Master's thesis

NTNU
Norwegian University of Science and Technology
Faculty of Economics and Management
Dept. of Industrial Economics and Technology Management

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Learning Pathways of Young Entrepreneurs: Navigating the Iterative Venture-building Process

Master's thesis in Entrepreneurship at NTNU School of Entrepreneurship
Supervisor: Roger Sørheim
June 2023

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Sammendrag

Denne oppgaven utforsker entreprenørskapslæring i konteksten av den iterative prosessen unge entreprenører gjennomgår for å sikre sin første betalende kunde.

Oppgaven har benyttet seg av en inngående kvalitativ tilnærming for å utforske de underliggende faktorene som påvirker entreprenøriell læring i tidlig-fase bedriftsutvikling. Dette har blitt gjort ved å benytte seg den empiriske metoden Zaltman Metaphor Elicitation Technique (ZMET), som tidligere har blitt benyttet i begrenset omfang i litteraturen om entreprenøriell læring. Åtte unge, nyutdannede entreprenører som er daglig leder i en tidlig-fase bedrift deltok i studien. Entreprenørene representerte bedrifter som nylig hadde mottatt STUD-ENT tilskuddet, og sikret sin første betalende kunde. Ved å følge den stegvise ZMET-prosedyren, ble det avdekket et rikt datagrunnlag fra entreprenørenes tanker og følelser rundt erfaringene deres. En databasert teoriutviklings tilnærming, og måls-ende analyse ble videre brukt for å avdekke entreprenørenes underliggende mentale konstrukter. Entreprenørenes aggregerte konstrukter ble videre visualisert i et konsensus-kart og utgjør oppgavens funn.

Funnene understreker entreprenøriell læring som sterkt utforskende og ikke-lineær. Videre avdekkes en rekke prosesser og situasjoner på mikro-nivå, både internt og eksternt, som kan ses å påvirke læringsutbyttet. Denne oppgaven er den første til å introdusere begrepet *setbacks*. Begrepet beskriver en situasjon hvor det å være ung, med et godt sikkerhetsnett, og ha mottatt softfunding kan resultere i lavere nivåer av følelsesmessig tilknytning til negative hendelser, som videre viser å kunne påvirke graden av refleksjon og læring. Entreprenørene vises å reflektere, men refleksjonen er ikke direkte knyttet til setbacks, kunnskapsutvikling, eller interaksjon med deres nettverk. Dette indikerer at endringer i entreprenørenes rutiner og refleksjons-mønster positivt kan påvirke graden og hastighet av læring til unge entreprenører

Funnene kan ha praktiske implikasjoner for unge entreprenører og institusjoner som er involvert i å støtte etableringen av oppstarter. Vi oppfordrer unge entreprenører til å motvirke deres potensielle mangel på erfaring og følelsesmessig tilknytning ved å etablere strukturer og rutiner for kunnskapsdeling og refleksjon. Dette kan sees å hjelpe dem å mer effektivt trekke ut verdifull kunnskap fra nettverk og erfaringer med tilbakeslagene.

Abstract

This thesis explores entrepreneurial learning in the context of the iterative venture-building process that young entrepreneurs go through to secure their first paying customer.

An in-depth qualitative approach was taken to explore the underlying factors of entrepreneurial learning in the early venture-building process using the novel empirical methodology called the Zaltman Metaphor Elicitation Technique (ZMET). Eight young entrepreneurs, who were recent university graduates and CEOs of their nascent ventures, participated in the study. These ventures had recently received the STUD-ENT grant and successfully obtained their first paying customer. Following the stepwise ZMET-procedure, the entrepreneurs disclosed exceptionally rich data about their experiences. A grounded theory approach and a means-end analysis were used to uncover connections between the entrepreneurs' mental constructs, where the aggregation of these reveal the entrepreneurs' shared mental models, depicted in a consensus map.

The findings accentuate the highly experiential and non-linear nature of entrepreneurial learning while exposing a number of micro-level processes and situations, both internal and external, that could influence the learning outcomes. Most notably, this thesis is the first to introduce the concept of *setbacks*, a situation in which being young in a safe environment and having received soft funding may result in lower levels of emotional attachment to negative events, thereby affecting the following degree of reflection and levels of learning. The entrepreneurs do engage in reflection, but this is not directly linked to setbacks, knowledge development, or any direct interaction with their networks, indicating that changes in the entrepreneurs' routines and reflective behavior could positively affect the rate and level of learning.

The findings of this study can have practical implications for young entrepreneurs and institutions involved in supporting the establishment of new ventures. We advocate for young entrepreneurs to try to counterbalance their potential lack of experience and emotional attachment by establishing structures and routines for knowledge sharing and reflection. This could be seen to help them in effectively extracting and reflecting on knowledge derived from networks and experiences with setbacks.

Preface

Writing a master's thesis is undeniably daunting. However, what appeared to be an impassable mountain amid our own venture-building process evolved into a conquerable summit thanks to the unquestionable belief and support from the amazing people, both faculty members and fellow students, at NTNUs School of Entrepreneurship.

First, we want to express our profound appreciation to our supervisor, Roger Sørheim. His belief in our skills, continuous encouragement, knowledgeable feedback, and dedicated time has been an essential source of motivation for us throughout this academic journey.

A heartfelt thank you also goes out to Lise Aaboen, Dag Håkon Haneberg, Torgeir Aadland, and Ragnhild Nordeng Fauchald for their invaluable contributions to our methodology. Their expertise, their generous sharing of knowledge, and their assistance have enriched our research and heightened the value of our thesis.

In conclusion, we hope that our thesis will not only do justice to the vast knowledge we have gathered but also pay homage to everyone who contributed to its accomplishments. We also hope our work adds value to the scholarly world and provides some interesting insights for young entrepreneurs in their venture-building journey, at least it did for us.

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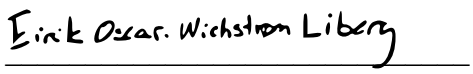

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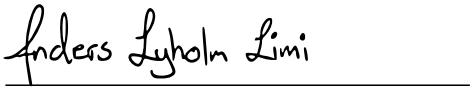

Anders Lyholm Limi

Trondheim, June 2023

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1.0 Introduction

The purpose of this thesis is to examine entrepreneurial learning in the context of the iterative venture-building process that young entrepreneurs go through to secure their first paying customer.

Entrepreneurship is crucial to economic innovation, expansion, and job creation (Acs & Szerb, 2007), yet navigating the complexities of business establishment, particularly for young entrepreneurs, can be daunting (Politis, 2008). These young entrepreneurs are not only faced with the general challenges of unpredictable market dynamics, high consumer expectations, and competition, but also have to deal with having little to no prior experience in either management or earlier entrepreneurial endeavors, which could be seen to potentially make the process much more difficult (Politis, 2005).

Achieving the first paying customer is a significant milestone in the start-up journey, affirming the venture's value amidst inexperience and resource limitations. This achievement could be seen to provide valuable proof of concept, start the cycle of financial viability and trigger crucial signaling effects (Aaboen et al., 2011; Wang et al., 2014). However, challenges persist post this achievement.

The further identification and development of their entrepreneurial opportunities can be seen as dependent on their ability to explore, learn, iterate, and adapt to the ever-changing market conditions (Corbett, 2005; Minniti & Bygrave, 2001). Consequently, understanding the underlying mechanisms of entrepreneurial learning and the factors affecting this learning amidst the highly iterative early stages becomes current and timely. This study, therefore, explores how young entrepreneurs acquire knowledge throughout the highly iterative process of attempting to attain a first-paying customer.

Although acknowledging that the success of a first product is of utmost importance for the future development of the new venture (Aaboen et al., 2011; Wang et al., 2014), the research on how young entrepreneurs attain their first customer is a scarcely researched theme. Furthermore, little prior research has focused on the specific events affecting and determining entrepreneurial learning (Soetanto, 2017), especially in the process of acquiring the first customer. Therefore, a careful examination of this subject should shed light on the crucial facets of how inexperienced entrepreneurs might learn more effectively during this phase.

Entrepreneurship research has traditionally aimed to pinpoint the traits that make entrepreneurs successful or the attributes of their prosperous and rapidly expanding ventures. However, after Gartner's (1989) publication, the paradigm began to shift towards a more process-oriented view of entrepreneurship and the learning therein (Cope & Watts, 2000; Watkins & Marsick, 1992). This shift placed the spotlight on entrepreneurship as a continual learning process. Rather than being seen as a fixed trait or characteristic, the literature now suggests that much of the learning in an entrepreneurial context is experiential.

Due to the growing research fields' inherent complexity and content-dependency (Haneberg, 2019; Toutain et al., 2017), research on entrepreneurial learning has been fragmented over a vast array of topics, leading to incongruencies in many areas (Wang & Chugh, 2014). Other researchers have looked at experiential learning in a broader sense, such as the process of learning-by-doing (Balasubramanian, 2011; Cope, 2003; Cope, 2005; Rae & Carswell, 2000). Minniti and Bygrave (2001) looked at entrepreneurial learning in a way of updating one's stock of knowledge from past experiences, both positive and negative, through only repeating actions that generate better outcomes. In the experiential process, Cope and Watts (2000) bring up the notion that different "critical incidents" could affect the learning outcomes and lead to "higher-level" learning, given that the entrepreneur proactively reflects on these events and reframes their personal understandings as a result. Earlier management and prior start-up experience have also been emphasized as a proxy for learning (Cope, 2005; Minniti & Bygrave, 2001; Politis, 2005), also stating how habitual entrepreneurs can be seen as less uncertain about the roles or functions in organizations, have a slightly higher preference for uncertain situations, and acknowledge that a more important component of their experience base is learning from

prior mistakes (Politis, 2008). Finally, considerable attention has been directed toward the examination of networks and their significance in the process of learning. In order to understand how to face self-crises, external threats, management, and organizational concerns, Soetanto (2017) outlines how entrepreneurs build different kinds of networks in response to their challenges, while Hughes et al. (2014) found that network-based learning does not directly correlate with performance, as the correlation is mediated by the entrepreneurs absorptive capacity.

Researchers have to date, attempted to understand how entrepreneurs learn from these experiences to develop their knowledge. Much of this research has drawn on the work of Kolb's (1984) definition of experiential learning (Wang & Chugh, 2014), which portrays an idealized cycle of learning through active experimentation, concrete experiences, reflective observation, and abstract conceptualization. The notion that entrepreneurial learning is a complex and context-dependent process (Toutain et al., 2017) is supported by the number of interactions and interdependencies between characteristics identified in the present paper.

Overall entrepreneurial capabilities can be seen as progressively cultivating over time through a process of experimentation, failure, reflection, iteration, sensemaking and updating of one's stock of knowledge. Despite a growing body of literature on entrepreneurial and organizational learning, the understanding of how entrepreneurs learn from previous experiences remains fragmented (Politis, 2005; Wang & Chugh, 2014). The existing body of literature underscores a notable scholarly oversight regarding the examination of micro-level processes that influence the learning outcomes. Haneberg and Aaboen (2021) echo this sentiment, emphasizing the need for research to offer a greater level of detail into the practices that enhance entrepreneurial learning. This call highlights the need for a thorough exploration of the complex mechanisms operating within these micro-level processes to achieve a holistic comprehension of the elements that determine learning outcomes. This thesis responds to this need by delving into entrepreneurial learning within the specific context of young, recent graduates lacking prior professional work experience, particularly during the crucial stage of acquiring their initial paying customer.

Based on the identified gaps in the literature, this thesis aims to expand the understanding of how young entrepreneurs learn through obtaining their first customer by first looking into the research question - RQ1: *What factors facilitate or inhibit entrepreneurial learning for young entrepreneurs?* This question is crucial as it directs our attention toward the specific, and underlying factors and conditions that enhance or hinder the learning process. Young entrepreneurs often encounter a steep learning curve, and understanding the facilitating or inhibiting factors could bring us a step closer to developing a more comprehensive framework of entrepreneurial learning, and provide valuable implications for practice, especially for those at the nascent stages of their entrepreneurial journey.

Second, the research question - RQ2: *How do young entrepreneurs learn from critical events in the early, iterative venture-building process?* is explored. Unexpected and critical events can be seen as unavoidable components of the non-linear and discontinuous path, as entrepreneurship is fundamentally a risky endeavor (Cope & Watts, 2000; Deakins & Freel, 1998). As a result, entrepreneurs must possess the ability to grow from these events, adapt, and move on. By comprehending this process, we could shine a light on the processes by which the young founders try to transform these challenges into chances for development.

Finally, the last research question - RQ3: *To what extent do young entrepreneurs reflect upon their experiences throughout the learning process?* Entrepreneurs may make sense of their experiences, draw lessons from them, and use these lessons to inform their future actions by reflecting on them (Cope, 2005). Even though it's critical, reflection in the context of early-stage entrepreneurship is still an under-studied topic. Our research seeks to deepen our understanding of entrepreneurial learning by revealing more about the specific reflective processes that new, recently graduated entrepreneurs engage in.

This study utilizes the Zaltman Metaphor Elicitation Technique (ZMET) (Zaltman, 1997; Zaltman & Coulter, 1995), which represents a distinctive and infrequently employed methodology within the field of entrepreneurial learning. Although the application of this approach has been limited to a small number of researchers, their findings have yielded profound and comprehensive insights, underscoring the richness inherent in this in-depth qualitative.

methodology (Haneberg & Aaboen, 2021; Haneberg & Aadland, 2019). Grounded in the fields of neuroscience and cognitive psychology, the methodology uses visual tools and metaphors as means to gain valuable insights into the deep-rooted perspectives and reflections of the participants, shedding light on their understanding, assimilation, and derivation of lessons from their experiences (Christensen & Olson, 2002; Zaltman, 1997; Zaltman & Coulter, 1995). Utilizing ZMET in this context enables a thorough exploration of the cognitive and emotional factors affecting the entrepreneurial learning process on a micro-level, often elusive in conventional research techniques (Cope & Watts, 2000).

The in-depth and qualitative data ZMET provides suits the inductive approach of this study, enabling the natural emergence of themes and patterns rather than validating preset assumptions. Utilizing ZMET followed by an inductive analysis, the aim is to offer nuanced insights into complex factors influencing entrepreneurial learning in young entrepreneurs, particularly during the crucial phase of obtaining their first paying customers.

This thesis's findings illuminate the entrepreneurs' common experiences, showcasing the courses of events leading to entrepreneurial knowledge development. The findings display that entrepreneurs learn experientially through an iterative process of obtaining their first customer, however, not necessarily by following the experiential learning steps outlined by the argued for by Kolb (1984). The finding showcases that young entrepreneurs develop new knowledge and learn through a myriad of interrelated factors. However, experiences from critical events and market interactions are prominent themes for facilitating learning. Despite displaying behaviors conducive to learning, the findings demonstrate that the rate and level of learning could be improved through reflective practices, particularly in relation to critical events and market interactions. One significant contribution of this thesis is the introduction of the concept of *setbacks*, which explores how young entrepreneurs, operating within a secure framework, may exhibit a lack of emotional connection and subsequent reflection after experiencing mistakes and negative events. This insight highlights the importance of fostering increased levels of reflective behavior and implementing supportive frameworks to enhance the speed and depth of learning in such contexts. By introducing this novel concept, we expand our understanding of the learning process in entrepreneurship and its implications for personal and professional development.

This thesis contributes to the research on entrepreneurial learning through venture creation, in the context of young entrepreneurs. By uncovering the mental constructs associated with entrepreneurial learning in young entrepreneurs, this thesis answers calls for an empirical understanding of the contents of entrepreneurial learning (Wang & Chugh, 2014).

This thesis further contributes to the understanding of the contents of entrepreneurship by adding a new layer of understanding of how young entrepreneurs learn experientially. Building on the acknowledgment that entrepreneurial learning is a complex, nonlinear, and context-specific process which may not be fully captured through idealized learning processes, this thesis contributes to the understanding of entrepreneurial learning by empirically demonstrating to what extent a broad spectrum of theoretical lenses accurately depicts the entrepreneurial learning process. Furthermore, the early stage of a nascent venture is characterized by a series of significant events, by depicting a detailed map of the shared mental models of the entrepreneurs, this thesis contributes to the understanding of the contents of entrepreneurial learning by showcasing how entrepreneurs react, and learn through significant and critical events. Thereby answering calls for a deeper understanding of the specific forms and levels of learning associated with critical events (Cope, 2005).

2.0 Conceptual Background

2.1 Attaining the First Paying Customer

A startup's road to landing the first paying customer can be complex and multidimensional, requiring strategic planning, execution, and adaptation (Dollinger, 2008). The continuous process of experimentation and learning comprises various iterations of almost all firm-level activities. One of these activities is the vital step of validating the initial idea's value and growth hypothesis (Ries, 2011). In order to do that, creating a minimum viable product (MVP), a simplified version of the good or service that captures its essential features and benefits, is crucial (Ries, 2011). The MVP is essential for generating initial interest and enabling customer validation, in which answers from prospective consumers are utilized to assess the viability and appeal of the service (Ries, 2011). The startup must simultaneously develop a compelling value proposition that articulates its product or service's unique advantages and differentiating features, resonating with potential customers and offering a compelling case for their support (Kirchberger et al., 2020).

Another crucial component of the journey is networking and getting recommendations. The startup may expand its reach, engage potential customers, and encourage word-of-mouth marketing by developing partnerships within important communities (Jarillo, 1989). Building client relationships is crucial for acquiring and keeping that first paying customer, laying the groundwork for a long-lasting, lucrative connection. To ensure relevance, competitiveness, and customer satisfaction, the startup must be prepared to iterate its offering based on consumer input and market dynamics, constantly upgrading its product, service, and strategies (Politis, 2005; Sullivan, 2000). For newly established businesses, obtaining the first client is a crucial milestone that can significantly impact the company's future.

Cultivating the first customer relationship is a pivotal undertaking for a new venture. It offers crucial business concept validation by demonstrating that there is a market need for the young firm's products or services. Securing a customer relationship is also viewed as a strategy to gain entry into the customer's network, which subsequently facilitates the generation of new contracts with additional customers (Aaboen et al., 2011). In combination with starting the cycle of

financial viability, the procurement of a customer also triggers a signaling effect for the startup, with customers serving as a reference, possibly compensating for the startup's lack of reputation (Aaboen et al., 2011). Wang et al. (2014) further validate this signaling effect, who posit that securing the first customer substantially enhances the founding team's legitimacy. This signaling effect, in turn, strengthens legitimacy regarding market readiness, customer knowledge, and commitment. In addition, the first customer's purchase can be seen as the first proof of concept, proving the usefulness and application of the company's product. The input from this early market interaction is priceless as it provides information for improving products, understanding markets, and fostering entrepreneurial growth.

2.1.2 Rationale Behind Focusing on Attaining the First Customer

The preceding section only scratches the surface of start-ups' vast experimentation, frequent mistakes, and crucial learnings in the attempt to attain their first customer. As the iterative process inherent in the entrepreneurship journey is fraught with complexities and uncertainties, start-ups can stumble and fail for many reasons, including inadequate management, insufficient market demand for the product or service, failure with the first product, or financial constraints (McGrath, 1999; Sarasvathy et al., 2013; Song et al., 2010; Walsh & Cunningham, 2016). The process of building the company is further complicated by the contemporary business landscape, which places unprecedented pressure on new businesses due to technological advances, manufacturing innovations, and heightened competition from international competition.

During the early stages of business growth, the entrepreneur and the business are inextricably linked, and the owner can still be seen as synonymous with the business (Cope, 2003). The importance of developing a deeper understanding of entrepreneurial learning in this early stage increases in light of the inherent complexity and difficulties of building a start-up (Sullivan, 2000). Past literature has shown that much of the learning that takes place within the entrepreneurial context is experiential, and whether it leads to a setback or a win, each experiment and iteration offers valuable insights and opportunities for learning (Minniti & Bygrave, 2001; Sarasvathy, 2001; Sullivan, 2000). Mistakes and failures, in particular, have been shown to offer exceptional learning opportunities. They serve as instructive situations that could reveal pitfalls to avoid in the future and imperfections to address while also highlighting outdated

tactics (Cope & Watts, 2000). Learning from these experiences can equip entrepreneurs with the wisdom to navigate the complex terrain of business creation, increasing their likelihood of eventual success.

The necessity for a "full" understanding of this learning process is more critical than ever as the business community develops and becomes more competitive. Studying the learning patterns can help entrepreneurs, investors, and business instructors increase new enterprises' survival and success rates. Examining the iterative start-up process of testing, failing, and learning is therefore not only of academic interest but also has real-world application in commercial entrepreneurship.

Although a vast array of literature exists regarding entrepreneurial and organizational learning in the context of established firms, the authors could not find any research focused on the unique learning events associated with securing the initial customer. To gain insight into how entrepreneurs learn from obtaining their inaugural customers, research findings exemplifying the vastly iterative process of acquiring the first paying customer have been presented before further delving into the topic of traits of being a nascent venture.

2.2 Young Firms and Inexperienced Entrepreneurs

Small innovative start-ups can be seen as the foundation for the Schumpeterian creative destruction process and are usually accounted for as the primary drivers of economic growth (Schumpeter, 1934). Although essential for economic growth, there is a general consensus that the most significant challenges for entrepreneurs typically appear in the initial phases of a firm's life cycle. These complex challenges are why evolutionary scholars propose that the first three or four years are governed by systems that replicate certain aspects of the general Darwinian *"natural selection*" (Cafferata et al., 2009, p. 375). Even though the death rate of young firms has been shown to be significantly higher in the first years (Singh et al., 1986; Stinchcombe, 1965), the benefits and drawbacks of being a new company in the market have long been up for debate.

2.2.1 Learning Advantages of Newness

On the one hand, being a newcomer has been seen to present its own unique advantages. One being the learning advantages of newness hypothesis as proposed by Autio et al. (2000). This hypothesis suggests that early-internationalizing novice ventures possess inherent learning benefits due to fewer entrenched routines and less cognitive and structural complexity, enabling quicker recognition and response to opportunities in the market (Autio et al., 2000). Such firms have also been shown to have increased flexibility compared to established competitors, making it easier to experiment with novel ideas and quickly adapt tactics in response to market developments (Sapienza et al., 2006). Lower risk aversion, as noted by Audretsch and Keilbach (2007), could also allow these firms to bypass the constraints of established technology trends. Additionally, being new to the market has been shown to potentially minimize cognitive gaps between existing entrepreneurial knowledge and new technologies making new firms better at capitalizing on emerging trends and assimilating cutting-edge information (Tripsas & Gavetti, 2000). Moreover, young entrepreneurs have been shown to more freely modify organizational structures and innovation practices, thereby creating efficient procedures and fostering an experimental culture (Tanriverdi & Venkatraman, 2005). Collectively, this independence from existing structures could provide new firms with a competitive edge, promoting a culture of experimentation, aiding quick adaptation and exploitation of new market opportunities, hence also providing an opportunity for increased learning (Minniti & Bygrave, 2001).

