and calmer.

"Every time Person 2 is talking, the other two cut the talk short or simply phase out and don't listen to what Person 2 is saying" – Mentor 6, first Outcome Report

"Maybe it's just my own feeling, but I think Person 3 and Person 1 have quite similar perspectives, like they are very collaborative or something, but I might be a little bit different. When I have a group discussion with them, I listen more to them than speak. Because they come from a very international background, so I try to understand that. But when we have reflection sessions with the mentors, I think there is a more neutral conversation where

there is like, maybe less judgement about how I might think. And I can explain logically how things work within our team. […] If I feel confused, I never blame any other person. I think this relates to the autonomy things I expressed earlier. When I feel confused, or I feel something is wrong, I will put the blame on myself and try to reflect on this more to know what I should have done better. I feel like I have to understand they perspective first, where they're coming from and what they're thinking about this before I try to explain myself in the team." – Person 2, first interview

"I think within our team there was often two people who would be clear on something and have reached a point of agreement, while the other person might be more hesitant." – Person 1, final interview

A key reason why the team might have had issues collaborating was their style of communication. Mentors repeatedly expressed their frustration with the detail orientation and over-communication of all team members. They explained difficulties keeping track in the conversations with the team, which in turn hindered them from helping properly. Person 2 also expressed an early concern on the inefficiency of their team meetings.

"Every time we were talking to them it was so hard to keep track. All of them have this thing where they just talk and talk and talk and never get to their point. We both have never been in a situation where following them has on their thought trails has been this hard. It seemed to also be connected to a very strong detail orientation. The issue is that in some cases both of us as mentors can fall into the same traps, which didn't help." – Mentors, summary interview

"Often when we say like we will have like 15 minutes check-in but it turns out like one hour session when we extend the conversation and do like more and more, yeah, I realize that communication like this is very important to align our perception to have the same the same thinking about what we are doing, but I am concerned about this. Recently these meetings sometimes can be very unproductive and ineffective, I don't know how to balance this." – Person 2, first interview

The previously mentioned detail orientation and uncertainty creates other issues as well. Both mentors describe that the team seemed to want a sort of check-box approach from, missing the bigger picture of what entrepreneurship entails. Smaller interventions were done at different times with the purpose of not spending so much time in their own silo. But receptiveness to feedback was not high enough for the team to act on it.

"Every time there was something that the team were to do, they seemed to want a checklist of things to do and how to do them. They were always really stressed, like "Should we do this presentation this way, that way, how is it supposed to look like, how many slides, should we use this font, should we do this, this, this?". Curiosity is great, but when it got to the level it did, that sort of went against what entrepreneurship is." – Mentors, summary interview

Effects of low receptiveness to feedback were exemplified through an intervention that was done on their use of tools early on, related to communication and collaboration. The feedback was repeated several times across the first two and a half modules, but the team did not act on it. This came back to haunt them in the research phase, where the amount of information became too large to handle. In this case, the approach might be interpreted as directive.

> "They had issues integrating with the program processes in general. But we did two different styles, one was to adapt more to how they did things and let them take what worked for them. The other was to talk to them about what didn't work and why, especially on their use of collaboration tools which was limited to Google Slides. We knew this would be an issue with the large research they would be doing, but they were not receptive to this feedback or trying to understand how it could work." – Mentors, summary interview

> "And every time we try to explain the bigger picture, we get back a "but why? Do I really have to, but why?". It is great for us to get constructive or positive criticism, but the way the questions are asked makes it hard to help them, it is more like a "prove me wrong" with no real interest in how it could fit into and help their work. It comes to a point where we get really annoyed at the way they communicate." – Mentor 6, Outcome Report 1

Another important reason for their struggles was that Person 2 and Person 3 had full-time jobs at program start. In addition, they faced many difficult life situations along the way, and Person 1 ended up taking on another part-time job as well. Combined with the inefficient communication this made a problematic foundation for collaborating properly.

> "The team had outside commitments that made it hard for them to do anything properly over time. Also, one person moved to another country, the other hit a wall midway and the third quit a job to focus on another project which was a huge and tough life decision to make." – Mentors, survey response

The final observation was that team members avoided conflict. According to person 2, team cohesion was rarely discussed compared to tasks, information and goals. They did not reflect much on dynamics.

> "We are more fully discussed, more subject related. So, we discuss more about ways on the consumption of both the material in the module, but we barely discuss about like how our team works, like how the communication goes and like we a more practical-based rather than like more than heart-to-heart conversation." – Person 2, first interview

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4.5.2 Period 2 - Slow and steady, but were they aligned?

The team moved on quite slowly, and struggled both to narrow down their problem area and come up with ideas to solutions. Their first barrier was to choose the problem. Several interventions were done by the mentors to help the team.

"They were working a lot on their problem area and statement because they were having trouble doing it. It's not weird that they found it hard, but it was frustrating to see how they dealt with it. One intervention was attempted where we told them to focus on a specific region, and then retracted three days later because it did not make enough sense in the program structure. Another was then done on choice metrics. In the end they got to a relatively wide but good enough problem statement that they could start generating ideas to solve it." – Mentors, summary interview

Selecting an idea and then improving it was the next focus of the team. They tried focusing on value creation for their customers. Their conversations were still mostly focused on task alignment and excluded team cohesion and reflection, unless the mentors were present.

"We haven't really set up a formal reflection time, which is perhaps something that we should be doing, but yeah. I think mostly we talk about our business, what our value is to customers, more business-related topics. And then where we need to go from there. […] I think we rarely have reflections on team dynamics unless they are mediated by a mentor. I don't know why that is, I think it could be a hazard I guess since it is naturally a quite sensitive topic. And I guess it is quite difficult because we haven't set up a structure to have such conversations on a more regular basis." – Person 1, midway interview

They had to do a lot of pivots along the way but were also quite perseverant and tried to make the next iteration work even when they did not truly believe in the idea. For that reason, it was hard to interpret the team with regards to their perseverance and how they adapted to uncertainty.

"A lot of our focus was always leading towards getting the next thing out and performing, and because our team in particular was going through a lot of pivots - we were constantly trying to find the next idea and refine it." – Person 1, final interview

"... They were perseverant in one way, often keeping on fighting to try and see if a problem or an idea could lead somewhere even while not believing in it. So, while frustrated, the person kept going, but also looked to other options. In June, the team pivoted from their original idea and did not persevere with the first one..." – Mentors, survey response

Another key observation that related to the confusion, uncertainty and lack of team alignment shined through in a quote from the midway interview with Person 1. They argued that it was difficult

to understand and apply the entrepreneurial tools and methods because they did not see how it was applicable to their situation when they were unsure what that situation was.

> "I think that the program content we get otherwise is not really applicable to where I am. And the reason for that is I'm not really sure where I am." – Person 1, midway interview

Another connection was later observed between their lack of understanding of their chosen problem area and getting out to experts.

> "We didn't really understand what space we were playing in. For example, we are within this specific industry space. And then we couldn't really figure out who to talk to in this space. As an analogy you could reach out to Bill Gates, but it doesn't make sense to reach out to him if you don't know whether you want to work with computer science." – Person 1, final interview

While the mentors' interventions on confusion and paralysis did not work in the first period, they got through in the second. Both Person 1 and the mentors explained how the work of the team changed as they got out to talk to experts more frequently. The effect of the intervention seemed connected to the team going out on their own to talk to external stakeholders, placing more focus on mentee characteristics. Their new style of action showed increased knowledge and understanding of entrepreneurial tools and methods. In this case it seems like the mentors were using a somewhat directive approach.

> "The mentors actually tried several times to both get us to link up with people and actually link us directly with people even though we didn't have anything concrete at those points. And once we got through that initial hurdle of meeting someone, interesting things happened in the team. I remember coming back from that initial meeting with someone and seeing effect from that action-based intervention. I had tried to convince Person 2 and Person 3 for a while that we just need to have more meetings with people and figure out what the hell is going on. And where they before had been very hesitant, they then seemed to be more self-motivated to do these meetings. So, the action-oriented style of the mentor at that point was more efficient I think than what just a conversation would have been." – Person 1, final interview

> "We often told them not to spend so much time in confusion and paralysis, and to reach out to us if they are stuck for even a short amount of time. Along the whole process and in different ways. One of the few that worked was when they understood a bit more how helpful it was to get out and talk to experts. But other than that, they still continued in the same confusion trail." – Mentors, summary interview

In the final survey, the Mentor 5 explained that attempted interventions were not always effective and linked this to the same poor communication as explained before. Interestingly, the mentors also took self-criticism and suggested that they also struggled to be clear in their own communication.

"I tried to be proactive and intervene several times with this team but to little avail. Mainly, they were hard to help because they all spent huge amounts of time talking in detail to a level where everything became confusing - and I am also that same type of person, so keeping track was hard." – Mentor 5, survey response

The style of intervention was observed to be somewhat directive, but not exclusively. Participants referred to a more non-directive and listening approach, while the mentors themselves say they alternated and felt they had to be more directive in time as an attempt to not create more confusion.

"At first the style of communication from our side was somewhere in the middle of directive and open questions. Mostly it was based on trying to give information or resources that could push their thinking or reflecting around certain topics. Perhaps it could be described as attempting to role model and not direct the team, while they wanted clear directions to make it easier for themselves. That is just an interpretation though. But over time, our style became more direct in the sense of telling it like it is." – Mentors, summary interview

"The mentor asked questions like "Where is this in the timeline of what you are trying to do? How does it matter in terms of those criteria?" – Person 1, final interview

The source of motivation in this team was also questionable. They seemed to compare themselves to other teams to feel better about their own progress.

"In many cases the motivation in our team comes from finding out we are doing better than we thought we were, and we can then continue to storm ahead or perform. I don't know if that is like, us checking boxes or if it is more of an emotional subconscious kind of reassurance that even though we are new to this we are doing just as well as any of the other teams." – Person 1, midway interview

Regardless of the team's difficulties, the mentor's frustration and the many interventions, the relationship between mentors and team members seemed to be quite good overall. But there were also indications of the opposite. It is however hard to say if this is due to low proactivity of the team or due to the actual relation itself.

"I think the level of trust to the mentors is a bit different. I do trust them both, but the first mentor has always been the one to first respond to things and that sort of says "this person knows more what they are talking about and doesn't just make up stuff to just give information". So yes, one factor there is volume. The other one is more on the free-flow discussions we have had which has, at least in my view, led to more of an understanding of my individual function. You know, understanding that this mentor knows how I think, rather than something less personal about the program content or process or something like that. If it was more of a structured conversation on the process that would be less personal, and not taking into account how my personal thought process interacts with the program context and so on." – Person 1, midway interview

"At several points we sent resources in Slack, but to little reaction from the team." – Mentors, summary interview

The mentors were observed to provide the mentor function of professional development and in some ways emotional and psychological support.

> "I think the mentors, even though they do not have contacts specifically in our problem area and within our locations, they are helping a lot on directing us to look for certain categories of resources and people. The help in identifying where to go and who to talk to has been valuable." – Person 1, midway interview

> "I would say that the strongest reactions to what the mentors have said to us have mainly been surprise due to getting feedback that we are doing fine and that we can move onwards. As in a positive surprise when we were uncertain about how good we were doing in general. I think positive surprises when talking to the mentors happen because of the nature of our team dynamic. All of us are quite perfectionist in a way, so sometimes I think we don't really grasp how much work we have actually done." – Person 1, midway interview

4.5.3 Period 3 - Descent towards the end

Team issues continued in the final period. One example was that they still got stuck in progress due to an excessive detail orientation and lack of time. However, they managed to push their solution and business development despite the barriers they encountered.

> "I think that while the team did get more work done in July on getting MVPs up and running and talking to potential customers and experts…" – Mentors, summary interview

> "An example of their detail focus came up once again in July, where most of their progress stopped because they felt it was important to decide on the perfect company name and domains for their email. It was linked to professionality, but they did not have a service yet and prioritizing such a small thing showed their lack of short-term strategic ability." – Mentors, summary interview

Their ability to collaborate did not get much better either. Continued difficulties, uncertainty and more led to a steady decrease in the team's commitment to both the program and each other. During the final period in the Oslo Weeks, collaboration suffered under pressure, and dealing with frictions was down-prioritized. Person 1 explained that their conflict avoidance in itself created frictions.

> "I am personally someone that, if there are team issues or personal issues while we are on a really tight deadline, will just want to get things done as soon as possible and keep the focus on that. Then we can have a conversation on it afterwards. Because if I don't really get any feedback from other team members about what is wrong, it is just too much work for me to try and pry out of them what the frustrations are and to have that conversation. That played out a lot during the Oslo Weeks too, because I was exhausted and trying to do a lot of work most of the time. We always had to prepare for the next pitch, or do something else, and when we were free our mentor was not." – Person 1, final interview

"I feel like a lot of the time we avoid talking about frictions in the team since it is sometimes a difficult conversation to have, and it would stress us out as it would take time away from something, we didn't really have time to do from before. […] The conflict shyness in the team was in itself creating frictions. I think the reason for it was in part because of the pressure of what we were trying to do. I was personally very conscious of the things we needed to get done." – Person 1, final interview

The team persevered with their idea despite having relatively low amounts of commitment to it. In the end their energy was drained, and they became increasingly focused on the negative feedback they received. Handling pressure was observed as a recurring theme.

"In the end, they persevered with this idea even though the feedback was generally experienced by them as negative. At the same time, there was much positive feedback too, but the team did not seem to notice, they were quite far down personally at the end. The perseverance in combination with the pressure to deliver on the pitches seemed to kill their team cohesion and work to a larger degree than how bad it already was." – Mentors, survey response

The trust and reciprocity in the mentoring relationship seemed to be quite high in the final period. But the level of involvement gradually decreased in this period as well. Before Oslo it remained quite high. It was although hampered both by themselves being a bit less involved, and from the team's side, with several instances of team members not responding in time and issues with scheduling meetings.

"I think the trust between us and the mentors is mutual and good with regards to the psychological safety and so on." – Person 1, final interview

"I think that while the team did get more work done in July on getting MVPs up and running and talking to potential customers and experts, the mutual involvement between us and the team was not too good. Several times, each side tried to set up meetings but there was always some issue getting it to happen or a couple of times none of the participants would be answering or show up to meetings. We also missed or had to reschedule some meetings. All the same, there was a lot of exchange of feedback in Slack on what they were doing." – Mentors, summary interview

The involvement level of the mentors declined and ended up being relatively disengaged during the Oslo Weeks. Mentor 5 explained this from their point of view, stating that their efforts were used to help other teams during Oslo Weeks.

"They also worked less than other teams and were less receptive to feedback. Another key issue was that all of them expected sort of a check-list of what needed to be done for their business to work, and fundamentally that is not what entrepreneurship looks like... At some points I just gave up and redirected my focus to teams that I felt could get an effect from my help. Not so much during the online program, but definitely during the Oslo Weeks.

I don't think my style of mentoring and communication went along too well with theirs to be perfectly honest." – Mentors, survey response

Person 1 explained that they would have needed the intervention of the mentors more than ever in the period where they were most absent.

"We didn't really have that much conversations on the team dynamics and how we were functioning together. And those conversations are long, but definitely something we needed the mentors help with, because you want it to be a structured conversation. That is something we would have liked to have more of during the Oslo Weeks, but the mentor was not really available during that time." – Person 1, final interview

Despite not being that present for most of the two final weeks, there were several instances where they did help out. This led to a few major realizations in the team. One intervention was done to improve customer understanding, and another one was done on the final day of the program to help the team understand their collaboration.

"At some point in Oslo weeks I did an intervention where I created a customer journey map for their customer, inspired by Jobs-To-Be-Done theory but not based on it. This seemed to help them understand better where their service fit in to the industry. Then there was another point where an external stakeholder came in and gave them quite negative feedback because of more industry knowledge. After that I also had to intervene or support them emotionally, but I found it very hard to know how to do that in that specific context. I basically told them the whole picture from my perspective, and the decisions they needed to take. Other mentors with better supportive ability were sent their way afterwards, and I took more distance and focused on helping all the other teams, as I thought they would get more effect from my assistance." – Mentor 5, summary interview

"When the mentor had the conversation with us at the end of the program on how motivations work within a team, there were several realizations, but I think this is something that is hard to explain as well like during the program itself. Because maybe you don't know yourself in that sense because you think that is just how everyone operates. I understood then that I am motivated by real world results and small wins, something I hadn't noticed before since my network is the same. I thought that was how everyone operated, by seeing something happen in the real world, but in our team, it turned out that this was not the case, and that was a source of friction." – Person 1, final interview

An important observation on the team's journey through the program was that the commitment level of Person 1 was initially higher than the other team members but dropped as a result of the difference. Instead of dragging the team, Person 1 lowered their expectations.