2.2.2 Liability of Newness

On the other hand, some of the challenges and disadvantages that newly established ventures face compared to their more established counterparts can be seen as partly manifested by the concept of the liability of newness, a well-known concept in entrepreneurial literature (Cafferata et al., 2009). This concept has mainly been built upon Stinchcombe‘s (1965) book “*Social Structures and Organizations*”. According to this theory, younger firms can be seen as having a higher risk of failure than older ones due to the dependence on cooperation with their networks, having lower levels of legitimacy, and the pressure of establishing a venture in a saturated market (Stinchcombe, 1965). The theory also includes risks such as the entrepreneurs' uncertainty regarding their value of goods and services, a lack of routines and solid structures (Song et al., 2010), and the cost of learning new tasks as exemplified by the process of introducing new roles

requiring a learning period for building knowledge and skills (Freeman et al., 1983; Stinchcombe, 1965). The liability of newness can be seen as making it difficult to establish trust from customers, investors, and other stakeholders, which may eventually have an impact on a new venture's survival.

2.2.3 Liability of Adolescence and the Honeymoon Period

Building on the abovementioned work, Fichman and Levinthal (1991) raised questions regarding the liability of newness. When including the fact that many relationships could start with an initial stock of assets, they found that these initial assets could act as a buffer, shielding new firms from the Darwinian selection pressures for a short amount of time while simultaneously providing resources for longer-term organizational development. Building on Brüderl and Schussler's (1990) work, who proposed a liability of adolescence, representing an inverted U-shape pattern describing the mortality hazard of new businesses, Fichman and Levinthal (1991) introduced what they called a honeymoon phase. This initial phase illustrates how the starting social and financial capital, along with psychological commitment and motivation, can enhance legitimacy and influence the willingness of other stakeholders to provide resources to the organization. This, in turn, could shield the new companies from early selection pressures for a period until their resources are either depleted or further developed. The greater the initial assets of the relationship or organization, the more resilient the firm becomes in withstanding and navigating the challenges that arise in its early stages (Fichman & Levinthal, 1991).

2.2.4 Liability of Smallness

As indicated above, small creative firms must not only deal with the liability of newness, but also contend with what is called the liability of smallness (Brüderl & Schussler, 1990). This liability can best be described as the absence of resources needed to efficiently implement the routines and structure essential to their strategy. These liabilities can be seen as resource constraints, poor internal organization and management, knowledge deficits, and a lack of reputation and bargaining power resulting in a higher risk of failure (Freeman et al., 1983; Lefebvre, 2020).

The literature has shown how the path to acquiring the first paying customer is a complicated and multidimensional process for any startup, becoming even more complex and challenging when

viewed through the lens of the early-phase venture-building process of young entrepreneurs. In this context, these vulnerabilities are made even more exposed by the lack of resources and previous experience in the entrepreneurial process, as young business owners must not only deal with the standard difficulties of starting a successful company, but also contend with the need to achieve a significantly higher level of performance compared to the industry average (Balasubramanian, 2011).

Interestingly, Singh et al. (1986) suggest that the maturity of the venture alone does not alleviate the liabilities of newness; rather, gaining support and endorsement from influential actors is crucial. This external backing facilitates resource exchange and interaction with other entities, providing an advantageous position over time. This highlights that gaining external legitimacy can mitigate an organization's liability of newness. Although some knowledge and external legitimacy can be gained through networks and the use of external resources, as will later be described, the more nuanced insights required for exploiting opportunities and handling the liabilities of newness are best learned through hands-on experience, frequently mentioned in the literature on entrepreneurial learning (Cope & Watts, 2000; Rae, 2000).

2.3 Entrepreneurial Learning

The literature on entrepreneurial learning is characterized by a broad and fragmented understanding of how entrepreneurs learn. Despite primarily being situated at the intersection of organizational theory and entrepreneurship, Wang and Chugh (2014) revealed how previous studies on entrepreneurial learning have also used a wide range of other theoretical insights, including organizational learning, social cognitive theory, population theory, and configuration theory.

The idea that entrepreneurs are action-oriented and that most of their learning can consequently be seen as experience-based is widely accepted in the literature on entrepreneurial learning (Rae & Carswell, 2000). According to the theory put forth by Deakins and Freel (1998), entrepreneurs learn best by learning-by-doing, which includes activities like trial and error, explicit problem-solving, and discovery. Wang and Chugh (2014) also find that a significant portion of the publications on entrepreneurial learning, specifically 32 out of 72, focus on different aspects

of experience-based learning, highlighting the importance of active experimentation. These articles are commonly employed as a theoretical lens for exploring entrepreneurial learning and can be regarded as mechanisms facilitating the learning process. Several notable articles have adopted Kolb's (1984) theory of experiential learning, which has significantly influenced scholars' understanding of learning in the context of venture building. On the other hand, authors have also researched key learning mechanisms like how entrepreneurs learn from positive and negative experiences, learn from past business experiences, learn vicariously through the experience of others, or learn through trial and error without building on Kolb's theories (Wang & Chugh, 2014).

The process by which nascent firms strive to acquire their initial paying customer has earlier in this thesis been shown to be characterized by a highly iterative process, requiring entrepreneurs to continually update their knowledge base through both trial and error. In light of the existing body of literature on entrepreneurial learning, the following section aims to provide a comprehensive overview of the field, focusing specifically on the mechanisms through which entrepreneurs learn in the first stages of the entrepreneurial journey.

2.3.1 Mechanisms by Which Learning Takes Place

Starting with the framework by which much of the theory has been built upon, Kolb's (1984) concept of experiential learning asserts that knowledge and competence development occurs as a result of a cyclical process of concrete experience, reflective observation, abstract conceptualization, and active experimentation. This idealized learning cycle highlights the value of having practical experiences, thinking back on those experiences, extrapolating conclusions, and using newly learned information in real-world contexts (Kolb, 1984). The idea of experiential learning could seem to fit well within the dynamic and context-specific character of entrepreneurial ventures, as entrepreneurs are seen to gain knowledge by involvement in a vast amount of different concrete experiences such as launching a new product, acquiring the first customer, self-reflecting and thinking about why something succeeded or failed, conceptualizing and drawing new conclusions from for example new market insights, and applying their new theories when making decisions and experimenting with various new approaches.

Other scholars studying entrepreneurial learning have employed Kolb's (1984) experiential learning cycle to analyze various aspects of the entrepreneurial process. The utilization of Kolb's (1984) idealized learning cycle can be seen in a variety of research papers investigating things like how entrepreneurs learn from failure and success (Minniti & Bygrave, 2001; Politis & Gabrielsson, 2009), the role of reflection in entrepreneurial learning (Cope, 2005), the significance of action and experimentation in acquiring entrepreneurial skills (Politis, 2005), using networks, co-partition, and venture acceleration programs (Pittaway & Cope, 2007; Politis et al., 2019; Taylor & Thorpe, 2004), and the relationship between experiential learning and opportunity recognition (Corbett, 2005, 2007; Dimov, 2007). By adopting elements of Kolb's (1984) theoretical framework, the literature on entrepreneurial learning provides valuable insights into the mechanisms by which entrepreneurs learn from their experiences and enhance their capabilities. It highlights the iterative and dynamic nature of entrepreneurial learning, emphasizing the importance of actively testing, reflecting on the outcomes, drawing conclusions, and trying again throughout the entrepreneurial development.

Hitherto the conceptual background has discussed how the literature on entrepreneurial learning proposes that entrepreneurs learn through their cycle of experiences, reflection, conceptualization, and active experimentation. Central to this iterative process is the notion of both positive and negative experiences. In their theoretical framework, Minniti and Bygrave (2001) tries to describe how entrepreneurs can be seen to update their subjective stock of knowledge in the aftermath of both positive and negative experiences throughout the iterative venture-building process.

2.3.2 Learning From Past Experiences and Updating the Stock of Knowledge

Minniti and Bygrave (2001) present in their paper a general model describing the process of entrepreneurial learning, especially focusing on how entrepreneurs update their knowledge and decision-making processes based on past experiences.

The decision-making process is explained as encompassing two types of knowledge. The first type is specific knowledge related to the chosen market, including technical, product, and industry-specific aspects. This knowledge can be acquired directly through experience or

indirectly, such as through recruitment. The second type of knowledge, a more general understanding of how to be entrepreneurial, is gained only through experiential learning or observation (Minniti & Bygrave, 2001).

In their paper, Minniti and Bygrave (2001) conceptualize the development of this knowledge as a refined algorithm of a recurrent choice problem, which could be seen as having many parallels to reinforcement learning algorithms in machine learning (Mahesh, 2020). This algorithm allows for varied patterns of entrepreneurial decisions, including suboptimal ones, due to the potential for errors and the inherent uncertainty of the future. When making choices, Minniti and Bygrave (2001) argue that entrepreneurs continually encounter a range of alternative actions, and have the option to choose between two possible strategies to maximize profits. The first choice is whether to choose actions that replicate or are closely related to previous choices, thereby exploiting pre-existing knowledge. Alternatively, the entrepreneur could explore new actions that are distinct from the ones already taken based on prior failures or the need to diversify and consider new alternatives. Over time, entrepreneurs consistently adopt the most promising options and discard the unsuccessful ones as they strive to maximize their profits. Consequently, some actions become ingrained components of the entrepreneurs' decision-making algorithm, exhibiting a self-reinforcing effect due to their repetition, building their knowledge foundation, and further influencing subsequent decision-making processes (Minniti & Bygrave, 2001). Even in the face of mistakes, entrepreneurs incorporate new information and update the algorithms that underpin future expected payoffs, illustrating that learning can occur even from failure.

However, the actual payoffs from choices often differ from the expected ones due to the underlying risk and impact of random variables. The authors emphasize that the challenge of distinguishing between various outcomes of actions plays a crucial role in determining the probability of reaching the optimal long-term equilibrium. The obvious explanation for this is that choosing the best course of action is difficult, as the entrepreneur may focus on strategies that are already performing reasonably well rather than pursue less well-known but potentially better alternatives (Minniti & Bygrave, 2001).

Minniti and Bygraves (2001) model of entrepreneurial learning, in which failure is as informative as success, introduces a novel perspective, underscoring the crucial role of prior knowledge and experience in decision-making under uncertainty. This transformative conversion of experience into knowledge, although through reflective interpretation, is also reinforced by Politis (2005) and underscored by several other authors. Rerup (2005) has, for example, extended this understanding by investigating how entrepreneurs leverage past entrepreneurial experiences to influence subsequent entrepreneurial endeavors positively. In this context, individuals who engage in multiple startups, so-called habitual entrepreneurs, stand out. These entrepreneurs have been shown to develop a distinct entrepreneurial mindset and advanced problem-solving abilities, thereby enhancing their proficiency in identifying and seizing new opportunities (Shane, 2000; Ucbasaran et al., 2013). Mueller and Shepherd (2016) bring yet another layer to this discussion, arguing that veteran entrepreneurs usually have more sophisticated opportunity prototypes, which can significantly streamline the transformation of failure experiences into valuable knowledge related to opportunity identification. These experiences and learnings form the basis for the entrepreneurs' actions, shaping their choices and strategies.

The model proposed by Minniti and Bygrave (2001), which has been further elaborated upon by several researchers, highlights the crucial role of updating one's knowledge base through concrete experiences. However, it is important to recognize that this learning process is non-linear and characterized by discontinuous events, contributing to the dynamic and contextual nature of entrepreneurial learning (Cope, 2005; Deakins & Freel, 1998). Rather than a smooth progression, the journey is marked by both successes and failures, with significant moments known as critical events that can profoundly impact an entrepreneur's learning trajectory.

When we shift our attention to these critical events, we delve into a deeper understanding of the entrepreneurial learning process, an exploration that can uncover new, comprehensive insights. In this context, the work of Cope and Watts (2000) offers valuable insights.

2.3.3 Learning from Critical Events

By exploring the intricate nature of critical events, and focusing on how these contextual and frequently emotionally charged incidents profoundly impact the entrepreneurial learning process, Cope and Watts (2000) bring up another important point on entrepreneurial learning. Their findings demonstrate how these emotionally connected situations can result in significant personal and professional growth, despite the fact that they might initially appear negative owing to the immediate stress they impose.

The researchers emphasize the multidimensional learning that these important events promote by drawing on different learning theories, particularly Burgoyne and Hodgson's (1983) three levels of learning and Argyris and Schön's (1978, as cited in Cope & Watts, 200) double-loop learning model. Notably, they highlight the critical role that emotions play in these incidents, where the intensity of the entrepreneurs' emotions during the occurrence and in the aftermath has a major impact on the entrepreneurs' cognitive interpretations and causal attributions, which could be seen to affect the learning outcomes (Mars & Hart, 2022; Ucbasaran et al., 2013; Yamakawa & Cardon, 2015). One important finding is that a lot of the learning from these occurrences is implicit in nature, which makes it difficult to formalize and communicate these experiences, especially when they are still happening. Despite this, Cope and Watts (2000) show how entrepreneurs can gain valuable insights from the often emotional, critical events with time and reflection, demonstrating the importance of these elements throughout the process.

In order to promote a reflective process, where entrepreneurs can draw on their own experiences to foresee and address issues in the future, Cope and Watts (2000) propose the use of mentoring programs to aid the entrepreneurs in more clearly bringing forward the experience of the entrepreneur and help them understand the events that have happened, and the context they happened in so that the same events can be avoided in the future. While advocating for this perspective, the authors warn against undervaluing the significance of direct experiential learning, and emphasize that entrepreneurs require personal exposure to such events to attain transformative, higher-level, learning outcomes while also acquiring the knowledge necessary to avoid repeating the same mistakes in the future (Cope & Watts, 2000).

In conclusion, Cope and Watts (2000) offer a wide-ranging viewpoint on the intricacy of critical events in entrepreneurial journeys. Their findings highlight the occurrences' transformative potential as catalysts for multidimensional learning and personal and professional growth, providing insightful information about the characteristics of entrepreneurial learning and the possible support systems for this process.

2.3.4 Learning from Discontinuous Events and Critical Inward Reflection

Also seeing the entrepreneurial process as both turbulent and non-linear, Cope's (2003) research examines the impact of significant, discontinuous events in the entrepreneurial process. These discontinuous events could be seen as crises, opportunities, or sudden changes in the market, referring to significant and unexpected occurrences or situations that disrupt the normal routines or predictable aspects of entrepreneurship (Cope, 2003).

His findings suggest that also these non-routine situations stimulate higher-level learning, challenging both personal norms, assumptions, and deeply held beliefs, potentially altering one's understanding of oneself or the business. This learning also extends beyond the accumulation of habitual lower-level learning, which is described as a more gradual accumulation of knowledge.

Cope (2003) takes a particular interest in the concept of critical reflection, involving a deep, inward, and often challenging introspective process challenging personal norms, assumptions, and "taken-for-granted" beliefs. His findings distinguish between two important forms of reflection: the first being a more structured, goal-directed reflection potentially leading to double-loop learning outcomes and significant business insights as described by Argyris and Schön (1978, as cited in, Cope, 2003), the second being a deeply personal reflection that could lead to transformative personal learning, challenging the entrepreneurs' self-concept and deeply held beliefs.

In the context of entrepreneurial learning from both critical and discontinuous events, it is valuable to also explore the literature on sensemaking and attribution for failure. Even though often being used in the context of entrepreneurial learning from failure (Ucbasaran et al., 2010; Yamakawa & Cardon, 2015), many of the same elements could be applied to the context of

learning from critical or discontinuous events, as they share several aspects such as involving circumstances or experiences, which are oftentimes confusing or unexpected, impose stress, being emotionally connected and offering a high opportunity for learning (Lattacher & Wdowiak, 2020; Mars & Hart, 2022; Weick et al., 2005).

2.3.5 Learning through Sensemaking

Entrepreneurial sensemaking represents the cognitive and interpretive mechanisms entrepreneurs employ to make sense of their experiences, particularly in the aftermath of confronting unexpected or confusing scenarios and failures (Maitlis & Christianson, 2014; Ucbasaran et al., 2013). This process includes the crafting of narratives that help entrepreneurs grasp the underlying causes of their failures and the impacts of their choices (Gabrielsson & Politis, 2009b; Ucbasaran et al., 2013). Sensemaking, therefore, is a continuous and evolving process; initial explanations for failure may undergo revision as entrepreneurs garner more information and continue to reflect on their experiences.

In essence, this iterative sensemaking process encapsulates three intertwined dynamics: scanning, interpretation, and learning (Mars & Hart, 2022). Scanning encompasses an active pursuit for information related to the unexpected event, involving a process of reflection on one's actions and judgments (Weick et al., 2005). Interpretation then involves making sense of these cues and events, factoring in external elements, and linking them to personal experiences and beliefs (Thomas et al., 1993). The learning phase, as an essential part of sensemaking, necessitates behavioral alterations based on insights garnered from the scanning and interpretation stages (Daft & Weick, 1984; Huber, 1991).

Importantly, sensemaking constitutes a process that interweaves personal characteristics, cognitive biases, social interactions, and accessibility of information to influence how entrepreneurs understand the outcomes of their actions (Maitlis & Christianson, 2014). Emphasizing plausibility over accuracy, sensemaking allows individuals to construct narratives that resonate with their pre-existing beliefs and worldviews (Weick, 1995). As such, the sensemaking process can equip entrepreneurs to draw inferences, learn from their mistakes, and steer their actions and decisions, thus aligning with Minniti and Bygrave (2001) 's model of how

entrepreneurs update their stock of knowledge. A deeper comprehension of how entrepreneurs learn from failure is offered by Cardon et al. (2011), who propose that entrepreneurs engage in sensemaking through attributions, the mechanisms through which individuals rationalize their behavior, the actions of others, and events in the world.

2.3.6 Learning through Attribution for Failure

In their exploration of how entrepreneurs attain insights from failure, Yamakawa and Cardon (2015) looked into the entrepreneurs' attributions of blame following failures. The researchers differentiated between two distinct types of attributions: internal unstable causal attributions and external stable causal attributions.

Internal unstable causal attributions refer to how entrepreneurs credit the reasons for business failure to their own faults, implicating their insufficient entrepreneurial skills or inadequate management know-how (Yamakawa & Cardon, 2015). On the other hand, external stable attributions pinpoint environmental factors, such as shifting customer preferences, intensifying competition, external uncertainty, or simply a stroke of misfortune as catalysts for their downfall (Yamakawa & Cardon, 2015).

Yamakawa and Cardon (2015) further assert that entrepreneurs who resort to internal unstable cause attributions are more inclined towards engaging in learning behaviors. Accepting responsibility for the failures, these entrepreneurs become motivated to reflect on their own strategies and behaviors, encouraging them to draw learnings from the experience to avoid similar future failures.

The process of entrepreneurial learning, characterized by trial and error, explicit problem-solving and discovery, has previously been shown to yield both favorable and unfavorable outcomes (Minniti & Bygrave, 2001). As this process is neither linear nor continuous (Deakins & Freel, 1998), unexpected and critical events could potentially spur a more profound inward reflection, thereby enabling higher-level learning (Cope 2003; Cope & Watts, 2000). It is also notable that the process of sensemaking and attributing failure has been shown to affect the learning journey of entrepreneurs, suggesting that their internal cognitive mechanisms can influence the degree of

learning (Cardon et al., 2011; Weick, 1995; Yamakawa & Cardon, 2015). However, it's important to highlight that the literature on entrepreneurial learning also points to situations where entrepreneurs do not update their knowledge base in ways that directly foster positive outcomes for their ventures.

2.3.7 The Possibility of Not Transforming Experiences into Improved Decisions

Building upon the concept of entrepreneurial learning, Cope (2005) presents an insightful consideration in his conceptual paper on the dynamic learning perspective. He highlights the potential challenge of effectively applying knowledge gained from past experiences to enhance future decision-making. Specifically, Cope (2005) emphasizes the potential risks of relying excessively on personal past experiences and existing beliefs when making future decisions. This reliance on past experiences can result in a misinterpretation of new situations (West & Wilson, 1995, as cited in, Cope, 2003), particularly if entrepreneurs do not take the time to reflect on their cognitive structures and erroneous beliefs (Cope, 2005; Kleiner & Roth, 1997). Cope's (2005) preceding arguments built on the work of Kleiner and Roth (1997), who present instances of individuals seemingly stuck in a cycle of repeating past errors, disregarding previously learned lessons. In a similar vein, Jarvis (1987) suggests the presence of "non-learning" responses, wherein individuals unknowingly reinforce false beliefs by incorporating their mistakes into their existing perspectives, which in light of Minniti and Bygraves (2001) model of learning could be seen to propagate false learning into the decision-making algorithm.

However, while these internal cognitive processes play a significant role in entrepreneurial learning, they only offer a partial view of the learning dynamics. To fully comprehend the nature and dynamics of entrepreneurial learning, it becomes essential to broaden the scope and investigate the influence of external factors, particularly social interactions and networks, which are instrumental in shaping the learning journey of entrepreneurs.

Learning isn't a solitary process; it's an interactive journey that's greatly influenced by social contexts (Taylor & Thorpe, 2004). This has been shown to be especially true in the context of critical or discontinuous events, as interactions within one's network can serve as vital sources of knowledge, providing alternative perspectives, feedback, and input that can supplement the

entrepreneur's individual learning process (Soetanto, 2017). Therefore, in establishing a comprehensive understanding of entrepreneurial learning, it is indispensable to consider the intricate interplay of affective and social dimensions within which this learning occurs (Taylor & Thorpe, 2004).

2.3.8 Market Inputs Contribution in Updating Entrepreneurs Stock of Knowledge

The process of entrepreneurial learning, when examined in its fullest context, transcends the borders of individual cognition, extending into the sphere of interpersonal relationships and social interactions. As elucidated by Stinchcombe (1965), nascent enterprises are often seen as heavily reliant on their networks for cooperation. These networks, which could encompass family, friends, colleagues, and other business partners, serve as invaluable sources of learning and knowledge acquisition as they could be seen to facilitate the structuring of knowledge, promote the derivation of meaning from experiences, and stimulate the development of innovative solutions from existing knowledge (Soetanto, 2017).

The significance of this relational dimension of entrepreneurial learning is further highlighted by Taylor and Thorpe (2004). They portray entrepreneurial learning as a complex and dynamic social process that engages in constant interaction with others and the surrounding environment. Their model underlines the social texture that enables learning, emphasizing the crucial roles of social interaction, reflection, and action. Importantly, they also acknowledge the role of emotions, which are often discounted despite their profound influence on the learning trajectory, either positively or negatively (Taylor & Thorpe, 2004).

Entrepreneurs, often distinguished by their individualism, nevertheless depend greatly on their personal networks in decision-making and problem-solving processes (Taylor & Thorpe, 2004). This dependency underscores the dynamic interplay between the entrepreneur and their network of relationships, marking a vibrant landscape of entrepreneurial learning. In sum, the social fabric of interactions and the affective dimensions of learning must be appreciated to gain a comprehensive understanding of entrepreneurial learning.

2.3.9 The Problem-Solving Process as a Social Learning Endeavor

Soetanto's (2017) study presents another compelling argument demonstrating the adaptive nature of entrepreneurial networks in the face of challenges. Drawing on Bandura's (1986) social cognitive theory, Soetanto (2017) portrays the problem-solving process as a social learning endeavor, underscoring the vital role of networks in knowledge development and resource acquisition. Through interactions within these networks, entrepreneurs navigate difficulties, with their consciousness and perspectives evolving in response to the new knowledge acquired from their networks. The study introduces a comprehensive model of entrepreneurial learning through networks, encompassing four distinct strategies employed by entrepreneurs to address difficulties: strengthening, expanding, condensing, and creating new networks (Soetanto, 2017).