"Another aspect is that as the person went on, their commitment level sank because the other two could not commit more, and therefore also effort went down, which affects how the skills show in these rankings. In retrospect, perhaps one should have just focused on taking a purely supportive role to this team and been sort of a cheerleader that encourages them to act and deal with whatever uncertainty comes their way. That was also one of the reasons

why I pulled away in the Oslo weeks, and tried to ask the other more emotionally supportive concierges to talk to them. I felt like my help and style of mentoring would not benefit them particularly much at that point." – Mentor 5, survey response

The evidence above also showed the importance of the emotional support of a mentor, which was lacking during the Oslo Weeks. In addition, it echoed the importance of getting out of the building and talking to external stakeholders.

"In many ways I think it was less need for motivation during the online program. In a way you're just plodding along, and you don't really have that much feedback from external people on where you are going. So, you believe that what you're doing is the right thing or what people want. I think it's when you start talking with experts and people who don't really believe in your idea that you have to deal with the demotivation, and that came mostly during the Oslo Weeks for us, when the mentors were not really available." – Person 1, final interview

The first mentor explained a realization about the team that occurred during the final day of the program. As read from a previous quote from Person 1, exhaustion was a major issue during the Oslo Weeks. The reason for this exhaustion seemed to be a poor ability to split tasks and responsibilities according to what each person in the team got energy from doing, as one can also see from Figure 23.

"This team is an interesting case. Firstly, they did not manage to collaborate well at all with regards to one person doing things they would never get energy from (e.g. contacting a lot of people and being the main networking person). It became obvious to me on the final day of the program (unfortunately not before). This was a learning for me too. On the other hand, the main issue was that the person became very stressed out continually because of the others working full time or part time on other things to the extent that the person felt like they would not get anywhere unless he took responsibility and pushed onwards. As a mentor I spoke to him about this sometimes and tried to give advice on how to handle the situation and also I did talk to the other two myself to try and understand better what I could possibly do and what hindered them." – Mentor 5, survey response

"Person 1 had a tendency to take on the extrovert type of tasks because of stress. While it would be done well due to being outgoing, the person lost a lot of energy from it. Person 3 and Person 2 however seemed quite extrovert in the sense that they got energy from being more in social settings, but they were quite shy to go out and talk to people and wanted to have everything settled before doing so. That counters entrepreneurial tools and methods." – Mentors, summary interview"

4.5.4 Summary team E

Development. This team went through a process with incremental development of competencies and relatively poor team dynamics. They had several smaller storming phases, but never truly got in-depth on their issues. Indecisiveness and detail orientation hinder the team progress. This is exemplified through (a) Person 2 initially who was worried about inefficient meetings, (b) evidence indicating they wanted a check-box approach to follow, (c) how they often adapted to uncertainty and pivoted their solution and (d) Person 1 who described midway that they did not know where they were in the process and therefore struggled to apply methods. The progress of the team often stalled as a consequence, rendering them less able to do actions and interact with external stakeholders.

Some recurring issues were difficulties with communication and collaboration, a lack of time and commitment from team members, low receptiveness to feedback, conflict avoidance and a lack of reflection on their team dynamics. Poor team communication is explained by (a) Person 1 and 3 seemingly dominating the dynamic, (b) Person 2 not being at the same level of English and feeling uncomfortable taking space and finally (c) each person having a style where they spent a very long time speaking in detail once they started. Their inefficient and confusing communication combined with detail orientation and uncertainty handling led to mentors having issues helping them. Low receptiveness to feedback connected to the communication and collaboration issues, as they had a "prove me wrong" attitude. In addition, they showed conflict avoiding behaviour on both task and interpersonal issues at several points. This was often due to pressure, for example of delivering something. Other times it was because they were directly shy. Person 1 described it at some point as potentially "hazardous" to do without a mentor present.

An observed effect of their poor team dynamics was that every commitment factor was quite low and kept declining through the program. The most interesting parts of this were how Person 1 was initially more committed than the others but declines as the others cannot commit as much due to having full-time jobs. In any case, the team's source of motivation is questionable, mostly coming through being surprised at how good they were doing due to being perfectionists. Their commitment to their idea also seemed low, but surprisingly they persevered a lot with it despite this. Another possible reason why all commitment factors were low was indicated through a combination of how poorly the team split tasks based on what they got energy from and how Person 2 and 3 lacked understanding of how important interaction with external stakeholders is when using entrepreneurial tools and methods.

Mentoring style and deployed functions. The involvement level of the mentors was initially quite proactive but declined to reactive and disengaged in the final period. Person 1 was frustrated by the lack of presence, as they needed help in the Oslo Weeks more than ever. However, mentors had a lot to do helping other teams and described that they felt they could not help much and possibly not being the type of mentor that the team needed. Intervention approach was observed to be changing between a non-directive, listening approach and a directive one, leaning more towards directive in the final period. Mentors were self-critical about their own role towards the team because they also had a similar detail-oriented communication style. They tried changing this to more concrete and directive in the second and final periods. Despite the apparent issues in the relationship, it contained a good amount of trust and reciprocity. The mentor functions of professional development, emotional and psychological support and role modelling were also observed, with participants describing most of the help they got as valuable.

Other interventions include (a) a talk about internal expectation clarification between team members early on, (b) some reflection sessions to help the teams reflect on themselves, (c) smaller interventions to push the team on from confusion and paralysis, (d) some direct interventions on how the team could move on, (e) a tool usage intervention to get them away from using a collaboration tool that would hinder them at later stages, (f) an action-oriented confusion intervention where they put the team in a meeting with external stakeholder, (g) some interventions on business development in the final period and (h) a final day talk about the future of the team, where topics included how people were motivated by different things and how the team did not utilize each other's strengths and split responsibilities based on what they got energy from doing or were good at.

4.6   Team comparison

The teams that developed the most were Team B, C and D. For different reasons, Team E and A did not experience the same positive developmental journey, and several skills and motivational factors declined through the program. As these were latent variables, this suggests that they either did decline, or simply did not develop from a personal foundation that initially seemed better than it was. Table 6 indicates the strength with which the mentors have ranked their teams along the survey scales.

Table 6. Visualized growth pattern of the teams[13]

Competency/team	Team A	Team B	Team C	Team D	Team E
Knowledge of tools/method	green	green	green	green	green
Understanding of tools and methods	yellow	green	green	green	yellow
Opportunity recognition	yellow	green	yellow	green	yellow
Marketing skills	yellow	green	yellow	green	yellow
Strategic skills	yellow	yellow	green	green	yellow
Resource planning skills	yellow	green	green	yellow	yellow
Communication skills	yellow	green	green	green	yellow
Interpersonal and collaborative skills	orange	green	green	green	orange
Learning skills	yellow	green	green	green	yellow
Creativity skills	yellow	yellow	yellow	yellow	yellow
Decisiveness	orange	yellow	yellow	green	yellow
Receptiveness to feedback	orange	yellow	green	yellow	orange
Self-awareness	orange	green	green	green	yellow
Entrepreneurial identity	yellow	green	green	green	yellow
Entrepreneurial passion	yellow	green	green	green	orange
Self-efficacy	yellow	green	yellow	yellow	yellow
Proactiveness	orange	green	green	green	yellow
Adapting to uncertainty	orange	yellow	green	green	yellow
Perseverance	orange	yellow	yellow	orange	orange
Commitment to program	orange	green	green	green	orange
Commitment to team	orange	green	green	yellow	orange
Commitment to problem and idea	orange	green	green	green	yellow

[13] Not all declines were bad, for example if the team was too perseverant. Ratings depend on mentor's early impression.

4.6.1 Development of individual competencies

Consistent development across teams was only found for the cognitive category of knowledge and understanding of entrepreneurial tools and methods. This was expected as many participants were not entrepreneurs from before. Most teams also developed skills for applying entrepreneurship, shown through increased opportunity recognition, marketing, strategic and learning ability. Communication, interpersonal and collaborative skills also increased for most teams. However, development of the latter ability was very polarized. The same could be said about the three commitment factors.

Competencies developed the most with Team B, C and D. They developed across the whole spectrum through the process, with some periods of stall or temporary declines. Team A and E did not develop to a significant degree, and in many cases experienced a decline in competencies. Large changes were observed across teams and periods both in a negative and positive direction. Teams did not experience developments similarly across periods, but some patterns on similar categories were observed. Three teams experienced a lapse in decisiveness in the second period, the other two stalled. The same period was characterized by collaboration issues. Every team also formed a stronger entrepreneurial identity to some extent, although one person was observed to find out they were not supposed to be an entrepreneur.

Team A only developed knowledge and understanding of entrepreneurial tools and methods and the skills related to using them, specifically marketing, resource planning, strategic ability and learning. Every other competency across all three categories either stalled or decreased, with the most visible examples being commitment, collaboration and decisiveness. Team E were closer to zero development than to any significant increase. They had similar development as team A, but also developed more self-awareness. Person 2 in this team also developed much more than other members, particularly the ability to be strategic, use resources, learn well, and also in forming an entrepreneurial identity and communicating better. This person is also ranked quite low on these factors, which meant there was a lot of room for improvement, but this person used the opportunity to grow compared to their team members.

In general, Team E struggled from not being able to neither do enough actions, have time to reflect or get out to external stakeholders to understand what value they could create. For their part it was due to a lack of time and commitment. This trend was also found for other teams. Team B did not develop much until Mentor 4 put them in touch with some external domain experts, the program manager spurred them to action and Mentor 5 helped them reflect. All of these activities were recurring in the development and progress of the teams. In addition, a lot of teams needed and got help on how they were creating value for their customers and capturing it through a business model, especially in Oslo.

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4.6.2 Development of team processes

Cohesion and alignment followed similar trends internally in teams. Only a few exceptions to this were observed. Team D experienced a split in cohesion between two team members and the other in the final period, but they were still aligned on their idea and direction. Team E had a relatively coherent first period but struggled to align their efforts in Insight Factory. It improved yet remained quite poor. Team B and D initially improved their team dynamic before they struggled in the second period and improved again in the final period. Team A and C experienced an initial decline from their starting point, but while Team C emerged successfully from their trouble Team A went on to have a heavy conflict in the second period. Team E were quite stagnant, with some improvement in the first period and then a steep decline in the final period.

Frictions or conflicts arose in every team but in different periods. They were especially prone to storming phases in the second period. Task-related conflicts were natural in period 2 due to the process of aligning on problem and idea. Interpersonal conflicts were not bound to a specific period. Particularly strong triggers were the Insight Factory in period 1 and the Oslo Weeks in period 3. The Insight Factory task created friction in three teams, two of which were the teams that struggled the most during the whole program and the team who handled it moved on to collaborate stronger. Issues during the Oslo Weeks usually occurred as a result of increased intensity both of collaboration and of pressure due to the program ending. Only two teams were explicitly observed to have a storming phase in these final two weeks, but there were instances of smaller frictions that other teams had to deal with.

Three teams managed to create various norms and started performing better. Team B and C managed to create norms with various degrees of mentor assistance and started performing very well in the final period. Team D had a latent friction that blew up on the final day of the program. Team A seemed to never properly recover from their storming phase. Finally, Team E experienced frictions at several times but didn't reference any major storming phase.

Conflict avoidance was a recurring theme with all teams except Team B. The typical style of handling problems was to simply not talk about their team dynamics or give each other proper and honest feedback whenever they had feedback sessions. Team C struggled with strong agendas and conflicts of interest and usually chose to not talk about it and just keep working on their own. They needed a lot of help to overcome their differences and changed this approach in time. Team D usually did not reflect on themselves and their team unless the mentors pushed them and explained the importance of doing so. They were honest and balanced when confronting each other on task-related issues but did not take up personal issues until the final day. Team E were generally shy of conflicts, particularly two team members. Person 1 usually was the most confronting. They managed to create

some norms, but often ended up dealing with their issue in a shallow manner. A trade-off was generally made where the team ignored frictions in favour of delivering and making progress.

Team A showed another form of shyness in the sense that they covered up the frictions with a veil of humour that made underlying issues subtle and hard to identify. There were two types of humour-based cover-ups. The first was that a person in the team would try to laugh and joke a bit while they expressed frustrations. The other was that a person would laugh the problem away to avoid dealing with it. Several participants in this team were observed to do both.

Another theme was how teams were often quite polarized with regards to decisiveness and perseverance. Most of the teams either showed a strongly perseverant and decisive attitude or were very indecisive and frequently adapting to the uncertain situations they faced. The most indecisive teams were B and E, who both struggled with confusion at many points in time. Team D seemed relatively balanced apart from Person 2 in the second period. This person showed strong perseverance for their own idea when the team in general struggled to decide on direction, to the frustration of the other members. Team A and C consisted of highly perseverant team members who struggled to align for most of the program. Team C went on to align and push on with their project together, while Team A went on to have the aforementioned conflict where a person left the program. According to the qualitative data, this person dominated the team and pushed their own idea, and the team split into sides.

The final theme of team development was trouble in communication and receptiveness to feedback. Several teams had issues communicating, while the nature of the issue varied. Team A and C suffered from an inability to listen to each other and be receptive to feedback, creating various problems. Team E also had this issue, in part connected to their detail oriented and very excessive style of talking. There were also indications that there were one or two people in Team A, C and E who dominated the communication. On the other hand, listening and taking feedback was a strength of Team B. Other teams developed to get better at this, Team D after the first period and Team C during the final period.

An interesting consequence of communication style was inefficient meetings. Team E struggled with very inefficient and confusing communication, which led to inefficient meetings. Their communication frustrated their mentors, who felt less able to help. Team A also struggled with inefficient meetings, but rather because they spent their time trying to both work and be social. In a way, the data showed that they tried and failed, for various reasons, to create coherence. The final example of communication style consequences was in Team C, where members in several instances did not communicate what they did because they did not know what they should communicate and not.

4.6.3 Mentor dimensions and mentor functions

Involvement level was somewhere between reactive and disengaged for Team A, B and C. Team D and E had proactive mentors who became reactive in the final period. The mentor pair of Team A and B, and the mentor pair of Team C, were observed to be directive. The mentor pair of Team D and E was observed to vary between the styles, but they utilized a non-directive and listening approach in most contexts for Team D while over time changing their approach to directive for Team E.

Negative effects of the reactive and disengaged directive mentoring style were observed in Team A, B, C and partly E. Mentor functions were deployed less frequently and seemed to be of lower quality. Several participants across teams complained about how their mentor used a directive approach compared to the effect of another mentor who had utilized the non-directive and listening approach in sessions with them. Experiences with directive mentors were not exclusively bad and participants explain that some of the interventions made did have positive effect on them. The frequency of quotes that express satisfaction in this manner was higher for periods where the mentors were more involved. Team D participants explain that the opposite mentoring approach had positive effects on them as individuals. All mentor functions were observed at many points in time. Such situations were observed at some points with Team E as well. Both teams explained how the mentors asked questions that helped bring perspective. In the case of Team D, an increase of self-awareness was observed as a consequence of the mentor using the non-directive and listening approach. This related to a role modelling function.

Mentor interventions were often focused around helping teams perform better and overcome barriers. However, all of the interventions were related to (a) how much action the team was taking, (b) how they were reflecting, (c) how they focused on and worked with value creation outside the typical "silo", (d) how well they were getting out to interact with external stakeholders like potential customers or experts, (e) help with handling conflicts and frictions or (f) how they were practically collaborating. Mentors were at times observed to take direct action interventions that provided teams with a-ha moments as they saw the result for themselves. Some mentors were better at certain types of interventions than others and did them across teams. Mentor 4 was the best at interaction with external stakeholders and used a directive approach. The program manager usually came in to do action-oriented interventions with short term next steps. Mentor 1 had some interventions on process management and collaboration, and a few on reflection. Mentor 5 had many interventions on reflection and value creation, but also some on interaction with external stakeholders. In the Oslo Weeks, Mentor 5 followed up almost all teams on value creation.