By examining the types of challenges that prompt entrepreneurs to leverage networks for learning, Soetanto (2017) identified that entrepreneurs establish distinct network structures in response to their challenges. These networks are not primarily formed based on products or technologies but serve as means for entrepreneurs to address self-crises, external threats, and management and organizational issues. The research sheds light on how entrepreneurs develop networks characterized by strong ties for exploitative learning and networks characterized by weak ties for explorative learning.

In line with previous findings by Cope and Watts (2000) on the importance of critical events for learning, Soetanto (2017) extends the literature by demonstrating how external threats can drive entrepreneurs to rely on trusted relationships, including family, friends, and long-term business partners. By welcoming new connections and strengthening weak ones for exploratory learning, the entrepreneurs modified their networks in response to internal crises, such as problems dealing with management and organization. These connections provide entrepreneurs with additional resources and capacities, enabling them to acquire new knowledge and develop new skills (Soetanto, 2017). These strategies highlight the significance of network interactions in overcoming critical events and catalyzing entrepreneurial learning, building upon Cope's (2003) work on how learning through networks can lead to "higher-level" or transformative learning.

2.3.10 Importance of Absorptive Capacities in Network Based Learning

Adding another dimension to the critical role of network-based learning in knowledge development, Hughes et al. (2014) examine the correlation between social capital, network-based learning, absorptive capacity, and business performance in young entrepreneurial firms. Their research adds a new layer of complexity to the understanding of network-based learning, challenging the notion of learning advantages of newness, instead emphasizing the key role of the entrepreneurs' absorptive capacity in enhancing business performance through network relationships. Thus, in line with Soetanto (2017) highlights the multifaceted nature of entrepreneurial learning, underscoring the importance of adaptive strategies and the ability to absorb and apply new knowledge.

Hughes et al.'s (2014) study shed light on a significant theoretical discrepancy concerning the entrepreneurial problem regarding the role of social capital in young firms' learning advantages and constraints. As shown in *Section 2.2.1*, the absence of prior knowledge and routines could, on the one hand, be seen as giving young entrepreneurial firms an edge (Autio et al., 2000); on the other hand, Hughes et al. (2014) challenge this assertion, showing how a lack of prior knowledge and routines could hinder a firm's ability to convert learning into meaningful performance returns. The researchers thereby introduce what they call the learning constraints of newness, illustrating the important role of absorptive capacity in transmuting these learning constraints into learning advantages.

From the perspective of absorptive capacity theory (Cohen & Levinthal, 1990; Lane & Lubatkin, 1998), prior knowledge equips firms with the capacity to sieve through information and discard what is irrelevant. A lack of prior knowledge, and thus also a lack of absorptive capacity, could tend to result in indiscriminate acceptance of information, leading to potential misinterpretations and an inability to utilize feedback from the market effectively.

Hughes et al.'s (2014) paper also challenges the argument of Nahapiet and Ghoshal (1998, as cited in, Hughes et al., 2014) that learning under the conditions of social capital directly improves business performance. The study suggests that the effects of social capital on network-based learning are different, emphasizing the complexity and nuance of this

relationship. The study concludes that a firm's absorptive capacity directly affects various performance factors by mediating the relationship between network-based learning and business performance. They further contend that in order for businesses to attain the potential benefits of network-based learning, they must engage in practices that enhance their absorptive capacity. The authors thereby address the performance gaps among young firms by highlighting the crucial role of learning processes in their development and contending that advantage accrues to firms that are able to meaningfully interpret and absorb the knowledge their social capital unlocks.

This perspective highlights the necessity of identifying, assimilating, and effectively absorbing the critical events for them to become valuable learning opportunities, as the process of engaging with the market and interacting with one's network on its own is seen as insufficient to secure improvements in performance for young entrepreneurs (Hughes et al., 2014).

2.4 Summary and Reflections

Obtaining the first paying customer for a novice venture can be seen as a complex and multifaceted process (Dollinger, 200). The entrepreneurs are faced with a multitude of actions that they need to take a stance and act upon, where even small errors can have significant consequences for the nascent firms (Song et al., 2010). The process can be recognized as highly iterative, non-linear and discontinuous (Deakins & Freel, 1998), with multiple courses of events and periods that could be seen to lead to both successes and failures, offering different degrees of learning opportunities throughout the journey (Minniti & Bygrave, 2001).

In this thesis, the theoretical framework of experiential learning from Kolb (1984) has been taken into consideration to understand how young entrepreneurs learn while acquiring their first customer. This framework portrays an ideal learning cycle of concrete experience, reflective observation, abstract conceptualization, and active experimentation that, in total, is said to make up the learning (Kolb, 1984). However, this idealized learning process may fully capture the complex and context-specific character of entrepreneurial learning (Cope, 2005). Young entrepreneurs lacking extensive professional experience, could be thought to deviate from following each step of the idealized learning cycle, potentially leading to missed learning

opportunities (Kolb, 1984). The conceptual background reveals that the iterative venture-building process, with its victories and failures, can be understood through different theoretical lenses, where the process of learning has been shown to contain learning at both individual and social levels.

At the individual level, entrepreneurs engage in a series of competing hypotheses and must choose between exploring new approaches or exploiting existing knowledge (Minniti & Bygrave, 2001). Learning seems to take place through accumulating personal experiences and updating the internal decision-making algorithm based on both positive and negative outcomes. This could be seen to lead to either specific knowledge or a more general understanding of how to be an entrepreneur (Cope, 2005; Minniti & Bygrave, 2001), further underscoring the importance of previous experience throughout the journey (Politis, 2005; Rerup, 2005). The learning path includes more calm periods of habitual, lower-level learning, while also containing critical and discontinuous events that could steer the entrepreneurs of their intended paths and pave the way for a more deep-rooted higher-level learning (Cope, 2003, 2005; Cope & Watts, 2000). The degree of learning could be seen to be affected by mechanisms such as sensemaking and attribution to either internal or external factors for faults, allowing individuals to reframe personal norms, assumptions, and deeply held beliefs (Mars & Hart, 2022; Ucbasaran et al., 2013; Weick et al., 2005; Yamakawa & Cardon, 2015), potentially leading to transformative learning outcomes dependent on the level of reflection and emotional connection (Cope, 2003).

At the social level, learning can be seen to occur through network interactions (Taylor & Thorpe, 2004). Personal networks serve as invaluable sources of knowledge, feedback, and alternative perspectives complementing the individual learning and facilitating the structuring of the knowledge (Soetanto, 2017; Taylor & Thorpe, 2004). Moreover, network interactions also play a significant role in overcoming critical events and liabilities of newness (Singh et al., 1986; Soetanto, 2017). However, this can be seen to require that entrepreneurs have built up proper absorptive capacities or routines (Hughes et al., 2014) or seek guidance from mentors or accelerator programs to reflect and make sense of their experiences (Cope & Watts, 2000; Pittaway & Cope, 2007).

The entrepreneur thus learns by updating their internal decision algorithm from both individual and social endeavors, and further tries to reproduce choices and actions which have previously yielded positive outcomes (Minniti & Bygrave, 2001). However, Cope's (2005) findings complicate this, suggesting that the internal algorithm may not always be updated with the right input, as entrepreneurs have been shown to walk into pitfalls of "non-learning" where individuals unknowingly reinforce false beliefs by incorporating their mistakes into their existing perspectives (Jarvis, 1987). Both these learning perspectives can potentially be seen in young entrepreneurs obtaining their first customer, where the entrepreneur learns through actions such as formulating a first value proposal, or reaching out to potential first customers. Although being flexible and able to quickly adapt (Autio et al., 2000; Sapienza et al., 2006) the entrepreneurs seem to be dependent on updating their subjective stock of knowledge throughout the experiential process, learning from both positive and negative events due to the various liabilities (Cope, 2003; Fichman & Levinthal, 1991; Hughes et al., 2014; Stinchcombe, 1965).

In summary, the conceptual background has explored the complex process of obtaining the first customer for young entrepreneurs, focusing on different mechanisms for learning at both individual and social levels. While the literature in this field has grown, it remains fragmented, consisting of many conceptual papers with limited empirical research (Wang & Chugh, 2014). Understanding how entrepreneurs learn is crucial for understanding their success in navigating the challenges and opportunities they face. Given the gaps in the current understanding of entrepreneurial learning, it is essential to contribute to the literature by providing a deeper understanding of how young and novice entrepreneurs learn. This builds up under the choice of a qualitative and inductive methodology, as presented in the following section, allowing for a more comprehensive exploration of the many underlying factors affecting learning for young entrepreneurs in the process of acquiring the first paying customer.

The author's understanding of the literature and theoretical frameworks discussed in this paper is illustrated in *Figure 1*. This visual representation helps conceptualize the interconnectedness and dynamics of entrepreneurial learning, providing a framework for further analysis and exploration. In conclusion, the conceptual background aims to shed light on the complex and dynamic nature of entrepreneurial learning, emphasizing the need for a qualitative and inductive

approach. By delving deeper into the learning processes of young and novice entrepreneurs, this research aims to contribute to the existing body of knowledge and provide insights that can inform entrepreneurial practice and education.

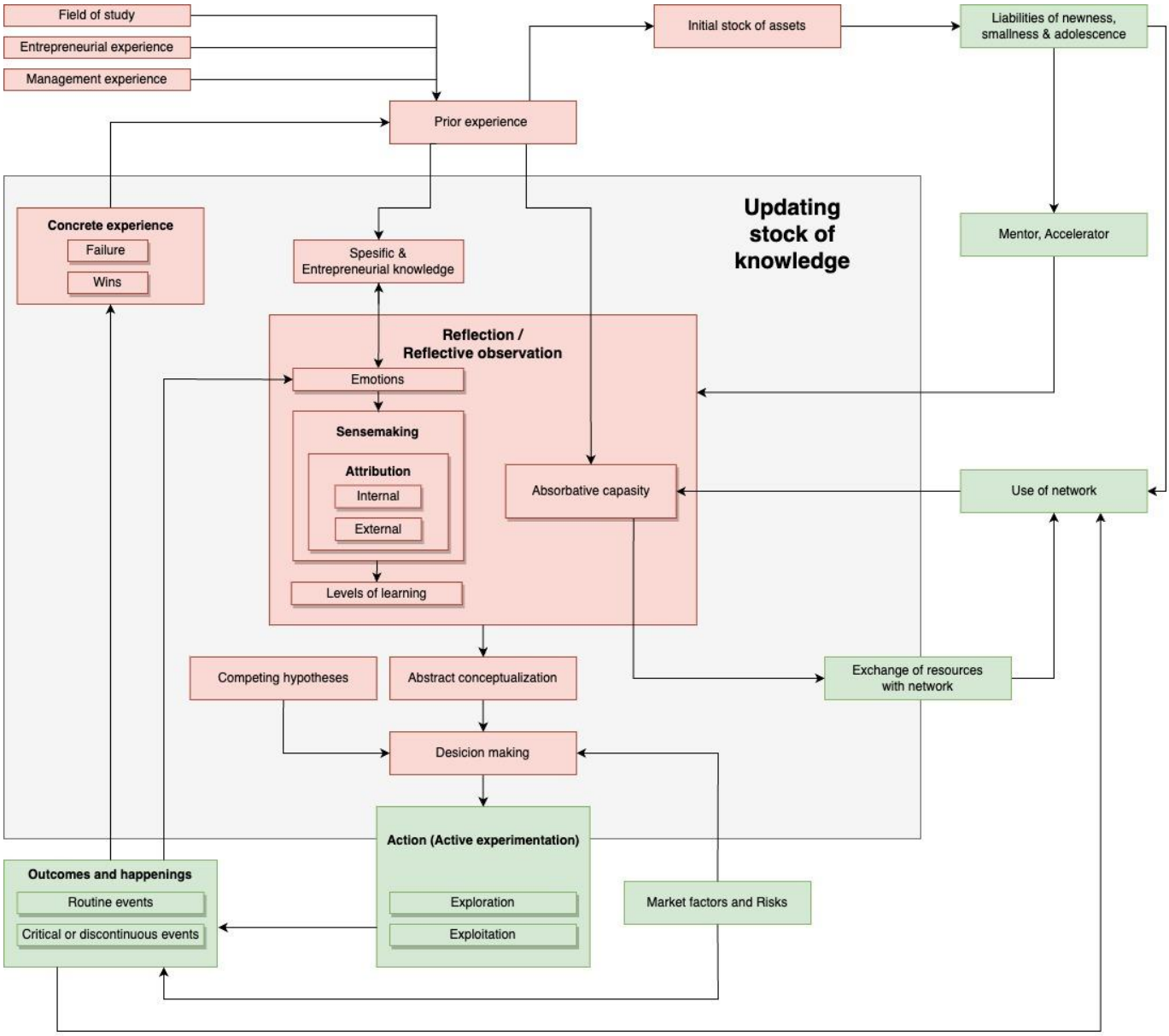

Figure 1 - Depiction of the main elements of the contextual background as understood by the authors.

3.0 Research Methodology

The purpose of this thesis is to examine entrepreneurial learning in the context of the iterative venture-building process that young entrepreneurs go through to secure their first paying customer. Given the significant economic role of entrepreneurship, exploring the unique factors affecting the learning outcomes becomes crucial. This is particularly interesting considering the non-linear and discontinuous environment (Deakins & Freel, 1998) faced by the young entrepreneurs, where several factors and experiences could be seen to affect the learning process. Although there have been several scholarly calls for the development of more research on entrepreneurial learning, empirical studies on entrepreneurial learning could be seen as fragmented and ad-hoc in nature (Wang & Chugh, 2014), and specifically scarce in this specific context. Given the lack of prior research in combination with Haneberg and Aaboen‘s (2021, p. 320) call for further research, which could "*accommodate an increased level of details in studies of practices that contribute to learning,"* it was deemed appropriate to use an exploratory, inductive research design that could reveal significant details into the learning process. An adapted version of the qualitative *Zaltman Metaphor Elicitation Technique* (ZMET) (Zaltman & Coulter, 1995) was therefore applied.

ZMET allows an in-depth understanding of the deeper meaning of the concept and the structures of thoughts and feelings about the product (Christensen & Olson, 2002) that led to the young entrepreneurs first paying customers. The chosen methodology has previously been observed to facilitate a comprehensive understanding of different entrepreneurial learning processes (Haneberg & Aaboen, 2021; Haneberg & Aadland, 2019). It achieves this by using images and their corresponding metaphors as tools for interviewees, facilitating the extraction, articulation, and elucidation of various conscious and unconscious processes they encounter during their entrepreneurial journey (Haneberg & Aaboen, 2021; Haneberg & Aadland, 2019; Zaltman & Coulter, 1995). By employing metaphors, the researchers can thereby gain insights into the entrepreneurs' cognitive frameworks and conceptualizations, which encompass essential facets of their personal lives and significant events encountered during the iterative process of acquiring their initial customer (Christensen & Olson, 2002; Hyrsky, 1998). These metaphorical

representations could therefore be seen to provide a detailed and comprehensive understanding of the multifaceted nature of the learning experiences in this context.

The theoretical frame of reference applied in this study provides a foundation for understanding and discussing the results of the inductive investigations. By drawing on established theories of the iterative process of building a company, the pros, and cons of being a new venture, as well as theories on entrepreneurial learning, the researchers were able to examine and interpret the empirical findings within the established conceptual framework. This inductive (Bryman, 2012) approach facilitated a deeper understanding of the learning mechanisms, processes, and factors affecting the learning outcomes of young entrepreneurs in their pursuit of securing their first paying customer. The application of the theoretical frame of reference enriches the analysis and enhances the theoretical contributions of this study, illuminating the complexities and nuances of entrepreneurial learning in this specific context.

Overall, the utilization of an exploratory, inductive, and metaphor-based qualitative research design, coupled with the application of a robust theoretical frame of reference, has allowed for a comprehensive examination of entrepreneurial learning in the context of young entrepreneurs. The empirical findings and insights derived from this inductive study contribute to the existing body of knowledge on entrepreneurial learning (Cope, 2003, 2005; Cope & Watts, 2000; Hughes et al., 2014; Minniti & Bygrave, 2001; Politis, 2005, 2008; Politis et al., 2019; Soetanto, 2017), providing interesting insights for both researchers and practitioners interested in facilitating the learning and development of entrepreneurs in the nascent stages of their entrepreneurial journey.

3.1 The Zaltman Metaphor Elicitation Technique

The Zaltman Metaphor Elicitation Technique is a distinctive qualitative research methodology, specifically designed to probe and elicit the deep-seated, often unspoken thoughts, feelings, and perceptions individuals hold regarding a particular subject or item (Zaltman, 1997; Zaltman & Coulter, 1995). Developed by Harvard Business School marketing professor Gerald Zaltman, ZMET integrates aspects of psychology, ethnography, and market research, offering a unique approach to unraveling the inner workings of individuals. The methodology follows a step-by-step process aimed at eliciting and analyzing participants‘ individual mental maps. These

mental maps can then be compared and synthesized to construct an overarching consensus map. The different steps, building up to the construction of the consensus map, will be described in the following sections. An overview of this process can be seen in *Figure 6* at the end of this section.

The ZMET methodology, originally derived within the realm of consumer marketing to "*elicit the metaphors, constructs, and mental models that drive consumers' thinking and behavior*" (Zaltman & Coulter, 1995, p. 36), is a research methodology fundamentally situated on the exploration of physical products. This was exemplified by Gerald Zaltman's (1997) work, in which he delved into the thoughts and emotions of interviewees regarding their use of telephones and computers at home. However, the versatility of the ZMET methodology has facilitated its successful application beyond marketing, permeating diverse research domains. It has been harnessed in educational research to decipher student and faculty perceptions of the future of online learning (Shearer et al., 2020), applied in social sciences to elucidate gender differences amongst sports event tourists (Chen, 2010), and leveraged in business and economics to comprehend employees' viewpoints on digitalization-induced change (Schneider & Sting, 2020).

In contrast to traditional research methodologies such as questionnaires and focus groups, ZMET collects data using a unique visual methodology (Zaltman & Coulter, 1995). Participants are asked to bring a portfolio of images that best reflect their thoughts and feelings about a specific topic. By evaluating the metaphors and answers using a variety of qualitative research methodologies, including a grounded theory approach (Corbin & Strauss, 1990) and a means-end analysis (Reynolds & Gutman, 1988), the underlying attitudes and ideas that motivate people's behavior can be explored in depth.

1. The methodology is underpinned by various premises rooted in social and biological sciences (Zaltman, 1997; Zaltman & Coulter, 1995). These premises include:
2. That thoughts are predominantly image-based, even if they are commonly expressed verbally,
3. The understanding that nonverbal communication plays a significant role in human interaction,
4. The acknowledgment of metaphors as crucial mechanisms for thought,

5. The awareness that metaphors can effectively uncover latent knowledge,
6. The recognition that cognition is embodied,
7. The acceptance that emotions and reason are equally influential and often interwoven in decision-making processes,
8. The acknowledgment that a substantial portion of thought, emotion, and learning occurs outside conscious awareness,
9. The understanding that different mental models can interact, and
10. The acknowledgment that mental models guide the selection and processing of stimuli.

In light of these premises, Zaltman and Coulter (1995) argues that the adopted methodology has the potential to facilitate the elicitation of richer narratives and provide deeper insights into the interviewees' representative mental models. Furthermore, Zaltman and Coulter (1995) asserts that this approach enables researchers to "*reveal basic reasoning processes, and provide deep, useful insights about consumers and their latent and emerging needs*" (Zaltman & Coulter, 1995, p. 49).

The complex nature of entrepreneurial learning requires a research approach capable of deciphering the multitude of influencing events. Given the non-linear, intricate, and sometimes subconscious nature of the entrepreneurial learning process, as highlighted by Cope and Watts (2000), ZMET provides an opportunity for respondents to reveal their learning journeys in a more nuanced and holistic manner (Christensen & Olson, 2002; Zaltman, 1997). It allows respondents to articulate their experiences and insights in familiar terms, thus making it easier for them to communicate their learning process effectively. The potential to provide a detailed understanding of how entrepreneurs internalize learning experiences through their mental models also aligns with the notion proposed by Hill and Levenhagen (1995), stating that mental models initially emerge as ineffable concepts with emotive content and are refined over time through verbal articulation and action. As ZMET is adept at eliciting metaphoric constructs and personal narratives, it is uniquely situated to reveal these refined models, thereby facilitating a richer comprehension of entrepreneurial learning processes. Furthermore, ZMET's approach aligns with the concept of articulation through action, a pivotal mechanism in entrepreneurial contexts, as it

navigates ambiguous situations by identifying interpretative responses and facilitating retrospective sensemaking.

In this context, researchers at the Centre for Engaged Education through Entrepreneurship (Engage) at the Norwegian University of Science and Technology (NTNU) have recently adapted the ZMET methodology in their studies on entrepreneurial learning (Haneberg & Aaboen, 2021; Haneberg & Aadland, 2019). These researchers have leveraged the technique to investigate how students assimilate knowledge from venture creation programs, understand how pre-seed grants can be an enabler for learning, and explore entrepreneurial learning at the center of communities of practice (Haneberg & Aaboen, 2021; Haneberg & Aadland, 2019). The rationale for the adoption of this methodology could seem to stem from its capability to yield *"extraordinarily rich data that enable a thorough and holistic understanding"* of the participants' learning processes (Haneberg & Aadland, 2019, p. 121).

Despite its evident utility, it is noteworthy that no methodological publications detailing the application of the ZMET methodology in entrepreneurship have been produced to date. This leaves a gap in practical guidance for such adaptations. Nevertheless, the technique has found application in understanding the more abstract concepts within the domain (Haneberg & Aaboen, 2021; Haneberg & Aadland, 2019). The aforementioned uses underscore the potential of ZMET as an insightful and flexible tool within the study of entrepreneurial learning.

Overall, the ZMET approach represents a shift away from traditional qualitative research approaches, and toward a more thorough strategy that considers the complexities of human thought and behavior. The research design for this paper has been fundamentally shaped by the preceding papers' use of the methodology for exploring entrepreneurial learning, as well as the capacity of the methodology to yield profound insights and detailed data about the ways in which young entrepreneurs comprehend, internalize, make sense of and learn from their experiences. The conjunction of these factors has established the groundwork for our chosen research methodology. In the subsequent sections, the comprehensive methodology of ZMET is elucidated, encompassing the preparatory measures, post-data collection procedures, and methodological steps undertaken to construct the consensus map.

3.2 Research Context

This thesis's research context is centered around young entrepreneurs' learning experiences as they embark on the iterative venture process of obtaining their first paying customer. Several stages of the entrepreneurial process were considered as potential research contexts, but ultimately, the focus was narrowed down to the specific event of entrepreneurs securing their initial customer. This particular moment holds significant importance for young entrepreneurs as it represents a crucial milestone in their venture's development (Aaboen et al., 2011). It serves as an outcome of their experimentation, market interactions, product development, mistakes, iterations, and, not least, learning to finally attain their first paying customer. By studying this specific event, the aim is to gain insights into how learning unfolds during the complex and iterative early stages of an entrepreneurial venture.