5.   Discussion

The result section showed several recurring topics. This chapter will try to discuss them and clarify the connections between findings, thereby answering research questions. Furthermore, limitations of the study, implications for the utilized theoretical frameworks and opportunities for further research will be described.

5.1   Effect of team process on competency development

Research question 1: "How do team processes affect the development of entrepreneurial competencies?"

The evidence indicated that the clearest effect from team processes on EC development was linked to how the teams went through the various stages of small group development. The most prominent were the *storming* and *performing* stages, despite the fact these did not happen chronologically as formulated in the Tuckman Model (Tuckman & Jensen, 1977). While *performing* phases rendered the team more able to do necessary activities for learning and growth, *storming* phases slowed down EC development or made it temporarily decline. However, to describe why this happened, another finding related to the development of competencies itself must first be discussed.

The stages had this different effect because evidence pointed to four key activities that had major impact on team and EC development. These were that the team (a) did a lot of actions, (b) were trying and feeling like they were creating value for someone other than those closest to them, (c) that they interacted a lot with external stakeholders (mentors not included) and (d) that they reflected upon their actions, mistakes and team dynamics. Together, the combination of team processes and required activities suggested two possible outcomes. When in a stage of performing, the team were likely to learn more due to getting more of the four activities done and therefore getting more frequent and higher-quality experiences. These could then be transformed into competencies (Kolb, 1984; Politis, 2005). By comparison, a lot of time and energy would be spent dealing with internal frictions when in a storming phase. On the other hand, people might have learned from simply getting through the storming phase itself. For the most part, the evidence indicated that more or unsolved conflict led to less commitment or effort and therefore less doing, value creation, reflection and interaction with external stakeholders.

One can find reference to all four of these activities in the EL and EC literature, but they are not formulated together as required activities for learning. Action-orientation, learning by mistakes and learning by reflection are key dimensions of EL as defined by Pittaway et al. (2011). These were in many ways mirrored by Lackéus' (2013) research on EC, but he specified the necessity of value

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creation in an attempt to move the focus of EL from simply "learning-by-doing" to "learning-by-value-creation", as the literature did not explain anything about what "doing" meant. He also tried making the dimension of "social practice and social engagement" more precise by defining it as "interaction with external stakeholders" but positioned this as one of several emotional events in the process of EC development rather than as one of the requirements for it to happen.

While the indications were that conflict in general hinders the team from doing these four activities that trigger EC development, other specific effects of team conflicts might vary based on the type of friction experienced. Interpersonal and task conflicts have different characteristics. Tekleab et al. (2009) discussed effects of conflict management on long term coherence in student teams and found that (a) high task conflict relates positively to long term coherence while interpersonal does not, (b) high conflict management neutralized this effect and (c) high levels of conflict management mitigated the negative effects of high interpersonal conflicts. As coherence is connected to the stages of small group development, this is likely to have influenced the EC development in the team through the previously discussed mechanisms. Amason et al. (2002) also found early evidence that cohesion in new venture top management teams was positively corelated to task-based conflicts and negatively to interpersonal conflicts, except in the cases where high cohesion could lead to a situation of group think as the members wanted a sense of belonging and did not want to contradict popular opinion (Rose, 2011).

One could question whether the conflict avoidance of some teams led to the issues of coherence that they experienced in the final days, when underlying issues surfaced, and whether not taking up these issues helped them avoid further problems or slowly depleted their energy. This would of course be bound to how strong the interpersonal part of the conflict would be, and how long they chose not to handle it. However, these implications were difficult to interpret properly from the data as it proved harder to separate the types of conflict than expected. Amason et al. (2002) found that the occurrence of task-based conflict could often lead to interpersonal conflicts, supporting the conclusion that such a separation in the data gathering would have needed to be done more rigorously before saying anything concrete about how the types affect outcomes. Tekleab et al. (2009) also mentioned that a limit to their study was the lack of separation between preventive and reactive conflict management, which adds yet another dimension to the complex topic. While no clear implications should be made on the effects of these dimensions, the topic is highly interesting and deserves more research to increase understanding of the concept of how team processes affect the development of EC.

5.2   Mentoring effect on team processes and competencies

Research question 2: "How does mentoring style and functions affect the development of team processes?"

A key finding in this study was that the mentor function of trust and reciprocity in the relationship was linked with the ability of mentors to deploy other functions with regards to frequency and quality. Results suggest that the development of trust and reciprocity was affected to a large degree by mentoring style. Whereas a non-directive, listening and involved approach was related to stronger development of reciprocity and trust, a directive and disengaged or reactive approach led to the opposite. One situation occurred where a team went into a position of defensiveness towards their directive and reactive mentors, which in turn hindered the effectiveness of everything else mentors tried to do. The other prominent example is how the relationship between Team A and their mentors degraded a lot through the program. Gravells (2006) hypothesized that this approach could lead to such a consequence. The journeys of Team A and C showed it happen in practice.

The effects mentors had on team processes were also related to how mentors handled storming or performing phases of the teams, and in turn the previously mentioned ability of the team to do actions, focus on value creation, interact with external stakeholders and reflect on their actions, mistakes and team dynamics. One could view this as extensions or as sub-parts of the mentor functions. This logic is furthered by another interesting point: The data indicated that interventions done by mentors or the program manager were consistently related to either one of the four described activities, conflict mediation or collaboration issues. Interventions were sometimes related to more than one. None of the mentors knew about or were told of these connections before or during the program.

Evidence supported this evolved understanding of the mentor functions from several perspectives and showed an additional connection to the mentoring style. First and foremost, teams were observed to have many periods where they did not reflect nor focus enough on value creation or interactions with external stakeholders. Indecisive or non-committed teams also struggled to do enough actions which gave them less experiences to learn from. The lack of interventions by mentors in these situations left teams less able to develop EC and team processes. On the other hand, whenever mentors did intervene, or spurred the team to action, the effect on development was evident. A mentoring style with higher involvement led to more frequent and higher quality interventions on these activities. Reasons found in the evidence were that mentors were (a) more likely to notice shortcomings and problems, (b) more able to act in time to improve the situation and (c) more able to understand context which helped them know which interventions they should do. These effects were moderated by the mentors' level of directiveness and ability to listen. This was especially evident for Team A, where

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mentors used a directive approach to detrimental effect on trust and reciprocity over time. But even despite this poor relationship, lower frequency and quality of mentor functions in general, any intervention made that did relate to the four activities was described as valuable by the teams.

The mentor as a conflict mediator is another interesting point that furthers the discussion of chapter 5.1 on how conflict management influenced cohesion, and therefore development of team processes and EC. In the study of Tekleab et al. (2009), conflict management was defined as the team addressing issues internally by themselves. But evidence may indicate that it would be more beneficial to the team if mentors performed this function together with a reflector function. Many researchers argue the case that reflecting systematically about such topics most often requires some support through various supervisory activities (Crasborn et al., 2011). Extended entrepreneurial mentor functions were also found to include a reflecting-assistance function by St-Jean (2011). Evidence further supports this through the observation that teams had trouble reflecting on their own in general and were hesitant to take up their issues. Several participants expressed regret in not discussing their problems earlier, as they later surfaced more harshly than necessary. Consequentially, entrepreneurial mentors might benefit the development of team processes, and therefore EC as well, by helping the team reflect in general but also by taking a mediating role in conflicts to help teams get through storming phases, especially if they include a strong interpersonal element.

5.3   Mentoring effect on competency development

"How do mentors affect the development of team members' competencies?"

Evidence on the mentoring effect on EC development mirrored the findings of the effect on team processes. Results indicated that effects were undesirable the more the mentoring style was disengaged and directive, while the case was opposite with a non-directive and listening approach combined with a more proactive involvement. Reciprocity was affected by the mentoring style, and in turn had a strong influence on the ability of the mentors to deploy other functions like professional development and role modelling. With higher involvement, topics were also more frequently discussed, which led to better deployment of the professional development and assisting personal growth functions. Evidence also suggests that intervention quality was affected by mentoring style, and mentors who listened to every team member and asked questions had better effect. The most prominent example was in the case of conflict resolution with Team D, where the mentor challenged them on how they viewed themselves and each other as people and partners. In this case, the role modelling function was deployed, leading to an increase in self-awareness for the team members. Respondents in teams with

directive and disengaged mentors complained about the poor effect of this approach when comparing to interventions they had with non-directive and listening mentors at later stages of the program.