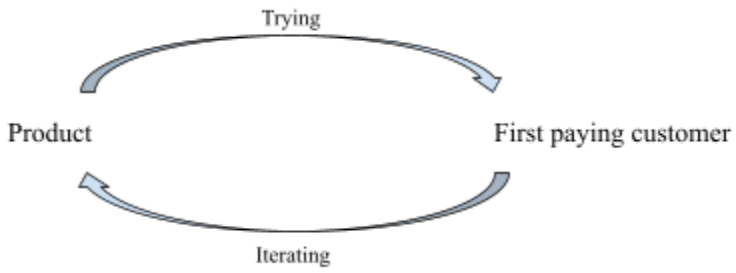

Figure 2 - Research context

3.3 Definition of Interviewees and Interviewee Selection

Upon defining the research context, which emphasizes entrepreneurial learning for young entrepreneurs, the focus shifted toward defining the interviewees. In this context, it was natural to look towards nascent ventures awarded "forny STUD-ENT". This public grant, distributed by Innovation Norway, specifically caters to recent graduates or imminent alumni from Norwegian universities and colleges aspiring to establish their companies, capitalizing on the knowledge developed during their academic pursuits (Innovasjon Norge, 2023). The grant's primary objectives encompass the promotion of scalable and sustainable business models and the fostering of innovative market solutions. To be eligible for this grant, the majority ownership

(80%) must reside with students, and the team should include a project leader who is a recent or soon-to-be graduate of a master's program.

This choice was influenced by several factors. Firstly, ventures backed by this grant provide an ideal context for studying the learning process in nascent ventures initiated by students, as these ventures involve the direct application of knowledge acquired during their studies to a real-world business environment without any direct prior management or entrepreneurial experience. Secondly, the grants stipulation of a scalable and sustainable business model ensures that the ventures actively address market demands rather than remaining solely theoretical. Lastly, the emphasis on significant student ownership directs the focus towards ventures where students themselves play a vital role in decision-making, providing a clear understanding of how their learning process influenced the process of attaining their first customer. Consequently, the "STUD-ENT" grant shaped the participant selection process and provided a meaningful context for exploring learning in nascent ventures initiated by young entrepreneurs.

The spotlight on the critical role of young entrepreneurs in decision-making was intensified in the selection of interviewees from the various companies. Specifically, requests were made to conduct interviews with company CEOs, who with their strategic expertise and decision-making authority, can be seen to offer important insights into organizational operations and strategic choice implications. Their unique position enables them to oversee the outcomes of decisions across the business, spanning all the way from product development to market entry strategies, and resource allocation. As such, they witness firsthand the impacts of their decisions, both positive and negative, and their reflections yield crucial knowledge on managing these outcomes. These insights could thereby provide valuable firsthand knowledge, contributing to a deeper understanding of their decision-making rationale, the consequences thereof, and reveal important learning dynamics within their early-stage ventures.

To mitigate the effects of hindsight bias, a psychological phenomenon in which individuals tend to perceive past events as more predictable than they were at the time (Cassar & Craig, 2009), the study's selection criteria incorporated a consideration for companies whose attainment of their first paying customer was sufficiently historical. This strategy was also aimed at ensuring

the interviewees had accrued substantial experience in their entrepreneurial journey. The study, therefore, focused on recipients of the "STUD-ENT" grants from the 2019/2020 and 2020/2021 cycle, interviewing these founders approximately 2-3 years post-award. This timeline afforded a reasonable assurance that the entrepreneurs had either secured a paying customer for their inaugural product or received customer funding for a specific product development process. This methodology establishes a balance between reducing hindsight bias and acquiring insights from ventures that have evolved beyond their very nascent stages.

In accordance with a meticulous selection procedure, interviews were conducted with eight companies. This decision drew upon the premise posited by Zaltman and Coulter (1995), advocating that a relatively small sample size, such as eight, could yield profound, comprehensive insights. Zaltman and Coulter (1995) further propose that the depth and caliber of data procured from such comprehensive interviews can often surpass the advantages of a more sizable sample, particularly when the investigation is intent on acquiring an in-depth comprehension of specific experiences and processes.

	Position	Study background	Year Founded	Included images / Visual material
Nr. 1	CO-CEO	VCP	2020	1. Criticality: Picture of fist punching through a wall 2. Enjoying chaos: Picture of office full of chaos 3. Relief: Picture of a man standing in the rain with open arms 4. It works: Picture of old plane taking off 5. Fake it till you make it: Picture of goldfish with shark-fin
Nr. 2	CEO	VCP	2020	1. Opportunity space: Picture of the ocean with a sea turtle 2. Blue ocean: Picture of a sunset over a blue ocean
Nr. 3	CEO	VCP	2021	1. Main incentives: Picture of burning money 2. Secondary incentive: Picture of lice looking forrest 3. Tomorrow's resources: Image of globe with recycling sign 4. Feeling replaced: Picture of a robot at an assembly line 5. The problem: Picture of firefighters
Nr. 4	CEO	Non-VCP	2018	1. Happiness: Picture of Liverpool winning over Man United 2. Community: Picture of two people high fiving 3. Insecurity: Picture of a road that splits 4. Relief: Picture of an excited man behind a computer 5. Excitement: Picture of a high voltage sign
Nr. 5	Former-CEO	Non-VCP	2020	1. Solid base: Picture of a brick wall being built 2. Frustration: Picture of a kid frustrated with his homework 3. Right level: Picture of different emojis 4. Learning path: Picture of arrows pointing in multiple directions 5. Mastery: Picture of a man with a jetpack on his back
Nr. 6	CEO	VCP	2018	1. Dream city: Birdsview of a nice looking city 2. Computerized decisions: Picture of computer drawn city 3. Communication: Picture of city with digitized star signs above 4. Computer Vision: Picture of cyclist being tracked in the city 5. Area utilization: Picture of AI tracking
Nr. 7	CEO	VCP	2020	1. Finding the product: Picture of a needle in a haystack 2. Building the product: Picture of a seed germinating 3. Bigger picture: Picture of dominoes lined up 4. Hope: Picture of light in the end of the tunnel 5. Future: Picture of a long, but nice looking mountain road
Nr. 8	CEO	VCP	2019	1. The problem: Picture of a vast amount of websites 2. The problem: Picture of different social media platforms 3. The problem: Picture of people sitting on their phones 4. Happyness: Picture of two people shaking hands after a deal 5. Celebration: Picture of the team celebrating

Table 1 - Description of the interviewees and their companies

The eight companies that made up the chosen sample offered a wide range of experiences and circumstances. It is important to note that one of these ventures had stopped operating before this study was being conducted. The inclusion of this organization in the study offered a distinctive perspective on the difficulties and learning experiences in nascent ventures, especially with regard to identifying the factors that can cause a venture to fail. Their inclusion enhanced the overall picture of the entrepreneurial journey by including both success and failure as well as the lessons learned from each. The remaining seven entrepreneurs, who represent firms that are still operating and have achieved their first customer, demonstrate that despite being recent university graduates with little or no entrepreneurial experience, they have managed to develop sufficient knowledge that has enabled them to successfully acquire their first customer.

The rather rigorous selection criteria delineated above provide an intriguing context for the exploration of entrepreneurial learning. Due to the highly contextual nature of entrepreneurial learning and the need to understand and interpret how learning occurs in relation to the circumstances they occur, Cope and Watts (2000) introduced a framework for the classification of interviewees. This framework also provides useful for the paper, giving insights into the specific context of research. The framework is therefore included and consists of two distinct, four-way typologies. The initial typology depicted in *Figure 3*, derived from Gibb and Richie's (1982) social development model, portrays a diverse spectrum of potential entrepreneurs as per their age and experience. Simultaneously, the second typology in *Figure 4* showcases start-up entrepreneurs concerning the explicit relevance of their preceding experiential learning, both in terms of overall business experience and sector-specific knowledge.

Improviser Young, at start of entrepreneurial career	**Revisionist** Older, near mid-career
Superseeder Middle aged, into new career	**Reverter** Older, moving into post-career activities

Figure 3 - Spectrum of potential entrepreneurs as per age and experience
Adapted from Gibb and Richie (1982)

Business / management experience	Sector experience: Low	Sector experience: High
Low	**Innocents**	**Knowledgeable improvisers**
High	**Confident entrants**	**Veterans**

Figure 4 - Explicit relevance of preceding experience
Adapted from Cope and Watts (2000)

In the context of this study's interviewee selection, the entrepreneurs could be categorized as "improvisers" according to Gibb and Richie's (1982) typology, and as "innocents" in line with Cope and Watts' (2000) typology.

Gibb and Richie's (1982) category of "improviser" pertains to individuals in early adulthood who exhibit a relative fluidity in class position and lifestyle, potentially reducing their perceived risks in starting a business. This group may have a higher likelihood of referencing or directly engaging with parents and other family members from their origin in an entrepreneurial context. Their attachments to work and occupation within this category are often considered incomplete or transitional. When evaluating new business ideas, they may prioritize the potential for

additional career growth compared to a conventional career path. The philosophy of life for "improvisers" typically leans towards openness and determination (Gibb & Richie, 1982).

In the context of Cope and Watts' typology, the "innocents" are characterized by a lack of significant business/management experience coupled with limited sector-specific experience. This classification provides valuable context and contributes to the understanding of the learning dynamics at play within these early-stage entrepreneurial ventures.

3.4 Interview Preparations

During the preparation phase for the interviews, an example was devised to provide participants with guidance regarding their selection of the photographs and images that would act as metaphors, and how they should represent these regarding their *thoughts and feelings about the first product that led to securing their first paying customer*. This guide, as exemplified in *Appendix G,* consisted of two exemplary "correct" choices and one "incorrect" choice as, followed by a justification outlining the latter's inappropriateness and clarifying the causes that ultimately led to the selection of a certain image. This was an important step to ensure that the interviewees would bring photos actually representing metaphors of their thoughts and feelings instead of images of the actual product.

Despite the step-by-step nature of the process, the literature on ZMET describes the requirements of a certain level of experience and expertise to be executed effectively (Zaltman, 1997), especially in regards to the open, unstructured interview process as it can be perceived as chaotic and lacking clear guidelines (Ramjaun, 2021). A test interview was therefore conducted prior to the actual interviews. A fellow classmate that recently started their own company was selected as a test participant, and the interview was conducted using the same questions and prompts that were planned for the actual interviews. The test interview served as a valuable learning opportunity and identified a potential issue regarding the participants' understanding of the initial question of "*What are your thoughts and feelings about the process that led to your first paying customer?*", as the participant did not quite understand what parts of the process that were referred to. Adjustments were therefore made accordingly, changing the *process* with the *product*, also making the question more in line with the original ZMET methodology (Zaltman,

1997). The understanding of the new question was tested once again, giving much better results. By acknowledging these challenges and taking them into account during the test interview, it was possible to refine the methodology and ensure that the actual interviews were as effective as possible.

Ultimately, the test interview was an important step in the process, as it allowed for iterative improvement of both the methodology and the interviewing technique, hence ensuring the actual interviews were able to provide valuable insights to the research questions. By addressing any potential issues or concerns before the actual interviews were conducted, it was possible to minimize any potential biases or errors in the data collection process and ensure that the results were as accurate and reliable as possible.

In accordance with the recommendations put forth by Zaltman and Coulter (1995), invitations for the interviews were sent out seven days prior to provide ample time for the interviewees to prepare and gather the requisite images. To mitigate any potential influence of our own understandings or biases on the participants, the invitation refrained from conveying any specific expectations or extensive explanations regarding the underlying concept. Participants were sent a mail asking them to bring five images or pictures that represented their thoughts and feelings in correspondence to the question *"What are your thoughts and feelings about the product that led to their first paying customer?"*, while also being assured that the images would solely serve as aids for facilitating conversational flow during the interview. This approach aimed to elicit unique perspectives from the participants, enabling them to freely express their thoughts without any influence from our preconceived notions. By deliberately avoiding any form of guidance or suggestion, we endeavored to maintain an open and impartial interview environment.

Participants were thereafter sent a reminder three days before the interview, emphasizing the importance of taking time to reflect on their choice of images and their significance before the interview. This was crucial for the success of the interview, as it would allow participants to delve deeper into their thoughts and feelings regarding the topic at hand.

3.5 Data Collection

The process of collecting data involved conducting interviews with participants residing in Oslo and Trondheim. Emphasizing the significance of in-person interviews, the primary objective was to create an environment conducive to a relaxed atmosphere, thereby facilitating a space where the interviewees felt that they could freely express their thoughts and feelings.

The eight interviews were conducted individually, with both authors of this study present. The interviews were audio recorded and had an average duration of one hour and 27 minutes, ranging from the shortest at one hour and four minutes to the longest at one hour and 54 minutes. The open-ended, unstructured interviews started with an initial phase of casual conversation aimed at establishing a relaxed atmosphere and enhancing the interviewees' comfort level. Following a brief informal introduction, the first step of the ZMET methodology was initiated, wherein participants were asked to provide an introduction to the context surrounding their chosen photographs and speak freely about their thoughts and feelings (Zaltman & Coulter, 1995). In the second step of the methodology, the entrepreneurs were asked to independently identify and provide a description of each image they had brought with them. During these steps, the researchers noted down the constructs that the interviewees presented.

The third step in the methodology involved employing a sequential approach, where each image was individually examined to enable a comprehensive exploration of the interviewees' constructs and metaphors (Zaltman, 1997). By delving deeper into the participants' thoughts and feelings, the interviewers aimed to elicit various constructs and uncover the underlying means-end relationships (Reynolds & Gutman, 1988). The goal of this means-end analysis (laddering-technique) is to identify the interconnectedness between the participants' constructs, encompassing attributes, consequences, and values (Haneberg & Aadland, 2019; Reynolds & Gutman, 1988). During this step, one of the authors assumed the role of asking the open-ended follow-up questions, trying to seamlessly integrate questions highlighting the structure between and content of the interviewees' mental constructs (Christensen & Olson, 2002). Meanwhile, the other author noted down relevant follow-up questions for the main interviewer to further understand and explore these constructs. This collaborative approach allowed the interviewer to guide the discussion, gather pertinent data, and preserve the natural flow of conversation

(Zaltman & Coulter, 1995). The final steps of the interview process in the ZMET methodology involved inquiring if there were any overlooked aspects or images, seeking participants' insights on the most representative image, and prompting them to consider images that could depict the opposite of the given task (Zaltman, 1997). By conducting the interviews in an unstructured manner and employing open-ended questions, the researchers were able to elicit rich and nuanced responses, fostering a comprehensive understanding of the interviewees' constructs and mental models. An example of questions used during the interviews can be seen in *Table 2* below.

Category	**Interview Questions**
General questions	● *Could you elaborate what you mean by X?* ● *Why does this represent X?*
Customer interactions	● *Can you elaborate on your experience with potential customer X?* ● *How did the feedback affect you and the team?*
Product/market fit	● *How did you arrive at this solution?* ● *What was the expectation associated with the initial product test?*
Priorities	● *How have your priorities changed since then?* ● *How do you prioritize now?*

Table 2 - Example of open ended questions asked throughout the interviews

Subsequent to the initial interview, an iterative refinement of the methodology was undertaken due to the observation that the interview with the first entrepreneur predominantly started with portraying all the positive perspectives of their entrepreneurial journey. To address this limitation, the researcher explicitly emphasized that the objective of the study did not involve evaluating the company, its progress, or the individuals involved and that it would rather enhance the research if the entrepreneur talked freely about both positive and negative experiences.

The in-depth interviews therefore encompassed discussions on both positive and negative events, offering the entrepreneurs a platform to communicate their experiences during potentially challenging periods retrospectively. Retrospective storytelling has been shown to provide individuals with a sense of distance from the initial intensity of their encounters, enabling the

interviewees to articulate the impact of different events that might have been difficult to express while experiencing them firsthand. As a result, the open interviews could serve as a medium for participants to reflect upon and communicate their experiences and previous emotions in a more accessible manner (Greiner 1972, as cited in Cope & Watts, 2000).

As noted by Cope and Watts (2000), a risk of adopting such an open ended and unstructured interview approach could be that the interviewers could not be certain that data would shed any light on the research questions that initially drove the study. However, these initial fears were not confirmed and the eight interviews not only yielded an array of interesting insights on important constructs affecting the interviewees learning outcomes, but it also highlighted interesting outcomes in terms of positive and negative experiences in the highly iterative process, how inexperience led to difficulties, and highlighted how internal reflection came into play in the process. Overall the interviews shed light on many interesting aspects of the process and led to a deep reflection from the participants, highlighted by the quotes:

> *"Now I get to reflect on a lot of things that I haven't had time to do before!"*
> - Interviewee nr. 1

> *"You have brought out many thoughts that I felt I did not have myself! Funny way you guys have solved it"*
> - Interviewee nr. 4

3.6 Data Analysis

Upon concluding the interview process, the first step of the data analysis started by transcribing the interviews. To ensure the confidentiality of both the individuals and the companies involved, all identifying information was removed from the transcripts. The transcription was executed through a blend of Microsoft Team‘s automatic transcription software and manual labor to ensure that all information was captured accurately. The manual transcription process was crucial in ensuring that the data collected from the interviews were as rich as the actual interviews and that it could be analyzed effectively. The entire transcript spanned over a total of 136 pages, giving an indication of the extensive nature of the interviews.

The transcribed interviews were then systematically coded using the Nvivo 12 software. Consistent with the methodology outlined by Haneberg and Aaboen (2021), a grounded theory approach (Corbin & Strauss, 1990) was employed, using open and axial coding techniques to generate a total of 115 categories before using these categories to outline each interviewee's mental maps. The primary objective of the analysis was to derive a comprehensive consensus map from the interview data, while trying to safeguard against influence from preconceived theories. The coding methodology facilitated a structured categorization process, enabling a holistic perspective of the data. Moreover, it facilitated the identification and exploration of relationships between categories, grounded in the empirical data rather than being reliant on pre-existing theoretical frameworks.

3.6.1 Open Coding

According to Corbin and Strauss (1990), the initial stage of open coding involves the systematic translation of data and phenomena into conceptual representations (subcategories). This process entailed identifying units of meaning within the transcripts, such as individual or brief sentences of words, with the purpose of assigning these labels. Using open coding allows the possibility to generate new concepts and ideas from the data by breaking it down into smaller parts and identifying patterns and categories (Corbin & Strauss, 1990). This process makes it easier to remain objective and avoid adding biases to the analysis, while ensuring transparency and helping other researchers see the underlying assumptions of the codes (Denzin & Lincoln, 2008). As the literature suggests, the undertaking of open coding can pose challenges, as acquiring proficiency in an intricate analytic coding system within the timeframe of a study may prove burdensome, potentially taking up valuable time elsewhere (Denzin & Lincoln, 2008). In order to ensure the proper execution of the coding phase, the authors sought guidance from faculty members who possessed expertise in this domain. Through these consultations, the authors were presented with illustrative examples, providing valuable guidance throughout the process.

Following the advice of Reynolds and Gutman (1988), both researchers engaged in the coding process, meticulously reading each sentence and engaging in discussions about the underlying meaning of potential new codes as shown in *Table 3*. However, the initial coding approach

resulted in an overwhelming number of codes, with over 500 codes in the first interview and over 300 codes in the second. This level of detail risked compromising the contextual information and caused the Nvivo software to slow down. As a result, a decision was made to restart the coding process, prioritizing the preservation of context and including more content within each code.

The revised iteration significantly improved the process, allowing for a deeper understanding of the interviewees' statements while facilitating more thoughtful considerations when applying the codes. New meanings and statements introduced in the interviews led to the creation of new subcategories, while previously discussed statements were appropriately incorporated into the existing subcategories. The coding process resulted in a total of 953 individual subcategories distributed across the eight interviews. The high number of codes can be attributed to the low level of abstraction used in the coding process, which was necessary to capture the diverse and wide-ranging themes related to the entrepreneurs' iterative process of attaining their first customer.

Transcript	**Coded as**	**Subcategory**
“There is a limited amount of expertise they have as they are inexperienced...”	→	Limited expertise
“We were at such an early stage that we almost didn't have the prerequisites to know what we should challenge...”	→	Lack of prerequisites
“We were a bit too much cowboys, driven by instinct a bit too much...”	→	Intuition-driven
“We follow our gut feeling...”	→	Gut feel
“There is a lot of gut feeling here...”	→	Gut feel
"We created something that we ourselves thought was nice...”	→	Own thoughts about need

Table 3 - Examples from the open coding process

3.6.2 Axial Coding

Axial coding involves the identification and definition of categories that encompass the underlying themes derived from the subcategories identified during the open coding process. As emphasized by Reynolds and Gutman (1988), the main objective of this step is to derive central meanings that are relevant to the purpose of the study. The focus therefore shifts towards examining the relationships between the codes rather than the codes themselves. In this process, Reynolds and Gutman (1988) emphasize the importance of trying to strike a balance between being broad enough to allow for replication of subcategories across multiple respondents, while avoiding excessive breadth that may result in the loss of significant meanings.

To facilitate the organization and analysis of the 953 subcategories into overarching categories, the researchers employed a practical approach. All the subcategories were printed onto paper sheets and cut out into small notes. This physical representation of the subcategories allowed the researchers to manipulate and rearrange the notes easily, aiding in the analysis process and acting as a way to keep track of all the subcategories. A large set of cups were bought, acting as a placeholder for the notes when sorting them thematically. Additional pictures of this process can be seen in *Appendix F,* while examples on the derivation of the categories from the subcategories can be seen in *Table 4* below. The entire process took three iterations, as the work of defining these categories can be seen as an iterative process as new categories develop during the process, necessitating a continuous update to place the subcategories under the right category (Corbin & Strauss, 1990). In the first iteration, the subcategories were coarsely sorted into overarching themes such as “Team”, “Challenges”, and “Feelings.” After the first round of sorting, a more fine-grained iteration was conducted, splitting the initial, overarching themes into more detailed categories, constantly looking at the underlying citations of the subcategories if there were any insecurities about its meaning, or if the subcategory had the potential to be placed under two or more separate categories. In this process, a small number of subcategories were also re-coded as they contained multiple meanings. To keep track of all the categories arising throughout the process, an Excel spreadsheet was set up and all the categories were written down. The last step in securing that the subcategories were placed “correctly”, was conducted when all the new categories were transferred into Nvivo. In the end, the process resulted in a total of 115

categories representing the potential constructs in the mental map and serving as a basis for the means-end analysis (Reynolds & Gutman, 1988).

Subcategory	Coded as	Category
Limited expertise	→	Challenges from limited experience
Lack of prerequisites	→	Challenges from limited experience
Intuition-driven	→	Subjective assumptions
Gut feel	→	Subjective assumptions
Own thoughts about need	→	Subjective assumptions

Table 4 - Examples of the axial coding process

The extensive duration of this meticulous process of open and axial coding necessitated mutual support between the authors to mitigate potential errors resulting from fatigue. Reynolds and Gutman (1988) and Saldaña (2009) underscore the importance of collaborative coding, as working in pairs can be seen to foster reliability and consistency. This step was important in preventing the aggregation of subjective opinions and ensuring the accuracy and rigor of the open coding process, especially after long days of categorization.

3.6.3 Connecting the Categories

After all the subcategories were placed and aggregated under each corresponding category in Nvivo 12, the transcribed interviews were printed. The print contained both the transcribed interviews, and the aggregated categories, showing where in the text the category belonged. A document with the full list of categories, together with a thorough description of each category, was printed to retain a clear overview of all issues. Throughout the analysis, this reference sheet served as a continual reminder of the conceptual structure under investigation. Thereafter, the process of reading through the interviews once again started, assessing the topic of matter in each sentence. The question of whether a category represented in a section of the text led directly to other categories(unidirectional) or if there was an indirect link (bidirectional) to other categories in the interview was considered. Notable topics that did not arise from the coding process were

also documented. The associations between themes were first traced by one of the authors, resulting in a graphic depiction of connected concepts. Following that, the other author independently read through the document and overlooked the connections made, either removing or adding new connections after a quick discussion with the person having traced the connections in the first place. This process allowed for a thorough examination of the relationship between the interviewees' mental constructs.

Upon finishing this process, a Microsoft Excel workbook comprising eight separate worksheets, each representing an individual interview, was set up. Within each worksheet, a 115 by 230 adjacency matrix was utilized. The matrix featured all the categories that arose from the axial coding, sorted in ascending order on the Y-axis, while alternate columns on the X-axis corresponded to the same themes. A design feature of this matrix was the use of two columns for each theme to account for both unidirectional and bidirectional connections. The unidirectional connections represented a direct connection leading from one category to another, and the bidirectional connections represented a clear connection between two categories, but deemed hard to say which category led to the other.

Once the workbook was established, connections from each interview were documented in the belonging workbook in the Excel sheet. For direct connections between themes, a '1' was entered in the left column of the relevant row. If a connection was bidirectional, a '1' was marked in the right column.

Upon completion of the data entry, results were compiled in two separate workbooks representing the cumulated connections between all the separate interviews, laying the groundwork for representing the consensus map. Notably, categories having appeared in three or more interviews received particular attention and were highlighted, while the categories with a total of two or fewer connections were discarded.. The findings were then presented in two separate summary sheets: one detailing the unidirectional connections and another for the bidirectional connections, which can be seen in *Appendix A and B*. An illustrative figure of the data gathering and analysis is shown in the figure below.

Figure 5 - The data analysis process

3.6.4 Illustrating the Consensus Map

After constructing the adjacency matrix illustrating the relationships between the themes, the process of depicting the cumulated relationships between the included categories, hence making the matrix easier to understand, started. The vast amount of data, as shown from the 26 510 individual cells in the "consensus map" workbook, necessitated a way to easily illustrate the connections.

Hence, a Python script was developed that read the adjacency matrix from the Microsoft Excel file, established a threshold for the minimum number of mentions, and generated a directed graph showing the relationships between the categories. The graph was produced by using the NetworkX library and was visualized using Matplotlib. A code snippet was also incorporated to look for any potential loops in the consensus map. By visualizing the connections, the code helps to avoid errors and improve the understanding of the underlying themes and their relationships.

The figure below depicts the process of deriving each interviewee's mental map from the categories, starting with an example from the transcribed interviews, where the bold text highlights the content of the codes shown under the CODING AND CONNECTING CONSTRUCTS column. Thereafter the means-end analysis started by linking these categorizations before representing the connections in the matrix representation. After all the mental maps were represented in the Excel workbook, the connections were aggregated through a Python script, only including connections that were made in three or more interviews. These connections were then drawn, ending up in the consensus map shown in *Figure 7* in *Section 4*

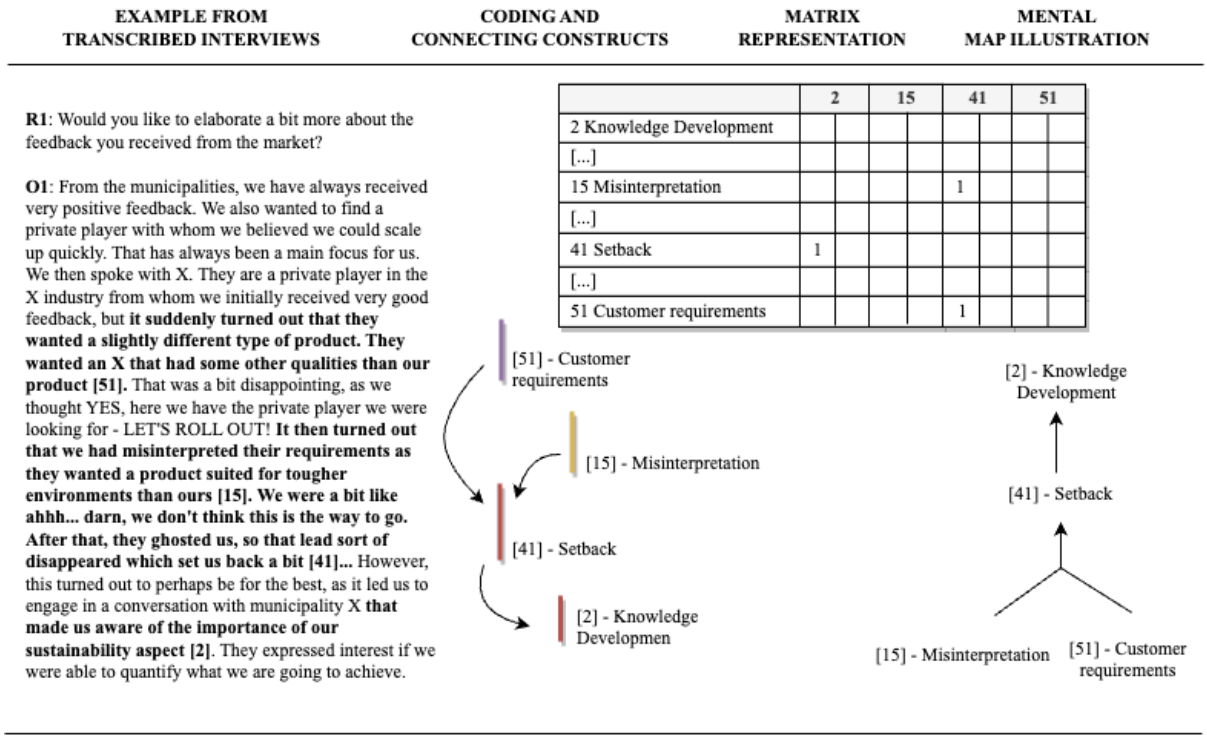

Figure 6 - Example of connecting and representing the mental constructs

3.5 Methodological Reflections and Limitations

Engaging with the Zaltman Metaphor Elicitation Technique (ZMET) within an entrepreneurial context presented a range of distinctive challenges and valuable learning experiences. The application of this methodology required careful planning, persistence, and adaptability, particularly within the dynamic and time-constrained environment of entrepreneurship. The previous utilizations of the ZMET methodology in the context of entrepreneurial learning have been limited, and to date, there are no academic articles providing guidance on its implementation in an entrepreneurial learning context, increasing the need for thorough planning.

The scarce application of the ZMET methodology in the context of entrepreneurial learning posed significant hurdles for the researchers. As noted by Tauheed (2021), strictly following the sequential ZMET steps might not always be practicable, and as per Zaltman and Coulter (1995, p. 48), "*each step can be introduced in different ways, and individual differences among customers may call for somewhat different approaches.*" This underscores the importance of exercising discretion while adapting the methodology, especially when modifying or omitting the ZMET steps as originally proposed by Zaltman and Coulter (1995). Although propper preparations were made in accordance, the nuanced process resulted in multiple iterations, especially during the coding, in total ending up taking much more time than anticipated.

The first challenge presented itself during the collection of the visual material. The prerequisite work the entrepreneurs had to do and the specificity of the required images caused some apprehension. It became clear from the start that a meticulous approach was essential to effectively follow up on the collection of the visual material with clear examples. To address this challenge, as mentioned in *Section 3.4*, the authors took the proactive step of sending example photographs to participants prior to conducting the interviews. Although examples were sent out, not all participants took their time to properly think about the pictures, and did indeed not follow the guide that was sent out even after updating the interviewee on the importance of collecting these images three days prior. This can be seen in *Table 1,* where one of the participants only included two pictures of the ocean while not having prepared any special reason for this other than that their product was meant for use in the sea. This acts as a limitation for this research,

and proposes a more thorough follow up for further applications, especially for entrepreneurs who could be seen to have very little time available for preparation.

Interview scheduling presented an additional hurdle. The entrepreneurs' time constraints made it challenging to find interviewees with enough time to conduct the comprehensive interviews. The original plan for the research was to compare companies emerging from venture creation programs with companies without such an educational background. However, due to interviewee cancellations, such comparisons were not included in this study. In addition to interviewee cancellations, there were several cancellations in the aftermath of receiving the task of collecting pictures, prolonging the interview process as the invitations had to be sent in good time. Some participants also had to cut the interview short after just one hour even though having agreed to at least one and a half, requiring the researchers to adapt the interviewing technique to be able to get through all the steps. The utilization of the ZMET methodology further complicated the scheduling, as it is recommended that the interviewers be physically present during the interviews (Zaltman, 1997), which led to the researchers having to travel to meet the entrepreneurs.

Creating a comfortable atmosphere for the participants can be seen as another critical aspect, possibly influencing the data quality to a great extent as both victories and failures were explored in depth. To set the context, the researchers knew or had a previous relation to most of the participants from the venture creation programs prior to conducting the research. The representatives for the last two companies were total strangers. Even though significant effort was put in to establish rapport and make the interviewees comfortable, the researchers noted a significant difference in the openness between these two groups, especially when trying to make the participants elaborate on the mistakes made during their process. Although the previous connection to the six entrepreneurs could represent a bias in terms of objectivity, the relation also enhanced the depth of these conversations, facilitating even more interesting findings and being even more enhanced by the use of ZMET (Zaltman, 1997).

Interestingly, but not surprisingly seen in the aftermath, in the first interview we observed a propensity for the interviewee to 'sell' their achievements. This phenomenon poses a limitation and could be seen as influenced by the entrepreneurs' wish to display their achievements. Recognizing this trend, a strategic modification of the introductory remarks was made to very clearly clarify that the goal was not to be sold anything, but rather authentically understand the entirety of their experiences, embracing both triumphs and failures.

The explorative application of a methodology originally made for a controlled and narrow setting of researching consumers' subconscious thoughts and feelings about one specific product into a context comprising eight different entrepreneurs talking about their companies' individual products leading to their first paying customer presented a great challenge. Although the interview technique represented an array of interesting insights, where the images brought by the interviewees facilitated deep reflections and even potential learning during the conversation, as seen in *Section 3.5*, the process of coding and analyzing these insights afterward required an enormous amount of work. The results were a total of 953 subcategories and 115 categories representing different aspects of the multifaceted and highly contextual aspects of entrepreneurial learning. This introduced a limitation in regards to data overload, especially taking into consideration the researchers lacking experience (Zaltman & Coulter, 1995) with the different methodologies for data analysis. Due to this the researchers experienced time constraints, especially in regard to the conceptual background also having to be studied and written from scratch. The researchers also experienced moments of losing sight of the bigger picture during the coding process. This could be reflected in the somewhat overlapping constructs represented in the consensus map depicted in *Section 4,* potentially leading to loss of interesting insights (Reynolds & Gutman, 1988)

In retrospect, the process of implementing ZMET within the entrepreneurial context proved to be an instructive exercise in empathetic engagement, flexible planning, and persistent inquiry. Although being work-intensive and requiring substantial planning, we witnessed the transformative potential of this methodology in facilitating profound insights into the entrepreneurial journey. Based on our experiences with the methodology, we could recommend a more specific question regarding the “Thoughts and feelings…”, and focusing on a common item

or experience for all the interviewees in further utilization of this methodology. We would also like to underline the importance of experience, before taking on both an unstructured interview methodology and an inductive process of open and axial coding to avoid overlapping constructs and facilitate richer results.

4.0 Findings

This section presents the findings from the ZMET and means-end analysis (Reynolds & Gutman, 1988; Zaltman & Coulter, 1995). The findings are based on the matrix representations in *Appendix A & B* and graphically represented as a comprehensive consensus map, as depicted in *Figure 7* below. Throughout this section, a more detailed explanation of the elements making up this consensus map will be described.

The ZMET methodology and analysis elicited many constructs, where the connection between these constructs makes up the entrepreneurs' mental models (Zaltman & Coulter, 1995). The constructs can be viewed as factors and variables which affect the individual's thoughts and actions. Through the means-ends analysis (Reynolds & Gutman, 1988), the causal relationships or "ladders" of constructs were uncovered, giving insights into how one construct leads to or influences another. As the variables that affect thoughts and actions are seen to affect each other in successive order, the constructs are organized hierarchically.

The consensus map encompasses 22 originator constructs, 19 connector constructs, and 17 destination constructs. For a connection between two constructs to be included in the consensus map, at least three mental maps have had to make the same connections. The consensus map is organized so that the originator constructs are displayed at the bottom of the consensus map. These originator constructs depict constructs that only have outward linkages. The connector constructs are depicted in the middle of the map.

The consensus map also depicts a series of connector constructs which are organized in successive constructs creating a ladder, highlighting the link between the connector construct and how each connector construct influences a successive connector construct. The destination constructs are displayed at the top of the consensus map depicting constructs that only have inward linkages. Through the consensus map, the destination constructs can be viewed as the endpoint of a tough process. However, a more accurate view of the destination constructs is that these constructs mark the beginning of a new thought process.

Although the majority of the linkages between the constructs are directed in a single direction, there are also depicted bidirectional linkages between constructs. These bidirectional linkages showcase constructs where both constructs influence each other.

A detailed description of each construct can be found in *Appendix C, D,* and *E*. Explanations of the number of connections between each construct can be found in *Appendix A & B*. In the subsequent section, the consensus map and its connections will be thoroughly explained to provide insight into the exploratory steps and learning process involved in entrepreneurs securing the first paying customer. It is vital to acknowledge that these constructs present a representation of the shared cognitive structure within a specific sample, serving as the foundation for the subsequent discussion. Given the high number of connections between the constructs, this thesis will place emphasis on providing explanations for the constructs which are of particular relevance to the discussion in *Section 5.0*.

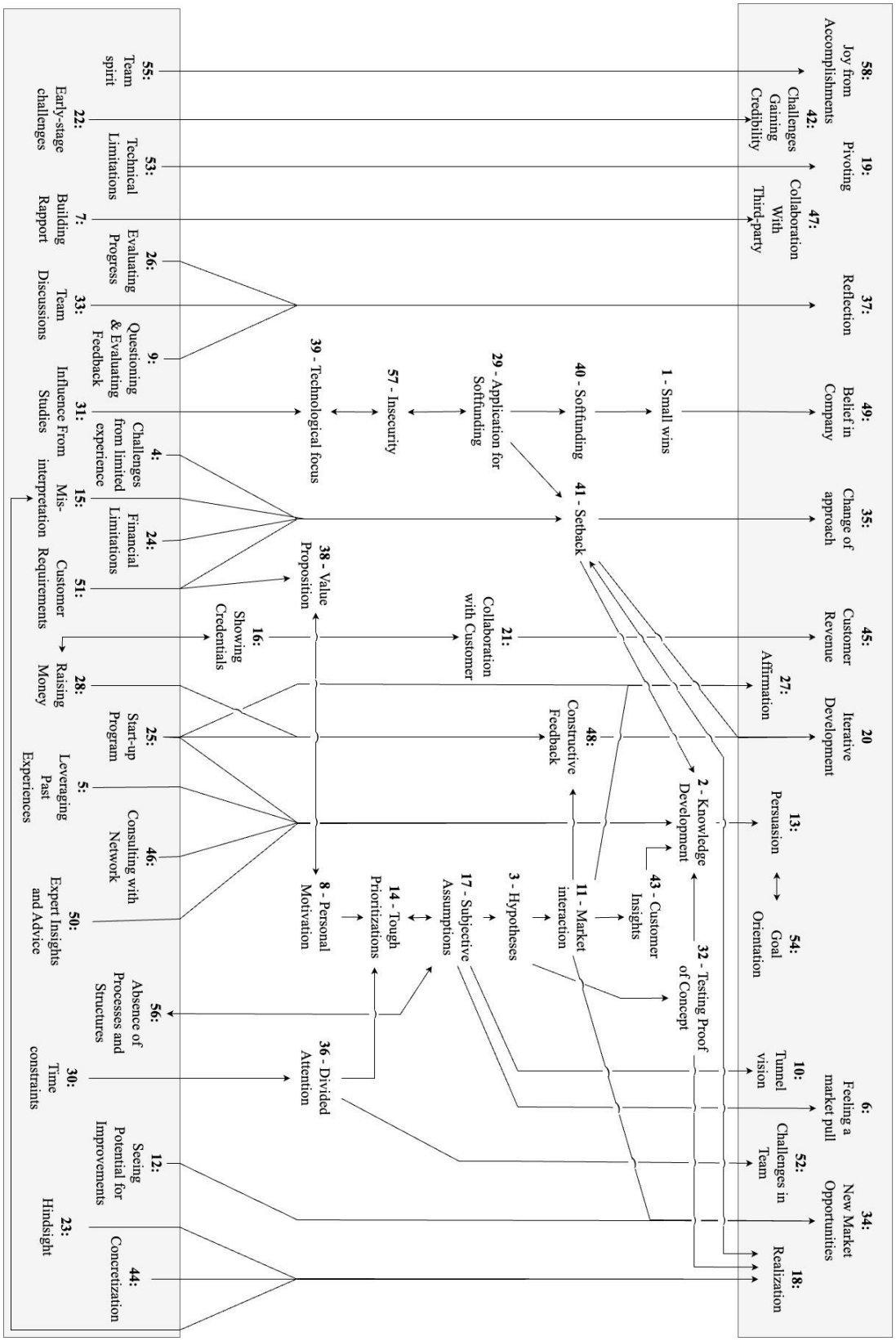

Figure 7 - Depiction of the Consensus map

4.1 Originator Constructs

The consensus map uncovers 22 originator constructs, which upon analysis, are categorized into three primary groups. These are: 1) *internal processes that influence decision-making,* 2) *aspects associated with being a young founder*, and 3) *factors involved in establishing market presence and strategic growth.*

4.1.1 - Group 1: Internal Processes Influencing Decision Making

The first group of originators can be seen as *internal processes influencing decision making* in the nascent firms. The six different constructs within this group shed light on various aspects that shape the choices made by the entrepreneurs and their teams. The overarching theme of this group highlights the significance of internal processes in driving the trajectory of these start-ups.

Originator constructs in the first group:	
[26] EVALUATING PROGRESS	[12] SEEING POTENTIAL FOR IMPROVEMENT
[33] TEAM DISCUSSION	[44] CONCRETIZATION
[09] QUESTIONING AND EVALUATING FEEDBACK	[23] HINDSIGHT

Table 5 - Originator group 1

These constructs highlight the internal procedures and factors influencing the young start-ups' reflection and decision-making processes. The constructs emphasize reflections and thought processes that arise in the iterative nature of entrepreneurial ventures.

The constructs *EVALUATING PROGRESS*, *TEAM DISCUSSION* and *QUESTIONING AND EVALUATING FEEDBACK,* emerge as the sole constructs directly leading to the destination construct *REFLECTION*. This finding suggests that a considerable portion of the conscious and outspoken reflective processes among the entrepreneurs can be attributed to internal decision-making processes, placing a significant emphasis on self-evaluation.

EVALUATING PROGRESS emphasizes the start-ups ongoing strategic and tactic monitoring and validation. *TEAM DISCUSSIONS* emphasize the start-up team's disagreements and collective decision-making process, while *QUESTIONING AND EVALUATING FEEDBACK* shows how the start-ups analyze feedback, suggestions, and nonverbal signs from external sources. The interrelation between these three constructs and *REFLECTION* illustrates how the processes of evaluating progress, engaging in internal team discussions, and questioning and evaluating feedback contribute to the reflective practices observed among young entrepreneurs.

The constructs *HINDSIGHT* and *CONCRETIZATION* lead to the destination construct *REALIZATION*, highlighting how the entrepreneurs found new understanding by concretizing their work and drawing conclusions from past experiences.

Lastly, construct *SEEING POTENTIAL FOR IMPROVEMENT,* which immediately leads to the destination construct *NEW MARKET OPPORTUNITIES,* shows how identifying areas for improvement and recognizing possible improvements in existing solutions can result in the identification of untapped market prospects.

Overall, the interconnectedness of these themes highlights the iterative and reflective nature of decision-making within nascent ventures. Reflection serves as a central construct that integrates and influences various aspects of the process, driving improvements, fostering innovation, and facilitating the exploration of new market opportunities.

4.1.2 - Group 2: Elements of Being a Young Founder

The second group originator constructs can be seen as *elements of being a young founder.* The ten different constructs in this group collectively highlight the unique elements associated with being in the early stages of entrepreneurship, where a lack of expertise and the change from academia to the business world are significant factors.

Originator constructs in the second group:	
[30] TIME CONSTRAINTS	[24] FINANCIAL LIMITATIONS
[31] INFLUENCE FROM STUDIES	[51] CUSTOMER REQUIREMENTS
[53] TECHNICAL LIMITATIONS	[15] MISINTERPRETATIONS
[22] EARLY-STAGE CHALLENGES	[55] TEAM SPIRIT
[4] CHALLENGES FROM LIMITED EXPERIENCE	

Table 6 - Originator group 2

These constructs highlight the challenges faced by young founders in the venture-building process. The links between the construct in group two also offer interesting perspectives on the dynamics and difficulties the young founders faced. The fact that the connector constructs *CHALLENGES FROM LIMITED EXPERIENCE, FINANCIAL LIMITATIONS, MISINTERPRETATIONS,* and *CUSTOMER REQUIREMENTS* all directly lead to the connector construct *SETBACK* illustrate the challenging nature of building a company and also shows that the start-ups share some common thread of barriers that may impede their growth and achievements.

CHALLENGES FROM LIMITED EXPERIENCE construct emphasizes the challenges brought on by a lack of prior entrepreneurial experience. *SETBACKS* in decision-making, strategic planning, and operational execution can be seen as a result of their lack of experience. Furthermore, *FINANCIAL LIMITATIONS* contribute to *SETBACKS* by imposing constraints on resources and pressuring the start-ups into a more short-term perspective.

EARLY STAGE CHALLENGES may be interpreted as similar to challenges from limited experience, however, this construct highlights the difficulties the early-stage start-ups encountered in achieving legitimacy and credibility in the market. This illustrated trough is linked with the connector construct *CHALLENGES FROM LIMITED EXPERIENCE.*

MISINTERPRETATIONS connects to connector construct *SETBACKS*, illustrating the difficulties brought on by misunderstandings and misconceptions. Setbacks in client acquisition, satisfaction, and retention can be caused by misinterpreting consumer demands, making incorrect assumptions, or choosing the wrong target market. *CUSTOMER REQUIREMENTS* also place emphasis on catering to the wants and expectations of the client.