Interestingly, these results mirror what St-Jean and Audet (2013) found when exploring the proposals of Gravells (2006). Similarities between their findings and those of this study were found despite the different contexts of research, suggesting that the observed effects of mentoring style are likely to be consistent across different entrepreneurship mentoring schemes and situations. While their study used a survey and found correlations between the styles and deployed mentor functions, the empirical analysis in this study contributes to explain more detailed qualitative reasons behind the occurrence of these results.

The important effect of high reciprocity and trust in relationships were also found by Couteret and Audet (2012) when looking at development through coaching in an incubation context. Their reasoning was that this was a key part of breaking down resistance to change that arose when the methods and self-awareness of the entrepreneur was challenged. In addition, they found that a characteristic of the entrepreneur had a large effect on this issue and being receptive to learning and change was a key part of explaining development. Evidence in this study also suggests this to be important, while it might also indicate that the relationship and receptiveness were consistently being built and mutually affects each other over time.

5.4   Limitations

Selection of participants for the program was not taken into account. Combined with the relatively small sample size of the study, this might have affected the implications due to participants being selected from 12500 talented people. These people were mostly chosen for their motivation and in part skills, which must be considered. I expected the main difference to be in motivational factors; that it would be higher than with for example students in entrepreneurship education programs. As all except one of the teams were committed and worked a lot consistently, the assumption held. Everyone was also young, and many did not have entrepreneurship experience. One could argue that, as a consequence, observed mentor effects were partly bound by the constraints of following up young, inexperienced entrepreneurs and that they might be different when following up people who actually run a business. However, the findings of St-Jean and Audet (2013) were similar both on mentor functions and interventions style despite their research being done on actual small-business owners with mostly quantitative methods and larger sample sizes, implying that findings are valid despite contextual limitations.

On another note, this study utilized the relatively broad mentor function definition of Jacobi (1991) which were drawn from literature within management studies, academia and psychology while not being explicitly related to an entrepreneurial context. Conceptual differentiation could be improved by comparing and refining these with the more extensive mentor functions framework of St-Jean (2011), which were not accessible to the author until a late stage of writing. He found four psychological functions, four functions related to entrepreneurial career development and one role model function. However, they called for more research on the topic as well. It is evident that this field is under-researched, and I suggest directing more attention to this field, taking into account the strong effects mentors have when following up teams.

Furthermore, terminology inconsistencies within the fields of EL, EC, team development and mentoring often led to difficulties and confusion during the writing and analysis. The definition of the term "entrepreneurial competencies" might also be unfit for general use due to including motivational factors. One could consider switching the term to "entrepreneurial capabilities". The theoretical framework was also based on three fields of research with many internal dissonances and lack of consensus on term interpretation. Some term usages were also inconsistent with their general definition, and changes were made to remedy this. Specifically, the knowledge, skills and attitudes (KSA) underwent several changes and was also contextualized to better visualize and guide the interrogation of the data. These changes can in the future be done even more rigorously to avoid misunderstandings and better differentiate between similar concepts.

The survey measure of developed competencies was useful to visualize data, guide analysis and find trends. However, they were not reliable enough to use them for more detailed quantitative comparison. Mentors might have been consciously or sub-consciously biased towards certain teams or team members based on their relation to them. Some mentors might be more critical than others when ranking. Terminology might also have been an issue here, despite having provided mentors with detailed explanations, a walkthrough of the terminology and being available for questions while they were taking the survey, they might have misunderstood terms due to not being familiar with them compared to their practice in the program. Candidate terms for misunderstanding are opportunity recognition, marketing, resource, self-awareness, entrepreneurial passion, self-efficacy, adapting to uncertainty and perseverance. As the survey was done retrospectively, memory might have been a problem, but the summary interviews were done before the survey was done and their memory of the team journeys should be more valid as a result. Finally, all developments in each period might not have been captured, but mentors used the opportunity to comment on it whenever they did not, which provided many useful quotes for triangulation.

Moreover, the assumptions on remote work and the difference in culture and so forth seemed logical. The "amplitude" of outcomes from typical team processes was larger than they would likely have been in a team of people from the same culture working in the same location. However, there might be effects that the author did not find from the combination of these limitations. Nevertheless, the depth of sample data in this study was very rich and therefore provided an extensive overview when analysed through triangulation. Therefore, the choices, limitations and result validity of the study are viewed as satisfactory for an exploratory study.

Similar future studies would probably do well to (a) improve competency evaluation and contextualize them depending on the use purpose, (b) do more rigorous tracking of team process development, phases they go through and focus more on the differences between interpersonal and task-based conflicts (c) ensure rigorous terminology usage. Furthermore, as this study focused on the mentor functionality from the learner perspective, complementary studies could focus both on program content and the characteristics and competencies of the mentor, which were not the topic of focus in this thesis.

5.5   Implications for theory

A new conceptual model was developed to better connect entrepreneurial learning processes and competencies with mentoring and team formation processes. Interestingly, the analysis conducted based on this framework uncovered that theory might benefit from simplifying and re-formulating the connection between entrepreneurial learning processes and entrepreneurial competency development to separate better between activities, processes and outcomes. This study found four key activities that were essential for developing competencies: Action, value creation, interaction with external stakeholders and reflection. These are for now named the "required activities for development", or "RAD", and can hopefully be useful in further inquiries.

The activities are concepts which have been used in most entrepreneurship literature, but in different ways and for different purposes. The re-formulation is therefore an attempt to clarify what the entrepreneurial learning process necessitates from learners to develop entrepreneurial competencies. It is possible that this could be generalized to other types of theories on innovation processes internally in companies or organizations as the requirements revolve around experiential learning with proper support mechanisms and are not necessarily bound to entrepreneurial processes.

The Tuckman model works quite well to capture developmental phases in teams but would benefit from taking time better into account, as they were not chronological. Teams can perform before they have stormed, and they often go through several storming phases at different times. The model should

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possibly also expand the storming phase with new theories and empirics on conflicts, as the storming phase has such a large effect on both team processes and entrepreneurial competency development. It could also be interesting, if such amendments were done, to see if one would find archetypical team development processes based on for example the entrepreneurial competencies of the team members or something similar.

With regards to the strong effects of storming on "RAD", and how mentors in turn affected this, ignoring conflicts and team dynamics in future research on entrepreneurial learning, competency development and mentoring would likely lead to cursory results. Seemingly, researchers like Pittaway and Cope (2007), Lackéus (2015) and Kubberød et al. (2018) already reference team dynamics as part of the explanation for their results without investigating it more closely. It would likely be beneficial to include this better when studying these topics in the future.

Finally, empirical evidence also provided support for the validity of the theoretical frameworks of St-Jean and Audet (2012; 2013) on mentor functions and effects of mentoring style on novice entrepreneurs. In contexts where mentors follow up a team of nascent or novice entrepreneurs, mentor functions should be expanded with conflict management assistance to better include the previously mentioned mentoring effect on "RAD". Conflict management in this case might not be restricted to only handling issues that arise, but also teams that are too shy of conflicts.

5.6   Future research

The thesis had to take a pragmatic and exploratory approach, and implications are preliminary. Future studies that combine entrepreneurial learning, competency development and mentoring with team formation processes should be done on similar contexts while improving method and taking current limitations and theoretical implications more into account. More investigation is called for to see if and how the required activities for development, or "RAD" have such strong effects on team processes and competency development as were observed in this study. Comparable studies should be done to examine the workings of this concept both with and without a mentor guiding the process. The extent to which mentors should help the team with different activities should also be investigated, as to understand better how to avoid mentees becoming dependent on the mentors.