TIME CONSTRAINTS leading to the connection construct *DIVIDED ATTENTION* contends that a lack of time and conflicting priorities may make it difficult to successfully manage duties and obligations.

INFLUENCE FROM STUDIES and the connector construct *TECHNICAL FOCUS* shows how the academic influences and academic backgrounds of the entrepreneurs can influence the start-up's technical focus. This effect can be both advantageous and difficult as an excessive focus on the technology may result in failures if it takes precedence over other business factors like potential customer needs or financial restrictions.

TECHNICAL LIMITATIONS leading to the destination construct *PIVOTING* emphasizes how the start-ups run into technical obstacles which may force them to pivot or change course.

Lastly, *TEAM SPIRIT* leading to the destination construct *JOY FROM ACCOMPLISHMENTS* signifies the positive impact of effective team dynamics on the start-up's achievements.

Overall, these interconnections show how complex the entrepreneurial path is for young founders. Setbacks, whether brought on by inexperience, financial constraints, misinterpretation, or customer demands, highlight how important resilience, adaptability, and the capacity to learn from failure are for the development and success of start-ups.

4.1.3 - Group 3: Establishing Market Presence and Strategic Growth

The seven originator constructs included in the overarching group *establishing market presence and strategic growth* provided insight into the numerous methods and tactics that the fresh graduates use in the development of their own start-ups. The included themes highlight the steps and factors included in the process of interacting with the market and establishing trustworthiness, involving stakeholders, getting advice from experts and attaining funding.

Originator constructs in the third group:	
[25] START-UP PROGRAM	[50] EXPERT INSIGHTS AND ADVICE
[7] BUILDING RAPPORT	[28] RAISING MONEY
[46] CONSULTING WITH NETWORK	[5] LEVERAGING PAST EXPERIENCES

Table 7 - Originator group 3

These constructs shed light on elements of the recent graduates' interactions with the market in their start-ups. Establishing a market presence entails presenting credentials, fostering relationships with stakeholders, requesting feedback and counsel from networks and experts, participating in start-up programs, seeking money, and utilizing their transferable knowledge. By skillfully handling these factors, recent graduates can strengthen their market position, encourage growth, and raise the possibility of long-term success in their entrepreneurial activities.

The originator constructs *CONSULTING WITH NETWORK*, *START-UP PROGRAMME, EXPERT INSIGHTS AND ADVICE,* and *LEVERAGING PAST EXPERIENCES* all directly lead to the connector construct KNOWLEDGE DEVELOPMENT and give insights into various sources that encourage growth and development in their entrepreneurial journey.

CONSULTING WITH NETWORK emphasizes the importance of getting opinions and recommendations from a wide range of contacts, including family, peers, and others. By exchanging expertise and experiences, this engagement can be seen as enabling the start-up founders to extend their viewpoints and receive insightful information that advances their understanding.

The *START-UP PROGRAM* construct highlights how accelerators and other start-up programs can aid in learning, offer direction, and streamline procedures. The young founder may gain access to important information, hone crucial skills, and broaden their understanding of entrepreneurial practices by taking part in such programs, which may assist them in developing their knowledge base.

EXPERT INSIGHTS AND ADVICE emphasize the value of getting opinions and guidance from professionals and industry experts. Engaging with seasoned people allows the start-up founders to benefit from their experience, validate assumptions, and receive helpful criticism, all of which could contribute to further knowledge growth and better-informed decision-making.

LEVERAGING PAST EXPERIENCES emphasizes the use of prior experiences and knowledge obtained from various situations. The young founders can apply their existing knowledge to guide decision-making, problem-solving, and strategic thinking in their entrepreneurial endeavors while also contributing to continuous knowledge development by utilizing these transferrable skills and insights.

RAISING MONEY leads to the connector construct *CONSTRUCTIVE FEEDBACK*, and emphasizes the value of asking potential financiers for advice and feedback during fundraising.

BUILDING RAPPORT as a link to the destination construct *COLLABORATION WITH THIRD-PARTY* emphasizes the work of building solid rapport and trust with all parties involved, including potential clients, partners, and investors.

SHOWING CREDENTIALS resulting in the connection construct COLLABORATION WITH CUSTOMER indicates that the start-up founders have attracted opportunities for collaboration with potential customers by presenting their credentials, experience, and successful track records.

These linkages again demonstrate the entrepreneurs' iterative process and underlie the importance of gaining expertise through networks, startup programs, professional inputs, and utilizing transferable knowledge. Overall, the nascent companies have been seen to broaden their

expertise, get insightful information, and open doors for growth and development in their entrepreneurial endeavors by aggressively pursuing knowledge acquisition, encouraging partnerships, seeking feedback, and developing strong relationships.

4.2 Connector Constructs and Ladders

The consensus map reveals a total of 19 connector constructs, whereas the authors have chosen to focus on five central themes, namely *SUBJECTIVE ASSUMPTIONS*, *MARKET INTERACTION, TESTING PROOF OF CONCEPT, SETBACK*, and *KNOWLEDGE DEVELOPMENT*.

The connector construct *SUBJECTIVE ASSUMPTIONS* is included in a ladder that spans from the originator construct *CUSTOMER REQUIREMENTS* to the two destination constructs *PERSUASION* and *GOAL ORIENTATION*. The construct subjective assumption is linked with the connectors constructs T*OUGH PRIORITIZATION* and *HYPOTHESIS*. Displaying how entrepreneurs collect information on customer requirements to formulate appealing value proposals. Due to time constraints, the entrepreneurs thereafter prioritize which elements of the value proposal to focus their time and attention to, before using their subjective assumptions to formulate hypotheses for how the initial product can serve value to a potential customer.

The connector construct *MARKET INTERACTIONS* is also included in the abovementioned ladder. Within the ladder market interactions has an inwards link from *HYPOTHESIS* and an outward link to *CUSTOMER INSIGHTS*. This further underscores the extent to which the young entrepreneurs use market interactions as a means to gain deeper insight into the needs of their targeted customers and means for testing hypotheses. Aside from the above-mentioned ladder, *MARKET INTERACTIONS* leads to the connector constructs *AFFIRMATION* and *CONSTRUCTIVE FEEDBACK,* in addition to the destination construct *NEW MARKET OPPORTUNITIES*. These linkages highlight how the entrepreneurs use market interactions to receive constructive feedback and affirmation on value proposals and venture developments. Insights gained through these interactions further provide the entrepreneurs with an avenue for identifying new market opportunities.

The connector construct *TESTING PROOF OF CONCEPT* is not directly linked with the abovementioned ladder, however, it can be seen as a construct that is influenced by the ladder. The construct has an inward link from *HYPOTHESIS* and an outward link which leads to the connector construct *KNOWLEDGE DEVELOPMENT,* and the destination construct *REALIZATION*. This highlights how the entrepreneurs utilize hypotheses to test proofs of concepts for early-stage product ideas, which contributes to new knowledge development and realizations about previously held beliefs.

The connector construct *KNOWLEDGE DEVELOPMENT* is included in the above-mentioned ladder. However, the construct is also influenced by the originator constructs *LEVERAGING PAST EXPERIENCES, CONSULTING WITH NETWORKS* and *EXPERTS INSIGHTS AND ADVICE,* in addition to the connector construct *SETBACKS.* This showcases how entrepreneurs utilized previously experienced interactions with networks and social relations, and experiences from setbacks in order to build new knowledge.

4.3 Destination Constructs

Lastly, the consensus map reveals 17 destination constructs. These constructs have been grouped into five main categories, namely: *experiencing joy and affirmation, the need for change and iteration, the pursuit of new opportunities, the challenges encountered,* and *reflections and goal orientation.*

The originator and connector constructs elucidated above pave the way to the destination constructs - the constructs that reflect outcomes and tangible actions taken by the entrepreneurs in response to the forces recognized in earlier constructs.

4.3.1 - Group 1: Experiencing Joy and Affirmation

The destination constructs included in *experiencing joy and affirmation* consists of:

Destination constructs in the first group:	
[27] AFFIRMATION	[58] JOY FROM ACCOMPLISHMENTS
[49] BELIEF IN COMPANY	[6] FEELING A MARKET PULL

Table 8 - Destination group 1

AFFIRMATION highlights how firsthand market interactions result in the joy of affirmation when entrepreneurs' assumptions are confirmed. *BELIEF IN COMPANY* refers to the positive feelings associated when experiencing traction in the marketplace. Similarly, *JOY FROM ACCOMPLISHMENTS* and *FEELING A MARKET PULL* shows how entrepreneurs experience positive emotions when gaining acceptance for their product.

4.3.2 - Group 2: The Need for Change and Iteration

The destination constructs included in *the need for change and iteration* consist of*:*

Destination constructs in the second group:	
[35] CHANGE OF APPROACH	[20] ITERATIVE DEVELOPMENT
[19] PIVOTING	

Table 9 - Destination group 2

Destination constructs *CHANGE OF APPROACH, PIVOTING* and *ITERATIVE DEVELOPMENT* displays the characteristics of the entrepreneurial process of young entrepreneurs, which is characterized by frequent changes of approaches and courses of action.

4.3.3 - Group 3: The Pursuit of New Opportunities

The destination constructs included in *the pursuit of new opportunities* consists of*:*

Destination constructs in the third group:	
[47] COLLABORATION WITH THIRD-PARTY	[45] CUSTOMER REVENUE
[34] NEW MARKET OPPORTUNITIES	

Table 10 - Destination group 3

Destination constructs *COLLABORATION WITH THIRD-PARTY, CUSTOMER REVENUE,* and *NEW MARKET OPPORTUNITIES* is characterized by situations representing new and advantageous opportunities for the young entrepreneurs.

4.3.4 - Group 4: Challenges Encountered

The destination constructs included in *challenges encountered* consists of:

Destination constructs in the fourth group:	
[10] TUNNEL VISION	[52] CHALLENGES IN TEAM
[42] CHALLENGES GAINING CREDIBILITY	

Table 11 - Destination group 4

Destination construct *TUNNEL VISION, CHALLENGES GAINING CREDIBILITY,* and *CHALLENGES IN TEAM* refers to challenging situations and hurdles for the entrepreneurs. Displaying that the young entrepreneurs experience situations of being too single-minded, challenging team dynamics, and challenges of having low credibility in the marketplace and with potential partners.

4.3.5 - Group 5: Reflections and Goal Orientation

The destination constructs included in *reflection and goal orientation* consists of:

Destination constructs in the fifth group:	
[37] REFLECTION	[18] REALIZATION
[54] GOAL ORIENTATION	[13] PERSUASION

Table 12 - Destination group 5

Destination constructs *REFLECTION, GOAL ORIENTATION,* and *PERSUASION* refers to the internal process within the individual entrepreneur putting their own thoughts in perspective and showcasing motivation towards achieving a given goal.

In sum, these Destination constructs embody the practical implications of the cognitive journey traced by the originator and connector constructs, reflecting the multidimensional and dynamic nature of the entrepreneurial process.

4.4 Bidirectional Links

The consensus map displays 9 bidirectional links between 15 constructs. The bidirectional links between constructs appear without there being one construct directly leading to a second construct. Bidirectional constructs thus represent a linkage between two constructs that influence each other, but it is not clear which construct leads to the other.

Bidirectional links		
TEAM SPIRIT	↔	JOY FROM ACCOMPLISHMENTS
INSECURITY	↔	APPLICATION FOR SOFT-FUNDING
INSECURITY	↔	TECHNOLOGICAL FOCUS
PERSUASION	↔	GOAL ORIENTATION
REALIZATION	↔	SETBACK
REALIZATION	↔	MISINTERPRETATION
SUBJECTIVE ASSUMPTIONS	↔	TOUGH PRIORITIZATIONS
SUBJECTIVE ASSUMPTIONS	↔	ABSENCE OF PROCESSES AND STRUCTURES
VALUE PROPOSITION	↔	PERSONAL MOTIVATION

Table 13 - Bidirectional links

5.0 Discussion

Building upon the existing literature, this paper will further discuss the findings in the consensus map shown in *Figure 7*. The consensus map depicts various factors influencing learning among eight young entrepreneurs striving to secure their first paying customers. By analyzing the aggregated interconnections derived from the entrepreneurs' mental maps, the consensus map serves as a valuable resource for the purpose of examining entrepreneurial learning in the context of the iterative venture-building process that young entrepreneurs go through to secure their first paying customers.

The discussion in this thesis centers around three research questions addressing the following:

1. *What factors facilitate or inhibit entrepreneurial learning for young entrepreneurs?*
2. *How do young entrepreneurs learn from critical events in the early, iterative venture-building process?*
3. *To what extent do young entrepreneurs reflect upon their experiences throughout the learning process?*

The subsequent analysis will explore our findings in light of similarities and differences from the literature observed in light of the theoretical framework. By delving into this comprehensive discussion, this study intends to contribute valuable insights into the learning experiences of young entrepreneurs, thereby fostering a deeper understanding of the intricate mechanisms and dynamic processes inherent in their entrepreneurial learning endeavors. Following the insights provided into the contents of entrepreneurial learning, the thesis will subsequently be positioned to provide recommendations for ways to aid entrepreneurial learning.

The research findings have elucidated several themes that can be seen to have a notable impact on the learning outcomes throughout the experiential venture-building process. The analysis identified three main groups of originator constructs, namely: *internal processes influencing decision-making, elements associated with being a young founder, and the process of establishing market presence and strategic growth*. Additionally, the destination constructs show

the perceived outcomes responses throughout the entrepreneurial journey. These are categorized into five groups: *experiences of joy and affirmation, the need for change and iteration, the pursuit of new opportunities, the challenges encountered, and reflections and goal orientations that shape future directions*. Lastly, the main connector constructs serve as a bridge between the originator and destination constructs, capturing transformational experiences such as *knowledge development, setbacks, market interaction, and hypothesis testing*, thus serving as key factors in understanding the interconnected nature of the learning process. Collectively, these findings provide valuable insights into the multifaceted dynamics that influence learning outcomes in the entrepreneurial context. The following discussion will delve into these constructs, investigating their interrelationships and impact and providing a comprehensive understanding of the entrepreneurial learning dynamics in the context of being young and inexperienced entrepreneurs.

5.1 Factors Facilitating Entrepreneurial Learning

The consensus map depicted in *Figure 7* vividly illustrates the various pathways through which the entrepreneurs participating in this study have engaged in activities facilitating entrepreneurial learning. A total of seven constructs explicitly lead to *KNOWLEDGE DEVELOPMENT,* with numerous additional constructs indirectly influencing these through the depicted ladders. For the purpose of our discussion, these seven constructs can, in light of the theoretical framework, be organized into two primary categories, namely: *Learning Through Networks and Social Interactions* and *Internal Processes Developing Knowledge*.

The first category, *Learning Through Networks and Social Interactions*, is particularly noteworthy as the most dominant factor shaping the knowledge development of the study's entrepreneurs. The elements within this category align well with existing scholarly work on entrepreneurial learning, demonstrating the rich diversity of social interactions that contribute to knowledge acquisition.

The second category, *Learning Through Internal Processes*, invites further exploration and discussion. The analysis reveals intriguing new findings about how young entrepreneurs learn during their early venture-building journey, thereby extending the understanding of

entrepreneurial learning. These insights have the potential to make a significant contribution to the extant literature in this area.

Before delving into the discussion of the two categories of factors facilitating learning, we would like to acknowledge Marsick and Watkins' (1990, as cited in, Cope & Watts, 2000) arguments that learning can arise unconsciously, a notion stated particularly relevant in the context of entrepreneurial learning. Additionally, we acknowledge the insights put forth by Cope and Watts (2000), who found that unconscious learning processes are prevalent in entrepreneurial learning. These arguments highlight the significance of unconscious elements in the overall understanding of entrepreneurial learning processes.

Furthermore, we recognize the concept of hidden knowledge, as proposed by Burgoyne and Hodgson (1983), which suggests that knowledge development can occur implicitly, without immediate changes in actions, but rather expands the range of possible actions and remains latent until triggered. This notion adds an extra layer of depth and complexity to the understanding of entrepreneurial learning processes and the potential accumulation of knowledge that may not be immediately evident.

The presence of unconscious elements in entrepreneurial learning underscores the relevance of the ZMET methodology in attempting to unveil the multifaceted and complex processes involved (Christensen & Olson, 2002; Zaltman & Coulter, 1995). This methodology provides valuable insights into the entrepreneurs' cognitive frameworks and helps uncover implicit knowledge that may influence their learning experiences. However, despite the benefits of the ZMET methodology in accessing insights into cognitive frameworks, it is worth noting that there may be connections between constructs that are not explicitly depicted in the construct map.

5.1.1 Learning Through Networks and Social Interactions

The first category of findings presents a clear image of how entrepreneurs develop their knowledge through active experimentation and interaction with their networks. This category includes three constructs from the findings originator group 1, namely *CONSULTING WITH NETWORK, EXPERT INSIGHT AND ADVICE,* and *START-UP PROGRAM*. Additionally, two constructs, *CUSTOMER INSIGHTS* and *TESTING PROOF OF CONCEPT,* derived from the findings "ladder," demonstrate how the entrepreneurs' market interaction and hypothesis testing also contribute directly to *KNOWLEDGE DEVELOPMENT*. These connections highlight that much of the entrepreneurs' learning and knowledge development can be seen as rooted in social processes.

The implications of our findings, revealing the prominence of social interactions in driving entrepreneurial learning, can be contextualized within the framework proposed by Singh et al. (1986). Their work suggests that obtaining support and endorsement from influential actors plays a pivotal role in overcoming both the liabilities of newness, as these interactions could be seen to facilitate the exchange of valuable resources. Given the young and inexperienced nature of the entrepreneurs under investigation, they are likely to encounter challenges associated with these liabilities, underscoring the significance of social interaction within the venture-building process. Moreover, our findings demonstrate that founders not only engage in resource exchange through their networks but also actively learn from their interaction with them. This finding aligns with Stinchcombe's (1965) argument that entrepreneurial learning extends beyond individual cognition and extends into social relations, wherein networks serve as valuable sources for learning and knowledge acquisition. The many different ways of interacting with their networks could also build up under the work of Kolb (1984), suggesting that entrepreneurs can learn and develop entrepreneurial skills through their experiences interacting with external networks.

5.1.2 Learning through *Consulting with Networks* and Seeking *Expert Advice*

Our finding highlights how young entrepreneurs actively engage in consulting with a network of market actors and experts to seek advice in the development of their initial product. This is exemplified by an interviewee whose company had developed a general technical solution and sought guidance on identifying the right product-market fit. During their participation in a technical conference, the entrepreneurs showcased their technology while actively seeking advice from experts on potential application areas. The interviewee described their experience as follows:

> "*We received a lot of ideas* [on where to apply the technology]*, and then there was a guy who approached us with an idea. He had worked within* [market segment the venture currently works in] *with* [prominent company], *so he could confidently tell us that we should look into this market. And then we did, which actually laid the groundwork for what we are doing now."*
>
> - Interviewee nr. 7

This anecdote exemplifies the explorative approach used by novice entrepreneurs in seeking expert advice and leveraging their networks to refine their product's direction and identify suitable market opportunities. This aligns with the findings presented by Soetanto (2017) 's which emphasize how entrepreneurs use networks to facilitate the structuring of knowledge, derive meaning from experiences, and foster the development of innovative solutions from existing knowledge. The entrepreneur's adoption of an explorative approach to acquire new knowledge about their product also builds up under Soetanto's (2017) findings, highlighting how entrepreneurs tend to build networks dominated by weak ties to foster explorative learning.

5.1.3 Learning Through *Start-up Programs*

The findings of the direct connection between *START-UP PROGRAM* and *KNOWLEDGE DEVELOPMENT* highlight the role of start-up programs, such as accelerators, in facilitating knowledge development for young entrepreneurs. These findings are consistent with the research conducted by Politis et al. (2019), which posits that experiential learning takes place within the context of acceleration programs. Specifically, Politis et al. (2019) argue that such programs

stimulate affective motivation, provide constructive feedback, and foster a supportive peer atmosphere, which also directly correlates with the findings of this study showing how *START-UP PROGRAMS* further link to *CONSTRUCTIVE FEEDBACK* and *AFFIRMATION*. The cutout below exemplifies how a start-up program helped one of the interviewees' learn how to budget properly.

> *"It's more like they [accelerator program] pick out the most important things about doing a start-up; they also teach you how to do it in practice. The budget thing, for example, they're like, why are you doing this here, and then show me things there's actually a point in keeping control of... They cut out a whole lot of unnecessary things, making my job much easier."*
>
> - Interviewee nr. 1

5.1.4 Learning through *Customer Insight*

Another construct that directly contributes to *KNOWLEDGE DEVELOPMENT* is *CUSTOMER INSIGHT*, emerging from the construct *MARKET INTERACTION* and affected by the rest of the ladder below, as seen in the consensus map. These insights play a significant role in enhancing entrepreneurial learning by providing entrepreneurs with a deeper understanding of which aspects of their technological solution hold market value. In light of Jarillo (1989) 's findings stating that firms that utilize more external resources experience growth rates that are 10% to 13% above the industry average, these findings show a great extent of utilizing external networks and market interaction for knowledge development, could show that the firm's use of customer insights could facilitate knowledge development and growth. This finding is exemplified through an interviewee who gained valuable insights from their market interactions, specifically regarding the factors of their product that resonated with potential customers.

"They [leading market actor] were very interested in the sustainability aspects [of the venture's solution]. They sell to municipalities through tendering processes. The municipalities have a high demand for sustainability. So if the [leading market actor] can tell the municipalities that they can reduce the number of kilometers driven by 30 percent, then that is a big deal."

- Interviewee nr. 4

5.1.5 Learning through *Testing Proof of Concept*

The final discovery regarding how young entrepreneurs learn through actively experimenting and interacting with the market can be illustrated through the construct of *TESTING PROOF OF CONCEPT* direct link with *KNOWLEDGE DEVELOPMENT*. This construct emphasizes the entrepreneurs' effort to validate their concept using various methodologies to gather insights, mitigate risks, and confirm market acceptance before committing major resources to product development or scaling. An example of how entrepreneurs actively test and validate their concepts and develop their knowledge based on these tests is shown below.

"It's two completely different [types of customers], you see. They work with completely different types of resources. One deals with [resource x], and the other deals with [resource y]... It's kind of the field test we conducted that made us go like, Okay, we should actually focus on this right now for our next steps."

- Interviewee nr. 3

These findings collectively demonstrate that a substantial portion of young entrepreneurs' knowledge development stems from exploring opportunities within the market and their networks. This observation aligns with Politis' (2005, p. 415) proposition that "*Entrepreneurs with a transitory or a spiral career orientation may, to a larger extent, focus on an explorative mode of transforming experience into knowledge.*"

5.1.6 Learning through Internal Processes

The second subcategory consists of two constructs that describe how entrepreneurs engage in knowledge processes through internal processes. These constructs are *LEVERAGING PAST EXPERIENCES* and *SETBACKS*. The fact that these constructs can be seen as connector constructs means that they are influenced by several other constructs before leading to KNOWLEDGE DEVELOPMENT.