Possible cases for comparable studies are various accelerators and incubators like Inkubator Aas, Antler, Startuplab, Katapult, but also practical entrepreneurship education courses like venture creation programs. The main differences I would expect to find with accelerators would be in the team members' motivational factors and team development phases because they are not designated to teams and already have a somewhat developed business idea. Entrepreneurship education would also

probably have very different movements in motivational factors due to team members being students and the levels of risk and exposure to strong emotions are far lower, something many researchers on entrepreneurship education discuss. If findings and implications are consistent across these contexts, their validity should be regarded as sufficient to call for more extensive research to examine these effects over time and thereby get stronger empirical evidence on effective entrepreneurship and mentoring methodologies.

The suggested revisions to the Tuckman Model with regards to time, conflict types and handling and recurrence of team formation phases should be examined and tested. If such a revised model is found to better explain small group formation, one could also investigate whether archetypical team journeys exist based on characteristics and development of people in the team. Parts of the contextualized KSM framework were surprisingly good at capturing the processes and phases of the teams despite its limitations. These could possibly be implemented in such a model as well, to track team progress and guide interventions.

Finally, one or more retrospective studies should be done with YSI 2019 alumni to examine how their competencies developed after program finalization. While all teams had issues and made mistakes, those who struggled most developed their skills least during the program itself. But it might be that they could look back at their experiences when facing new situations, learning from their failures and successes or aspects of the experience that went unnoticed. Their career choice might also have been affected by the entrepreneurial learning process, and it would be interesting to re-evaluate how they developed motivational factors in the program after knowing what they ended up doing.

6.   Conclusion

The aim of this qualitative case study was to investigate how mentors' ability to assist early-stage entrepreneurial teams develop entrepreneurial competencies could be improved. A theoretical framework was created to interrogate the data based on team formation processes, entrepreneurial learning and competency development and nascent entrepreneurial mentoring. Empirical data from the Young Sustainable Impact 2019 Global entrepreneurship and innovation program was analysed using a variant of thematic analysis. In addition, mentors were surveyed retrospectively to create a visual overview of developmental patterns. The processes of each team and their respective mentors were then analysed in the three periods between conducted interviews by triangulating between data sources. They were ultimately summarized and compared, and findings were discussed.

Connections were found between the development of entrepreneurial competencies, how the team formation processes developed, how involved the mentors were and which intervention approach they used. First and foremost, the competency development was strongly affected by whether the team did what the author has called "required activities for development", or "RAD". These are "action", "value creation outside ones immediate context", "interaction with external stakeholders" and "reflection on experiences, mistakes and team dynamics". They are based on the entrepreneurial learning and entrepreneurial competency literature and have been re-formulated and re-positioned to specify the differences between activities, processes and outcomes. The observation was that doing more "RAD" led to more and higher quality experiences that would then be transformed into competencies. The team formation process further influenced the ability of the team to do "RAD". Storming phases and conflict led to less of it and performing phases led to more. However, well-handled storming phases also led to development of certain entrepreneurial competencies and team dynamics.

Mentors affected both the team formation processes and competency development through how they helped the team in the storming and performing phases, and through mentor functions like professional development and role modelling. The style of mentoring in turn influenced the outcomes of mentor interventions and functions. High levels of involvement combined with a non-directive and listening approach were beneficial, while the opposite was not. Part of the reason was observed to be that a non-directive and listening style led to an improved deployment of the reciprocity and trust function, which in turn influenced everything else mentors tried to do. However, even those who utilized less effective mentoring styles still provided some beneficial interventions for their teams when they addressed points related to "RAD", for example helping the team reflect or spurring them to action and increased interaction with external stakeholders. This was a particularly interesting observation, because interventions that mentors did were almost consistently about spurring the team

to do more "RAD", despite there being no awareness about this link. These interventions were either directly related to the four activities or done through conflict mediation or collaboration interventions to help teams overcome storming phases. Lack of such interventions also hindered development.

This thesis was done with a pragmatic approach, and a preliminary framework was created based on the findings and implications to suggest how mentors should approach the task of mentoring a nascent entrepreneurial team. These are visualized in Figure 4. The conclusions and recommendations made here should be contextualized to their setting. They can hopefully provide good effect for incubators, accelerators, entrepreneurship education programs or other contexts that would benefit from mentoring schemes for nascent entrepreneurs, and then be iterated based on results. By helping these organizations improve their program design, they might in turn help entrepreneurs develop more competencies, enjoy increased effect from mentors and be more resilient in facing the complexity of the modern western economies to the extent that business dynamism can be revived.

Mentoring framework for early-stage entrepreneurship

Your style:

- Involve yourself proactively and follow up on your own initiative

- Utilize a non-directive and listening approach, practice how you ask questions

- If you provide reflections from your own experience, make sure they are given only as rounds for comparison and that they must make their own experiences on that which you share

Their development:

- Help the team keep up their action-orientation

- Help the team focus on how they are thinking and working on creating value for others and themselves

- Help them focus on interacting more with external stakeholders, and share of your own network if you have relevant contacts

- Have a structured way to help the team reflect on their actions, mistakes and team dynamics

Relation and team:

- Be open to learn from your mentees and keep the relationship reciprocal

- Try to understand what entrepreneurial competencies the team have, especially motivational factors

- Encourage task conflict and be ready to intervene if the team experiences relational conflicts. With a good mentoring style, you can understand the underlying reasons better and define what interventions to make

Figure 24. The preliminary framework based on the findings of this study.

7. References

Amason, A. C., Pearson, A. W., & Ensley, M. D. (2002). Understanding the dynamics of new venture top management teams: cohesion, conflict, and new venture performance. *Journal of Business Venturing*(4), pp. 365-386.

Ardichvili, A., Cardozo, R., & Ray, S. (2003). A theory of entrepreneurial opportunity identification and development. *Journal of Business Venturing*(1), pp. 105-123.

Blenker, P., Elmholdt, S. T., Frederiksen, S. H., Korsgaard, S., & Wagner, K. (2014). Methods in entrepreneurship education research: a review and integrative framework. *Education + Training*(8/9), pp. 697-715.

Bone, J., Gonzalez-Uribe, J., Haley, C., & Lahr, H. (2019). The impact of business accelerators and incubators in the UK. *BEIS Research Paper*(009).

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*(2), pp. 77-101.

Bunge, M. (1963). A General Black Box Theory. *Philosophy of Science*(4), pp. 346-358.

CB Insight. (2019, Nov 6). *Research Briefs: The Top 20 Reasons Why Startups Fail*. Retrieved from CB Insight: https://www.cbinsights.com/research/startup-failure-reasons-top/

Cooney, T. M. (2005). Editorial: What is an Entrepreneurial Team. *International Small Business Journal*(3), pp. 226-235.

Cope, J. (2005). Toward a Dynamic Learning Perspective of Entrepreneurship. *Entrepreneurship Theory and Practice*(4), pp. 373-397.

Couteret, P., & Audet, J. (2012). Coaching the entrepreneur: Features and success factors. *Journal of Small Business and Enterprise Development*(3), pp. 515-531.

Crasborn, F., Hennissen, P., Brouwer, N., Korthagen, F., & Bergen, T. (2011). Exploring a two-dimensional model of mentor teacher roles in mentoring dialogues. *Teaching and Teacher Education*(2), pp. 320-331.

Crisp, G., & Cruz, I. (2009). Mentoring College Students: A Critical Review of the Literature Between 1990 and 2007. *Research in Higher Education*(6), pp. 525-545.

DeMers, J. (2018, Feb 15). *5 Big Brands That Had Massively Successful Pivots*. Retrieved from Entrepreneur Europe: https://www.entrepreneur.com/article/308975

Eckhardt, J. T., & Shane, S. A. (2003). Opportunities and Entrepreneurship. *Journal of Management*(3), pp. 333-349.

European Commission. (2013). *Entrepreneurship 2020 Action Plan: Reigniting the Entrepreneurial Spirit in Europe.* Brussels: European Commission.

Fayolle, A. (2007). *Entrepreneurship and new value creation: the dynamic of the entrepreneurial process.* Cambridge University Press.

Gartner, W. B. (1988). "Who Is an Entrepreneur" Is the Wrong Question. *American Journal of Small Business*(4), pp. 11-32.

Gersick, C. J. (1989). Marking Time: Predictable Transitions in Task Groups. *The Academy of Management Journal*(2), pp. 274-309.

Gibb, A. A. (1997). Small Firms' Training and Competitiveness. Building Upon the Small business as a Learning Organisation. *International Small Business Journal*(13), pp. 13-29.

Gravells, J. (2006). Mentoring start-up entrepreneurs in the East Midlands – Troubleshooters and trusted friends. (B. Garvey, & A. Carter, Eds.) *The International Journal of Mentoring and Coaching*(2), pp. 3-15.

Haggard, D. L., Dougherty, T. W., Turban, D. B., & Wilbanks, J. E. (2011). Who Is a Mentor? A Review of Evolving Definitions and Implications for Research. *Journal of Management*(1), pp. 280-304.

Harper, D. A. (2008). Towards a theory of entrepreneurial teams. *Journal of Business Venturing*(6), pp. 613-626.

Hytti, U., Stenholm, P., Heinonen, J., & Seikkula-Leino, J. (2010). Perceived learning outcomes in entrepreneurship education: The impact of student motivation and team behaviour. *Education + Training*(8/9), pp. 587-606.

Innovation Norway. (2018). *Oppdragsgiverrapport fra Innovasjon Norge 2018.* Oslo: Innovation Norway.

Jacobi, M. (1991). Mentoring and Undergraduate Academic Success: A Literature Review. *Review of Educational Research*(4), pp. 505-532.

Johannessen, A., Christoffersen, L., & Tufte, P. A. (2016). *Forskningsmetode for økonomisk-administrative fag* (5 ed.). Oslo: Abstrakt Forlag.

Klotz, A. C., Hmieleski, K. M., Bradley, B. H., & Busenitz, L. W. (2014). New Venture Teams. *Journal of Management*(1), pp. 226-255.

Kolb, D. (1984). *Experiential Learning.* Englewood Cliffs, NJ: Prentice-Hall.

Kraiger, K., Ford, J. K., & Salas, E. (1993). Application of Cognitive, Skill-Based, and Affective Theories of Learning Outcomes to New Methods of Training Evaluation. *Journal of Applied Psychology*(2), pp. 311-328.

Kubberød, E., & Pettersen, I. B. (2017). Exploring situated ambiguity in students' entrepreneurial learning. *Education + Training*(3), pp. 265-279.

Kubberød, E., Fosstenløkken, S. M., & Erstad, P.-O. (2018). Peer mentoring in entrepreneurship education: towards a role typology. *Education + Training*.

Lackéus, M. (2013). *Developing entrepreneurial competencies: An action-based approach and classification in entrepreneurial education.* Ph.D. , Chalmers University of Technology, Department of Technology Management and Economics, Division of Management of Organizational Renewal and Entrepreneurship.

Lackéus, M. (2014). An emotion based approach to assessing entrepreneurial education. *International Journal of Management Education*(3), pp. 374-396.

Lackéus, M. (2015). *Entrepreneurship in Education: What, Why, When, How*. Paris: LEED division of OECD: European Commission.

Lackéus, M. (2018). "What is Value?" – A Framework for Analyzing and Facilitating Entrepreneurial Value Creation. *Uniped*(01), pp. 10-28.

Mach, M., Dolan, S., & Tzafrir, S. (2010). The differential effect of team members' trust on team performance: The mediation role of team cohesion. *Journal of Occupational and Organizational Psychology*, pp. 771-794.

Man, T. W. (2008). Understanding Entrepreneurial Learning: A Competency Approach. *Entrepreneurship and Innovation*(3), pp. 189-198.

Man, T. W., Lau, T., & Chan, K. F. (2002). The competitiveness of small and medium enterprises: A conceptualization with focus on entrepreneurial competencies. *Journal of Business Venturing*(2), pp. 123-142.

McKevitt, D., & Marshall, D. (2015). The legitimacy of entrepreneurial mentoring. *International Journal of Entrepreneurial Behavior & Research*(2), pp. 263-280.

Minniti, M., & Bygrave, W. (2001). A Dynamic Model of Entrepreneurial Learning. *Entrepreneurship Theory and Practice*(3), pp. 5-16.

Naudé, W. (2019). The Decline in Entrepreneurship in the west: Is complexity ossifying the economy? *Discussion paper series*(12602).

Oxford University. (1989). *The Oxford English Dictionary* (2 ed.). Oxford: Oxford University Press.

Pittaway, L., & Cope, J. (2007). Simulating Entrepreneurial Learning. *Journal of Management*(2), pp. 211-233.

Pittaway, L., Rodriguez-Falcon, E., Aiyegbayo, O., & King, A. (2011). The role of entrepreneurship clubs and societies in entrepreneurial learning. *International Small Business Journal*(1), pp. 37-57.

Politis, D. (2005). The Process of Entrepreneurial Learning: A Conceptual Framework. *Entrepreneurship Theory and Practice*(4), pp. 399-424.

Rae, D. (2000). Understanding entrepreneurial learning: a question of how? *International Journal of Entrepreneurial Behavior & Research*(3), pp. 145-159.

Rae, D. (2005). Entrepreneurial learning: a narrative-based conceptual model. *Journal of Small Business and Enterprise Development*(3), pp. 323-335.

Regjeringen [The Norwegian Government]. (2015). *Regjeringens Grunderplan [The governmental plan for entrepreneurship]*. Oslo: Nærings- og Fiskeridepartementet.

Rose, J. D. (2011). Diverse Perspectives on the Groupthink Theory: A literary review. *Emerging Leadership Journeys*(1), pp. 37-57.

Sarasvathy, S. D., & Venkataraman, S. (2011). Entrepreneurship as Method: Open Questions for an Entrepreneurial Future. *Entrepreneurship Theory and Practice*(1), pp. 113-135.

Sarasvathy, S. D., Dew, N., Velamuri, S. R., & Venkataraman, S. (2003). Three views of Entrepreneurial Opportunity. *Handbook of Entrepreneurship Research*, pp. 141-160.

Schneider, J. (2017). *Understanding Design Thinking, Lean and Agile.* Sebastopol: O'Reilly Media, Inc.

Silverman, D. (2015). *Interpreting Qualitative Data* (5 ed.). Sage Publications.

Smith, M. J. (2017, Jan 12). *Do Funders Care More About Your Team, Your Idea, or Your Passion?* Retrieved from Insights by Stanford Business: https://www.gsb.stanford.edu/insights/do-funders-care-more-about-your-team-your-idea-or-your-passion

St-Jean, E. (2011). Mentor functions for novice entrepreneurs. *Academy of Entrepreneurship Journal*(1), pp. 65-84.

St-Jean, E., & Audet, J. (2012). The role of mentoring in the learning development of the novice entrepreneur. *International Entrepreneurship and Management Journal*(1), pp. 119-140.

St-Jean, E., & Audet, J. (2013). The Effect of Mentor Intervention Style in Novice Entrepreneur Mentoring Relationships. *Mentoring & Tutoring: Partnership in learning, 2013*(1), pp. 96-119.

Tekleab, A. G., Quigley, N. R., & Tesluk, P. E. (2009). A Longitudinal Study of Team Conflict, Conflict Management, Cohesion and Team Effectiveness. *Group & Organization Management*(2), pp. 170-205.

The Guardian [Anonymous writer]. (2018, Nov 21). *Our new column from inside Amazon: "They treat us as disposable"*. Retrieved from The Guardian: https://www.theguardian.com/us-news/2018/nov/21/our-new-column-from-inside-amazon-they-treat-us-as-disposable

Thompson, L. L. (2008). *Making the team: a guide for managers* (3 ed.). Pearson/Prentice Hall.

Tuckman, B. W. (1965). Developmental Sequence In Small Groups. *Psychological Bulletin*(2), pp. 384-399.

Tuckman, B. W., & Jensen, M. A. (1977). Stages of Small Group Development Revisited. *Group & Organization Studies*(2), pp. 419-427.

Von Osnabrugge, M. (2000). A comparison of business angel and venture capitalist investment procedures: An agency theory-based analysis. *Venture Capital: An International Journal of Entrepreneurial Finance*(2), pp. 91-109.

Wang, C. L., & Chugh, H. (2014). Entrepreneurial Learning: Past Research and Future Challenges. *The International Journal of Management Reviews*(1), pp. 24-61.

Yin, R. K. (2014). *Case study research design and methods* (Vol. 5). Thousand Oaks, Ca: Sage.