5.1.7 Learning through *Leveraging Past Experiences*

Delving into the more internal processes, the consensus map reveals a fascinating aspect of entrepreneurial learning among young and inexperienced entrepreneurs, highlighting their ability to develop knowledge from past experiences even in the absence of experiences from prior professional work. While several studies previously have emphasized the significance of earlier management and start-up experiences as a means of learning, as shown by Politis (2008), little attention has been given to how entrepreneurs draw upon knowledge from unrelated fields. This represents a noteworthy gap in the existing research, as the literature on entrepreneurial learning has not yet explored how entrepreneurs with limited or no prior start-up or management experiences leverage and transfer knowledge from unrelated domains into their entrepreneurial pursuits.

Our study contributes to the current understanding of knowledge development by shedding light on this subject. The finding thereby challenges the traditional notion that knowledge acquisition in entrepreneurship primarily relies on prior industry-specific experiences (Politis, 2005). Instead, we demonstrate that these entrepreneurs develop valuable insights by tapping into diverse experiences beyond their immediate professional backgrounds, also building on the work of Minniti and Bygrave (2001), showing that non-entrepreneurial experiences could also update the entrepreneur's stock of knowledge.

To exemplify this phenomenon, one of our interviewees employed their prior experiences with board games as a framework for strategically positioning their nascent venture in the marketplace. They likened the venture to a board game, emphasizing the importance of strategic

positioning and their determination to overcome challenges and succeed, whether against competitors or within the market.

> *"I like to think of things as a board game (...) positioning pieces strategically. Where do I put it on the board, and how can I break through and crush the opponent, whether it's a competitor or a market segment we are after."*
>
> - Interviewee nr. 1

These findings hold significant implications as they expand our understanding of how entrepreneurs acquire knowledge. By recognizing that young entrepreneurs can leverage past experiences from unrelated fields, our study unveils a previously unexplored dimension of entrepreneurial learning. This highlights the importance of considering a broader range of experiences beyond traditional measures of management or start-up experiences when examining entrepreneurial knowledge acquisition and decision-making processes.

5.1.8 Learning through *Setbacks*

The research findings also shed light on how young entrepreneurs learn through their experience of what is referred to as setbacks in the consensus map. The findings of the direct connection between the constructs *SETBACK* and *KNOWLEDGE DEVELOPMENT* underscores the significance of this learning process.

Setbacks can, in this context, be understood as occurrences of varying severity that deviate young entrepreneurs from their intended path. This definition is derived from the underlying factors identified as contributors to these setbacks, namely: *CHALLENGES FROM LIMITED EXPERIENCE*, *MISINTERPRETATIONS*, *FINANCIAL LIMITATIONS, REALIZATION*, *CUSTOMER REQUIREMENTS*, *APPLICATION FOR SOFT-FUNDING,* and the constructs following this connectors ladder. Despite the negative connotation associated with these setback-inducing elements, the entrepreneurs reported that such events provided valuable opportunities for learning and knowledge development. For instance, the previous example illustrated in section 5.1.1 highlighted how customer requirements and misinterpretations initially led to a setback but eventually transformed into knowledge development. While this

example focused on the inability to secure a desired customer, an experience that could be looked at as common in the early experiential stages, other findings have shown events that could have led to greater consequences if not handled properly. An illustration of this can be seen in the construct APPLICATION FOR SOFT-FUNDING, which also demonstrated a connection to setbacks. One interviewee explained the reasoning behind their failure to obtain soft-funding:

> "*We got rejected as we had not written a good enough application, which could have been critical, but we tried again by changing the perspective of the application, and it was accepted the next time around*."
>
> - Interviewee nr. 8

These findings align with the arguments put forth by Minniti and Bygrave (2001), who contend that entrepreneurs develop knowledge through both positive and negative experiences. Furthermore, we observe certain similarities between Cope and Watts‘ (2000) definition of critical events, Cope's (2003) notion of discontinuous events, and the concept of setbacks as defined in this study. These similarities can be identified through two main similarities. The first is that entrepreneurs also develop knowledge through these more or less harsh and expensive setbacks, and the second is that setbacks also lead to discontinuances or disruptions in the firm's path.

By proposing a connection and highlighting the similarities between critical events, discontinuous events, and setbacks, as well as elucidating the factors that contribute to these setbacks, our study addresses the call made by Cope (2005) for a deeper understanding of the specific forms and levels of learning associated with critical events in the literature on entrepreneurial learning. However, despite the identified similarities, we also acknowledge significant differences that provide a more nuanced understanding of entrepreneurial learning from these events, especially in the context of young and inexperienced entrepreneurs in their venture-building process. These differences will be explored in detail in *Section 5.2.3*, focusing on the lack of deep emotional connection and reflection associated with setbacks, which could be shown to inhibit the full learning potential of these events.

5.1.9 Indications of Knowledge Development Beyond Explicit Connections

In the previous sections, the factors that are directly linked to knowledge development in the consensus map have been discussed. However, the findings reveal the existence of constructs that could represent knowledge development without being explicitly or indirectly connected to the construct. An example of this can be seen in the relationship between the connector construct, *CONSTRUCTIVE FEEDBACK*, and the destination construct, *ITERATIVE DEVELOPMENT*. Although neither of these constructs is linked with knowledge development either directly or indirectly through ladders, we acknowledge that the process of obtaining constructive feedback and iteration based on it can involve some degree of knowledge development. This observation aligns with the argument put forth by Marsick and Watkins (1990, as cited in, Cope & Watts, 2000) that learning can occur unconsciously. It could therefore serve as an example of the possibility of implicit knowledge development processes, which may not be explicitly articulated by entrepreneurs and hence not be represented in the consensus map. The excerpt below shines a light on this potential unconscious learning, as one interviewee understood that their assumptions were wrong based on the market feedback they received.

> *"It's like, that's what it's all about, so it was the... the previous assumption we had that people wanted to know more, which actually turned out not to be true. We were confronted with that by the market."*
>
> - Interviewee nr. 6

This discussion thus far has outlined the key factors that facilitate young founders' entrepreneurial learning in the explorative process of acquiring their first customers, while the aforementioned excerpt also shows how learning can occur unconsciously. These factors have been presented as external and internal contributors to the entrepreneurs' learning process. External learning occurs when entrepreneurs engage with networks and social relationships, while internal learning is facilitated through leveraging past experiences and overcoming setbacks. Having discussed these factors, we now shift our focus to potential inhibitors to entrepreneurial learning.

5.2 Factors Inhibiting Entrepreneurial Learning

5.2.1 The Role of Reflection in Entrepreneurial Learning

The preceding sections of this thesis have provided insights into the experiential learning journey of young entrepreneurs as they navigate the complexities of securing their first paying customers. These findings have revealed a series of distinct actions and events, both internal and external, that can be seen to facilitate learning, thereby answering calls for an increased level of detail in understanding the specific practices that contribute to entrepreneurial learning (Haneberg & Aaboen, 2021) in this very context. This pattern of learning, intertwined with exploration and experiential processes, aligns with Kolb's (1984) theoretical framework and mirrors insights from previous research conducted by scholars such as Marsick and Watkins (1990), Minniti and Bygrave (2001), Cope and Watts (2000), Cope (2003, 2005), Politis (2005, 2008), and Politis et al. (2019).

While numerous factors have been shown to directly or indirectly promote learning, it's worth noting that the role of reflective observation, emphasized by Kolb (1984) as a crucial step in the experiential learning process, and critical reflection identified by Cope (2003) as a key element in "higher-level" learning from discontinuous events, hasn't been thoroughly examined in this thesis. This lack of attention is particularly striking, given the importance attributed to reflection within the broader domain of entrepreneurial learning. The omission of reflection as a clearly defined element leading to knowledge development in the preceding section may strike the reader as unexpected. However, the rest of this discussion will pivot to consider reflection in relation to factors inhibiting learning for young entrepreneurs. To clarify, this section does not aim to position reflection as an impediment to learning but rather to highlight how a lack of reflective processes in response to or in conjunction with significant events and market interactions can act as a barrier to entrepreneurial learning.

By explaining how the consensus map could depict areas where young entrepreneurs might lack certain kinds of reflective processes, we aim to highlight the specific contexts and factors in which the absence of reflection could inhibit the entrepreneurs' ability to learn. Although *Section 5.1* presented how the entrepreneurs under study indeed exhibit reflective capacities, these reflective processes were primarily seen confined within their own entrepreneurial teams. As the

following sections will show, the consensus maps could be shown to lack some expected links from certain constructs to reflection, especially in the context of the entrepreneurs' interaction with their networks and following setbacks.

5.2.2 Reflections' Role in Knowledge Development through Networks

Given the focus of this thesis, it's notable that our study's participants are characterized by their limited entrepreneurial or industry-specific experience, primarily attributable to their recent graduation from university. This could be translated into the understanding of a modestly updated decision "*algorithm of an iterated choice problem*" (Minniti & Bygrave, 2001, p. 5) as the entrepreneurs haven't had the time or possibility to make that many mistakes, update their decision algorithm, try again and possibly, through this improve their performance by updating their own and the teams subjective stock of knowledge.

Literature on entrepreneurial learning advocates that inexperienced entrepreneurs must leverage knowledge and market-specific information from networks and social interactions to augment their understanding and compensate for their limited experience (Soetanto, 2017; Taylor & Thorpe, 2004). This same body of research further posits that entrepreneurs must exercise reflective behavior in order to discern and assimilate relevant knowledge and firm-specific information derived from these networks and social interactions (Hughes et al., 2014).

The consensus map provides a clear visual representation of the entrepreneurs' active engagement in cultivating relationships with market actors and developing social relationships. These findings align with Stinchcombe's (1965) findings asserting that younger firms can be seen as reliant on cooperation with their networks to draw knowledge from external partners, compensating for their limited experience and scarce internal resources. Furthermore, the map also demonstrates that entrepreneurs successfully acquire knowledge through their experiential interactions with the market, as indicated by the direct connection between *CUSTOMER INSIGHT* and *TESTING PROOF OF CONCEPT* with *KNOWLEDGE DEVELOPMENT*.

However, the consensus map uncovers a notable absence of a clear connection between *MARKET INTERACTION* and *REFLECTION,* specifically in terms of *CONSTRUCTIVE FEEDBACK*. Further building up under this anomaly from the idealized learning in the contextual background is the existence of the originator construct representing *ABSENCE OF PROCESSES AND STRUCTURES* leading up to *MARKET INTERACTION* through its ladder, and an interesting link where CONSTRUCTIVE FEEDBACK directly affects the companies ITERATIVE DEVELOPMENT without any apparent direct link to reflection.

These findings suggest that the entrepreneurs under study might not have built the necessary absorptive capacities or embedded the appropriate routines to adequately develop their knowledge base from these social interactions. This observation aligns with Hughes et al.'s (2014) concept of learning constraints from newness, further emphasizing their results. If these constraints are left unaddressed, they could inhibit entrepreneurs' ability to mitigate the challenges arising from their inexperience and overcome the liabilities of newness, potentially slowing the firm's development and increasing their susceptibility to errors and setbacks (Hughes et al., 2014). An example of this possible lack of absorptive capacities is shown below, where one of the entrepreneurs got constructive feedback from the market but did not seem to take in the full potential of the feedback, as they still keep on iterating on their original value proposition in a slightly different manner even though affirming that their previous assumption that people wanted to know more turned out not to be true.

> *"It's like, that's what it's all about, so it was the... the previous assumption we had that people wanted to know more, which actually turned out not to be true. We were confronted with that by the market. [imitating the feedback they received:] 'No, here we have some engineers who think that everything can be solved with technology. We don't care. We're here to make money... 'So that's a lot of what the company is working on now: Not just information, but insights for valuable decisions."*
>
> - Interviewee nr. 6

Our findings highlight a significant absence of internal processes and structures among the entrepreneurs, a trait commonly associated with novice entrepreneurs (Brüderl & Schussler, 1990). Based on Hughes et al.'s (2014) research, this lack of organization could potentially

hinder the development of their absorptive capacities, which are crucial for extracting and discerning information relevant to their firms from their networks. This observation suggests that the firm's constructive feedback directly influences its iterative development. However, it also indicates that entrepreneurs may not fully harness the learning potential offered by their networks. As a result, the entrepreneurs may struggle with the challenges associated with being new for a longer period, as they could be seen to fail to compensate for their lack of experience due to inadequate routines and reflection practices.

5.2.3 Contrasting Setbacks with Critical Events

As shown through the consensus map, making mistakes is integral to the early stages of the entrepreneurial process. This is shown in *Section 4.1.2* through the many courses of events which can be seen to lead to what is referred to in the consensus map as setbacks. Our findings also show that entrepreneurs learn through these setbacks. The link between setbacks and knowledge development is also clear, although only three of the eight entrepreneurs made this connection in their mental constructs, as seen in *Appendix A*. *Section 5.1.2* has further presented the similarities between setbacks and critical events in facilitating learning outcomes. The thesis will now turn to show the differences between these events in combination with an explanation of why these differences might occur, how this could be seen to inhibit the learning outcomes for young entrepreneurs, and in the end, introducing setbacks as its own concept.

The findings of this study confirm that entrepreneurs do indeed develop knowledge from setbacks, which aligns with the existing literature on critical and discontinuous events (Cope, 2003; Cope, 2005; Cope & Watts, 2000). The results also show that the entrepreneurs do engage in reflective behavior. However, it is noteworthy that despite the learning outcomes associated with setbacks, *Figure 7* reveals no direct connection between the constructs *SETBACKS* to *REFLECTION*. This finding is significant considering the theoretical background and the recognized role of reflection in the learning process. This missing connection illustrates one of the perceived differences between critical events and setbacks and can be seen in the following quote. The quote explains how one of the interviewees had their application for soft funding declined, potentially a major flaw, but did not seem to reflect much upon the reasoning other than just stating that it could be seen as a part of the process.

“We may have applied for funding from Innovasjon Norge as well. They didn't understand what we were doing, like many others. And perhaps we didn't fully understand it ourselves either. That's just how it is...”

- Interviewee nr. 8

According to Cope (2003, 2005) and Cope and Watts (2000), the defining characteristics of critical or discontinuous events are the *"emotionally-laden nature of these events"* and their possibility to result in "*fundamental higher-level learning*" (Cope & Watts, 2000, p. 104), where the learning outcomes are "*the result of what can be described most precisely as 'inward' critical self-reflection"* (Cope, 2003, p. 429).

The abovementioned section described the lack of a clear connection between setbacks and a deep 'inward' critical reflection. Another important notion that did not show up, despite ZMETs ability to elicit deep structures of thoughts and feelings (Zaltman, 1997), was the entrepreneurs' lack of an emotionally-laden connection to the setback. The fact that the consensus map shows no constructs defining significant negative emotions, only positive emotions connected to the venture's *SMALL WINS,* brings up yet another important difference between discontinuous or critical events and setbacks. This is in spite of the fact that Cope and Watts (2000) argue that such an emotional connection holds especially true for negative events. Consequently, these findings suggest that the potential for higher-level learning from setbacks, due to the absence of emotional connection and reflection, may diminish into more habitual lower-level learning and inhibit the full learning potential from these events. Considering Minniti and Bygrave's (2001) findings, this could increase the likelihood of entrepreneurs encountering similar setbacks in the future. The statement from one interviewee, representing the one company that no longer operates, exemplifies the challenges they faced in clarifying expectations regarding their stock options, despite the entrepreneur's prior experience.

"*I find it somewhat thought-provoking that we didn't achieve better results, considering the amount of time we invested in it, and partly because I have also experienced similar things before.*"

- Interviewee nr. 5

This is especially interesting regarding the fact that the same entrepreneur described how their team never sat down and reflected together.

> "*As a team, we didn't sit down and think, 'Let's do a retrospective here,' and partly it was also because, you know, the team dynamics should have been different*."
>
> - Interviewee nr. 5

Based on the described differences between critical or discontinuous events and setbacks, the thesis will further discuss potential reasons for the prominent lack of reflection and emotional connectivity in relation to the setbacks, starting with Gibb and Richie's (1982) category of the "improviser".

As seen in Gibb and Richie's (1982) typology describing the spectrum of potential entrepreneurs as per their age and experience, the entrepreneurs under study have in *Section 3.3* been described to be in the "improviser" category. This stage describes individuals in early adulthood who exhibit a relative fluidity in class position and lifestyle, potentially reducing their perceived risks in starting a business while also being perceived to have been in a transitional attachment to work (Gibb & Richie, 1982). Taking this into consideration, the lower perceived risk could in light of Cope's (2003) findings, be seen to affect the emotional consequences as the young entrepreneurs neither expose themselves nor their families to either financial or social risks. This could again be seen to inhibit the learning outcomes as Brown (2000, as cited by Cope, 2003, p. 290) remarks, "*Learning and emotion work together in a tandem motion"*.

The entrepreneurs' reduced emotional connection to setbacks can also be attributed to the initial financial capital provided by Innovasjon Norge through the soft-funding grant, known as STUD-ENT, amounting to 1 million Norwegian kroner. This initial infusion of financial resources can be seen as alleviating the pressure to secure a first customer, resulting in decreased levels of negative emotions following a setback. This perspective aligns with the concept of a "honeymoon" phase proposed by Fichman and Levinthal (1991), suggesting that an initial stock of assets serves as a buffer against early-stage Darwinian selection pressures. One of the

interviewees also mentioned perceiving the grant as a safety net, relieving the need to bring in real money.

> "*We create very application-focused cases that also, not least, take away the focus on actually spending time on it. And you don't write based on what is best for the company. But rather what is best for the application, there is a lot of follow-up time and that whole aspect. And not least, it can be a comfort to receive funds so that you don't have to bring in real money.*"
>
> - Interviewee nr. 5

In addition to having financial resources that could potentially provide insulation against early selection pressure, there are other factors that could contribute to the young entrepreneurs' lack of emotional reactions and reflection. These factors include their recent graduation from university and their residency in a country with robust social security systems. Consequently, the entrepreneurs do not perceive setbacks as a crisis, as they have alternative work opportunities in the event of venture failure. Taking all these factors into consideration, the next section introduces the concept of setbacks.

5.2.4 Introducing the Concept of Setbacks

While setbacks have been likened to critical or discontinuous events in the non-linear process (Deakins & Freel, 1998) of acquiring a first customer for a young entrepreneurial venture, it is important to note the significant differences that exist. By introducing the concept of setbacks, as a descriptive concept in the learning process, we seek to enhance the understanding of how young entrepreneurs learn from mistakes and negative events. To the best of our knowledge, there is a gap in the existing literature regarding the concept of setbacks in the context of how young entrepreneurs learn. Therefore, the introduction of this concept serves as a valuable contribution to the scholarly understanding of entrepreneurial learning. It offers new insights and perspectives that were previously unexplored in the literature.

Moreover, this thesis has addressed the need for research that delves deeper into the intricacies of entrepreneurial learning from formative experiences (Reuber & Fisher, 1993, as cited in Cope,

2003) and the underlying mechanisms of this learning process (Cope, 2003). The introduction of the concept of setbacks, provides an empirical description of how young entrepreneurs might lack a certain degree of emotional connection and reflection in the aftermath of negative events, thereby potentially inhibiting important learning within the complex and iterative first stages of the venture-building process. This research, therefore, contributes to the existing body of knowledge on entrepreneurial learning and provides valuable insights into the mechanisms driving learning in entrepreneurial contexts.

A trait of a critical event is the connection between an experience and the entrepreneurs' inclination to undergo strong emotional reactions (Cope, 2003). However, as empirically presented in this thesis, we find that not all critical events promote a strong negative emotional response, and these learning situations can better be captured by the concept of setbacks.

A second distinguishing feature between critical events and setbacks is the stages in the entrepreneurial process in which it explains the entrepreneurial learning process. While critical events describe events throughout the entrepreneurial process, setbacks focus on the nascent stages of the entrepreneurial process, thereby serving as a more applicable concept in describing young entrepreneurs learning from negative experiences.

Cope (2003) calls for further research into the relationship between emotional intensity, reflection, and learning. Through the concept of setbacks, we propose that young entrepreneurs, and in particular recent graduates, display lower levels of emotional intensity following a negative unintended event. Possible contributors to the reduction in emotional intensity is outlined in *Section 5.2.1*. The lack of emotional reactions can be seen as an inhibitor for entrepreneurs achieving deep reflection following a setback, thereby reducing the potential learning outcome from negative events.

6.0 Conclusion, Implications and Further Research

6.1 Conclusions

The purpose of this thesis has been to examine entrepreneurial learning in the context of the iterative venture-building process that young entrepreneurs go through to secure their first paying customers. Entrepreneurial learning has, throughout this thesis, been argued to be a complex and highly context-dependent process (Cope, 2005), where the illustrative consensus map underscores the highly iterative and non linear process, displaying a rich set of micro-processes seen to influence the entrepreneurs learning. The process of unveiling the contents of entrepreneurial learning has been further argued to be a challenging process due to the hard-to-articulate nature of entrepreneurial learning and that entrepreneurial learning can arise unconsciously within the entrepreneurs (Minniti & Bygrave, 2001).

To mitigate these challenges and in order to contribute to a nuanced understanding of entrepreneurial learning, this thesis has employed a novel research methodology to the field of entrepreneurial learning. Through utilizing the ZMET methodology (Zaltman, 1997) we have been able to provide insights into the entrepreneurs' cognitive frameworks to contribute to uncovering implicit knowledge that may influence their learning experiences.

In answering research question 1: *What factors facilitate or inhibit entrepreneurial learning for young entrepreneurs,* we find supporting evidence to the literature stated in *Section 2.3* arguing that entrepreneurs develop knowledge through social and market interactions. The thesis argues that such interactions are of particular influence to the knowledge development process of young entrepreneurs, given that knowledge derived from networks mitigates the young entrepreneurs' lack of experience. In discussing factors contributing to increasing learning outcomes, this thesis contributes new insights into the understanding of entrepreneurial learning by arguing that young entrepreneurs learn by leveraging experiences from fields unrelated to entrepreneurship or industry-specific knowledge. Through this, we challenge the notion that entrepreneurial knowledge acquisition primarily relies on previous management or industry-specific experiences.

In answering research question 2: *How do young entrepreneurs learn from critical events in the early, iterative venture-building process,* this thesis asserts that critical and negative events are an inevitable component of the highly experiential process that offers the potential for valuable learning opportunities despite their initial negative perception by entrepreneurs. However, the findings reveal how young entrepreneurs learning from such events could be inhibited due to several factors. These factors could be seen as coming from perceiving the entrepreneurial endowment as less risky and thereby lacking a strong emotional connection hence also the important inward critical reflective behavior in the aftermath. Therefore, the thesis argues that the existing concept of critical events (Cope, 2003; Cope & Watts, 2000) does not fully capture how young entrepreneurs learn from these experiences. Building on this insight, the thesis introduces the concept of setbacks as a more accurate and descriptive concept for understanding how young entrepreneurs learn in their early venture-building process.

In answering research question 3: *To what extent do young entrepreneurs reflect upon their experiences throughout the learning process,* this thesis has argued that lack of internal structures for knowledge sharing and reflection serves as an explanation into the inhibitors of entrepreneurial learning. This thesis finds that young entrepreneurs do engage in reflective practices, however, these practices were primarily confined to processes within the entrepreneurial team. Through the primarily internal reflective processes, the young entrepreneurs can be seen to fail to reflect on knowledge and firm-relevant information from networks and social relations. Furthermore, this thesis argues that, as depicted in the consensus map, no linkages exist between reflection, setbacks, and market interactions. Through this missing link, the argument has been made that entrepreneurs are less likely to correct erroneous behavior due to a lack of reflection with networks and social relations following a setback. Thus showcasing how lack of reflection contributes to hindering the entrepreneurs in developing their stock of knowledge, thereby extending their period of liability of newness.

6.2 Practical Implication

The findings of this thesis reveal that young entrepreneurs' levels of learning could be increased through establishing structures and routines for knowledge sharing and reflection, not only internally but also with their networks, especially focusing on reflection in the aftermath of setbacks. These findings reveal a set of practical implications as to methods for facilitating increased reflection and, thereby, learning in young entrepreneurs.

This thesis has argued for the importance of establishing internal routines for knowledge sharing and reflection, especially in connection to market interaction. Although the young entrepreneurs do display reflective behavior within the team, the entrepreneurs are characterized by a lack of established processes and structures. Establishing better internal structures for knowledge sharing and reflection, not only within the team, but also with their networks, could therefore be seen to facilitate increased levels of knowledge development. Establishing processes for knowledge sharing and reflection is of particular importance when interacting with market actors. Through this young entrepreneurs will be better equipped at leveraging mitigating their lack of experience, and draw knowledge from networks and social relations in order to reflect on setbacks.

Additionally, the findings of this thesis emphasize that young entrepreneurs may exhibit a lower level of emotional impact and reflection following setbacks compared to what is anticipated in the existing literature. This could partly be attributed to their lower levels of perceived risks, them being situated within safe frameworks, having received soft funding, and being young with plenty of future opportunities. A substantial asset that the entrepreneurs of this study all had in common was the soft-funding capital received from Innovation Norway. Our findings can therefore be seen to have implications for public soft-funding schemes intended to stimulate new venture creation, and in particular grants aimed at young entrepreneurs. Although some of these come with an additional endowment for the acquisition of a mentor, there is a greater need to implement follow up procedures and routines around this, ensuring that the entrepreneurs use this in following up reflective processes in connection to market interaction and setbacks, helping them in putting their experiences into perspective.

6.3 Further Research

This paper has provided novel empirical insights into the contents of entrepreneurial learning among young entrepreneurs, providing avenues for further research. A key contribution of this thesis is the introduction of the concept *setbacks*. Setbacks as a concept have been argued to hold descriptive validity of the entrepreneurs included in this study. Yet, future research could further validate and develop this concept by employing longitudinal studies to explore how the young entrepreneurs emotional attachment and critical reflection develops over time, with the perceived risk of failure getting larger as the companies develop and the entrepreneurs get older. It would be particularly interesting to investigate the concept of setbacks in relation to entrepreneurs having varying sets of initial assets in their initial phase.

Another interesting avenue for future investigation could be to probe the potential learning differences among entrepreneurs from varying educational backgrounds - those with experience in venture creation programs versus those without. Although not taken into account in this study, six out of the eight entrepreneurs had graduated from venture creation programs, which could be seen to impact their level of reflection and initial assets (Lackéus & Middleton, 2011). An interesting line of research would be to evaluate if and how these different educational backgrounds influence learning behaviors, learning rates, and learning levels when transitioning from students to young entrepreneurs.

This thesis has also unveiled how entrepreneurs draw from previous experiences, including those unrelated to entrepreneurship, to enhance their business acumen. This is an interesting finding not found to be described in detail in the literature. Therefore, additional research could delve into how young entrepreneurs transfer knowledge from previous fields of interest, such as gaming, to facilitate entrepreneurial learning.

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8.0 Appendix

A. Unidirectional connections

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
1 SMALL WINS							1	2			1					1					1																												3					
2 KNOWLEDGE DEVELOPMENT													3						1		1													1	1		1	1						1			1						
3 HYPOTHESES									1	1	3				1																3						1						1											
4 CHALLENGES FROM LIMITED EXPERIENCE						1				1	1				2			1								1				1									1		3	2				2					2	2
5 LEVERAGING PAST EXPERIENCES	1	3									1	1		2			2	1			1					1								2																			
6 FEELING A MARKET-PULL								1			1			1	2			1		1						1														1		2			1				1				
7 BUILDING RAPPORT													1								2												1													3						
8 PERSONAL MOTIVATION	1					1					1			3			1		1																		1	2											1					
9 QUESTIONING & EVALUATING FEEDBACK		1				1			1		1						1	2								1											4							1										
10 TUNNEL VISION																																																						
11 MARKET INTERACTION		4				2	1	1	1					1				2		1	1					2	4								4				1		1		4	2		1	3	1	1	1		
12 SEEING POTENTIAL FOR IMPROVEMENT														1						2														3	2			1	2									1					
13 PERSUASION	1					1			1		1									1	2						2				1		1	2						1			1			1						
14 TOUGH PRIORITIZATIONS		1			1		1						1						1	1																												1					
15 MISINTERPRETATION	1																	2					1											1	2					5													
16 SHOWING CREDENTIALS							1						2								4						1							1							1				1								
17 SUBJECTIVE ASSUMPTIONS		1	3			3	1		1	3			1	2	1												1		1									1	2		1						1					
18 REALIZATION	2	2													1				1	1															1					2			1									
19 PIVOTING																																		1														1				
20 ITERATIVE DEVELOPMENT	2	1				1					1		1						1								1								1		1						2		1		1				
21 COLLABORATION WITH CUSTOMER	2	1										1			1	2			1										1		2		1	1		1			1		2		3			1		1	2		
22 EARLY-STAGE CHALLENGES							1						1											1														2			3		2			1						2
23 HINDSIGHT		2	1								1							3																1				1		1			1								1	
24 FINANCIAL LIMITATIONS										1				2														1	2			1									3								1	1
25 START-UP PROGRAMME	1	3							1					2				2								3	1	1		1	1					1						1				3		1			
26 EVALUATING PROGRESS		1								1	1	1	1					1												1			2		3						1										
27 AFFIRMATION	1									1					1																																1					
28 RAISING MONEY		1					1		1					1	1	1					1				1		1						1			1				2		1				3					
29 APPLICATION FOR SOFT FUNDING													1		1				1				1						1				1				1	5	3		1										
30 TIME CONSTRAINTS														2				1								1						1			3				2												
31 INFLUENCE FROM STUDIES		1	1		2	1	1		1	1	2		1				1				1				1		1						1	2		4										2				
32 TESTING PROOF OF CONCEPT		3				1	2			1	2	1	2	1				4		1	1					1													2		2	1	2			1	1	1			
33 TEAM DISCUSSIONS		1							1					1				1	1	1						1									1		3										1			1	
34 NEW MARKET OPPORTUNITIES						2					1								1	2						1									1			1			1							2				
35 CHANGE OF APPROACH	1					1													1	1						1													1			1										
36 DIVIDED ATTENTION														3																											1										4	
37 REFLECTION		1						1	1								1	2			1																									1							
38 VALUE PROPOSITION						1		1																																												
39 TECHNOLOGICAL FOCUS					1	1		1		2		1		1	2			2		1												2					2			3						1	1				
40 SOFT-FUNDING	4																							1			1				1			1														1				
41 SETBACKS	1	3	2									1		1				2		3			1	2	1	2			1				1	6		1														1		
42 CHALLENGES GAINING CREDIBILITY																								1																												
43 CUSTOMER INSIGHT		4							1					1				2		1									1				1	2			2			2											
44 CONCRETIZATION		1				1	1						1	1				3	1	1						1																										
45 CUSTOMER REVENUE	2					2																						1	1		1																1				
46 CONSULTING WITH NETWORK	1	3						1	2		2							1	1	1						1											1						1				2					
47 COLLABORATION WITH THIRD PARTY	1						1				1		1			1										1												1												1			
48 CONSTRUCTIVE FEEDBACK		1				1			2					1	1			2	1	3						1								1	2		2	2					1					1				
49 BELIEF IN COMPANY								1		1				1																																						
50 EXPERT INSIGHTS AND ADVICE	1	3	1				1		1			1	1			1		2	1								2								2	1										1		1	1			1
51 CUSTOMER REQUIREMENTS		2				1			2					1						1																		3	1		3							1					2
52 CHALLENGES IN TEAM																																								2					2						
53 TECHNICAL LIMITATIONS												1		1	1				3							1					1	1		1						1						1					

B. Bidirectional connections

	08	15	54	16	38	55	39	17	41	14	56	13	57	58	18	29	28
08 PERSONAL MOTIVATION			1		3			1			1		1				
15 MISINTERPRETATION															6		54
54 GOAL ORIENTATION	1	1										3			1	2	
16 SHOWING CREDENTIALS												2					1
38 VALUE PROPOSITION	1		2														
55 TEAM SPIRIT	1																
39 TECHNOLOGICAL FOCUS	1	2			2					1					2		
17 SUBJECTIVE ASSUMPTIONS		1			1		2		1	3		1				1	
41 SETBACKS										1	1				2		
14 TOUGH PRIORITIZATIONS			1		1							1					
56 ABSENCE OF PROCESSES AND STRUCTURES		1	1				1	3	2	1		1	1				
13 PERSUASION								2	1								2
57 INSECURITY							3										
58 JOY FROM ACCOMPLISHMENTS						3											
18 REALIZATION		1							3								
29 APPLICATION FOR SOFT FUNDING		1	1				1					1	3				
28 RAISING MONEY		1	1	3					2	1			1				

C. Originator constructs

Originator construct	**Explanation**
TEAM SPIRIT	This category includes elements like creating a cohesive team environment, emphasizing effective communication, taking into account both individual and group needs, valuing different viewpoints, fostering a positive workplace culture, constructively handling conflicts, and aiming for synergy to accomplish shared goals.
EARLY-STAGE CHALLENGES	This category includes various issues and problems that arise from being an early-stage businesses, including the need for a different strategy, taking on large customer projects too soon, having limited legitimacy in the beginning, looking for product-market fit, having inadequate grounds for investment, incomplete product development, and the immaturity of the company as a whole.
TECHNICAL LIMITATIONS	This category includes elements like the complexity of the task at hand, restrictions placed by the technical lead, difficulties in technical development, the impact of technological advancements, and the existence of technological constraints that affect the team's work and decision-making processes.
BUILDING RAPPORT	This category includes different approaches for building relationships with potential customers, creating rapport through conversation, exceeding client expectations, staying in touch with stakeholders, making sure of client satisfaction, fostering honesty in client interactions, keeping commitments, enhancing client impressions through curiosity, and charging for it.
EVALUATING PROGRESS	This category includes the emphasis on the necessity of regularly validating tactics, remaining grounded and self-aware, questioning one's strategy, and remaining aware of progress throughout the process.
TEAM DISCUSSIONS	This category includes activities like holding weekly team meetings, having productive internal discussions, conversing with team members, running into arguments, and coming to an understanding despite differences.

QUESTIONING AND EVALUATING FEEDBACK	This category includes factors like questioning the legitimacy of advice, ignoring feedback, reading body language and signals, needing to be familiar with specific cases to give sound advice, not always paying consideration to investor advice, uncritical support, being misled by feedback, and evaluating feedback.
INFLUENCE FROM STUDIES	This category includes things that have to do with how studying or academic activities influence and affect the entrepreneurs. The impact of education, educational background, academic knowledge, and scholarly influences on decision-making and professional development are some of the variables that are covered.
CHALLENGES FROM LIMITED EXPERIENCE	This category includes issues like limited experience among part-time employees, making business agreements without experience, a lack of experience, a lack of market experience, insufficient prerequisites, a lack of technical competence, naivety in company formation, recognizing the lack of practical experience, inexperienced entrepreneurs, and issues with inexperienced entrepreneurs setting their boundaries.
FINANCIAL LIMITATIONS	This category includes factors like depending on funding, the need for customer revenues, tasks being too capital-intensive, low-income levels, making the most of scarce resources, running out of money, trying to prevent financial depletion, short runways, limited funds, short-term perspectives, the impact of money on opportunities, and difficulties paying employees.
MISINTERPRETATION	This category includes things like losing a customer due to changed requirements or specifications, misconceptions about the customer's needs, making false assumptions, misreading complexities, misunderstanding limitations, targeting the wrong customer, the customer not seeing the situation as a problem, exceeding expected timeframes, misconceptions about technological maturity, imagining a different investor, and believing a customer would by the product.
CUSTOMER REQUIREMENTS	This category includes things like customer requirements, the customer's dependence on the startup generating revenue for them, the customer's interest in simplifying work processes, the customer's search for more effective solutions, the customer's desire to lessen financial implications, new customer requirements, requests for alternative product specifications, and the customer's expectation of measurable results.

SHOWING CREDENTIALS	This category includes factors like the signaling effect of investor cooperation, the potential for increased legitimacy with accurate price estimates, the use of references for increased legitimacy, the importance of prior experience, the facilitation of market acceptance through prior experiences, demonstrating understanding and knowledge to bolster legitimacy, and capitalizing on positive experiences.
RAISING MONEY	This category includes things like preparing the foundation for investment funding, obtaining funding for recruiting needs, securing investment from investors, taking notes at investor meetings, and the goal to raise valuation. It underscores the value of securing financial resources, utilizing investor partnerships, and aiming for growth in company valuation.
START-UP PROGRAMME	This category includes things like accelerators explaining essential steps in processes, accelerators simplifying processes for easier understanding, participating in accelerator programs, fundraising programs, and learning from accelerator programs and putting that learning to use.
LEVERAGING PAST EXPERIENCES	This category includes activities like intentionally transferring experiences to new contexts, utilizing knowledge from prior processes, utilizing familiarity with related environments, using learnings from academic studies, generalizing knowledge from preliminary personal projects, using knowledge from former team members experiences, transferring strategic thinking from games, and launching projects based on recently acquired transferable skills.
CONSULTING WITH NETWORK	This category includes things like asking for advice regarding strategic decisions, talking to family members, meeting with people, engaging with peers of your own age and level of experience, utilizing your network, and getting feedback from friends.
EXPERT INSIGHTS AND ADVICE	This category includes things like experts verifying assumptions, consulting with seasoned industry figures in one's network, placing a high value on conversations with experts, receiving feedback at a trade show booth, actively listening to professionals, learning from professionals, conversing with those who possess understanding, having board members fill knowledge gaps, and being challenged by experience.

TIME CONSTRAINTS	This category includes factors like having limited time availability, having deadlines to meet, dealing with problems as they arise, putting off organizational issues until they are absolutely necessary, and not wanting to spend much time on systems and analysis.
SEEING POTENTIAL FOR IMPROVEMENT	This topic includes things like improving current solutions, spotting opportunities for improvement, discovering prospects for augmentation, the potential for a new solution to streamline operations, and removing obstacles. The category highlights the start-up's thoughts on how existing solutions can be made more efficient or replaced with better ones.
CONCRETIZATION	This category includes things like specifying the willingness to pay, concretizing value propositions for investors, being specific and precise in sales, realizing the advantages of specificity, honing case presentations, and improving sales techniques.
HINDSIGHT	This category encompasses elements such as looking back at how progress facilitated momentum, hindsight indicating alternative approaches, seeing the potential for earlier hypothesis clarification and testing, seeing the potential for starting with a simpler solution, looking back at the importance of knowing what to expect from hired expertise, the occurrence of non-dramatic collaboration breakups, looking back at how one could avoid hierarchical management structure, the recognition of insufficient scrutiny of core hypotheses, the importance of a solid foundation, and the significance of well-structured vesting agreements.

D. Connector constructs

Connector construct	**Explanation**
TECHNOLOGICAL FOCUS	This category includes things like focusing on the technical aspects of a product, emphasizing the lack of existing systems, developing a mobile application, developing a very technical solution, determining the product's technical viability, speaking in technical terms when speaking with customers, tearing apart products for testing, being engineer-focused, and beginning with technology as a foundation.
INSECURITY	This category includes things like concerns over what's to come, doubts about one's comprehension of methodology, insecurity about the ability to keep commitments, insecurity about how to complete the product, uncertainty about the plan in an application for funding, insecurity about how to choose the best course of action, insecurities around leadership requirements, and difficulty visualizing development.
APPLICATION FOR SOFT FUNDING	This category includes activities like writing an application, competing for funding or support, attempting to construct a case for the application, honing the application, obtaining support for development, ensuring alignment between the application and the overall strategy, having the application increase complexity, having the application impose restrictions, having the application divert attention, and having the desire to depart from the application's proposed course of action.
SOFT-FUNDING	This category includes elements like obtaining the *forny STUD-ENT* grant from Innovasjon Norge (IN), making the venture survive with the help of *STUD-ENT*, being granted *Markedsavklaringstilskud* from Innovasjon Norge, and seeing soft funding as a safety net.
SMALL WINS	This category includes things like advancement, group achievements, obtaining the first client, significant innovations, multiple little innovations, market entry, obtaining proof of concept, early commercialization, and reaching a tipping point. It draws attention to the accomplishments and milestones that the start-ups had made along the way, demonstrating development, market acceptance, and the possibility for future expansion and success.

SETBACKS	This category includes things such as discovering mistakes, spotting crucial flaws, rejections from investors and applications for funding, realizing that one's priorities were wrong, waiting too long to conduct real product testing, being constrained by production time, not having a finished product, deviating from what was originally planned, frustration with the situation, customer rejection of the value proposition, lengthy decision-making processes, numerous pitfalls in product development, losing valuable advisors or mentors, conflicting trends, product redesign, jargon acting as a barrier to learning, team members prioritizing other jobs, and experiencing slow development.
COLLABORATION WITH CUSTOMERS	This category includes factors like getting support from customers, having customers facilitate testing, having a client base that supports the venture, working closely with customers while developing technology, and appreciating the value of customer involvement in order to develop a successful product or service that satisfies their demands.
CONSTRUCTIVE FEEDBACK	This category includes things like receiving an early refutation of initial hypotheses, receiving feedback on critical improvements, hearing that one has a too technically focused value proposition (engineering-oriented), constructive feedback from experienced team members, customers not wanting to use the product as anticipated, debunking of hypotheses during customer meetings, identification of flaws in the idea by market actors, addressing mistakes made by employees, and customer feedback.
KNOWLEDGE DEVELOPMENT	This category includes things such as increasing market interest through applied learning, building a toolbox of skills, gradual development and progress, acquiring sector-specific competence, making adjustments based on competence development, building internal competence, gaining understanding over time, wishing to do things differently in the future based on past experiences, seeing improvements, external training, and learning about new technologies, being thrown into a task without prior knowledge, creating hooks for learning, embracing continuous learning, learning from challenges and friction, fear of making mistakes, refining communication skills over time, addressing weaknesses, expanding one's understanding, and embracing a learning-by-doing approach.

VALUE PROPOSITION	This category encompasses different value propositions mainly related to resource optimization and sustainability. It includes things like increasing resource efficiency, reducing costs with solutions, leveraging data insights as a value proposition, cost-effective solutions, customer-defined primary value propositions, facilitating greater sustainability for customers, customers defining the start-ups core values, circular economy practices, and social sustainability.
PERSONAL MOTIVATION	This category encompasses factors like the personal motivation of using the startup as an opportunity to learn, gaining energy from being out in the market, setting goals based on motivation, being interested in the sustainability aspect, aligning core values with motivation, having the technology as a hobby, being driven by proving others wrong, and personal interests affecting the choises.
TOUGH PRIORITIZATIONS	This category includes things like remaining completely focused on one's own tasks, concentrating efforts on areas with traction, finding the correct equilibrium of focus, ranking applicants based on competence, prioritizing quality over quantity; speed over marginal improvements; progress over maintenance , prioritizing scaling over individual customers, avoiding an excessive focus on in the early stages, evaluating the choice between in-house and outsourcing, being hard on doing work that does not repeat past mistakes, prioritizing the need for strategic freedom, prioritizing based on customer evaluation criteria, prioritizing one's own time and spending, prioritizing based on technical feasibility and market potential, prioritizing based on time constraints, to-do lists, motivation, and market fit are all examples of different priorities in the interviews.
SUBJECTIVE ASSUMPTIONS	This category includes factors like the start-ups presumptions regarding the markets necessity of their offerings, knowledge based on personal thoughts and gut feelings, reliance on future projections, decision-making based on perceived needs, drawing from personal experiences and understanding, considering trends, generalizing knowledge, intuition-driven decision-making in the early stages, and belief in market growth.
ABSENCE OF PROCESSES AND STRUCTURES	This category includes factors like the need for a more systematic approach, the need for structure, poor control over part-time employees, inattention to the various phases, a lack of systematic processes, the absence of milestones, the absence of follow-up routines, natural processes, subconscious methods, disorganization, and the desire to develop efficient processes.

HYPOTHESES	This category takes in the use of fundamental hypotheses in the early stages, developing critical hypotheses, identifying bottlenecks, ranking hypotheses, recognizing potential, and believing in elevated legitimacy through prototyping.
MARKET INTERACTION	This category focuses on taking notes on customer interactions, interacting with industry players, and appreciating the benefits of having an external perspective. It includes the activities of gaining insights from customer interactions, actively interacting with key market participants, and being proactive and outwardly focused in order to gain useful market insights, spot emerging trends, and forge lasting relationships with customers.
TESTING PROOF OF CONCEPT	This category encompasses alternative validation methods for assessing payment willingness, field testing, conducting pilot projects with potential customers, pitching ideas for feedback, product demonstrations, prototyping, testing for potential upside, testing with users, and validating willingness to pay as a way to mitigate risks.
CUSTOMER INSIGHT	This category focuses on elements such as understanding the motivation behind purchases, gaining insights into customer needs, understanding user adoption thresholds, understanding that buyers are less concerned with the startup's vision, market-based foundations, identifying pain points for customers, starting with market problems, and seeing varying friction across segments.
DIVIDED ATTENTION	This category focuses on factors like part-time employees being insufficiently committed, founders who aren't fully committed, split focus, and studies that divert attention away from important activities.

E. Destination constructs

Destination construct	Explanation
JOY FROM ACCOMPLISHMENTS	This category focuses on things like celebrating victories, taking pleasure in reaching objectives, discovering enthusiasm in progress, and feeling relieved when things start to function..
CHALLENGES GAINING CREDIBILITY	This group emphasizes factors including limited responses as a result of being a young company, the capital-intensive aspect of establishing sufficient credibility, clients needing more legitimacy for paid collaboration, and startups having weaker negotiating leverage.
PIVOTING	This category focuses on topics like pivoting, moving toward one's area of expertise, switching to a more straightforward technical solution, and switching depending on market dialogues.
COLLABORATION WITH THIRD PARTY	This area focuses on activities like obtaining subcontractors, forming alliances that allegedly lead to them becoming clients, forming alliances with key industry players, developing products with partners, and working with outside sources.
REFLECTION	This category primarily focuses on topics like using downtime for reflection, debriefing scenarios, engaging in collaborative team reflection after customer meetings, reflecting on not performing despite prior experience, individual reflection, seeing reflection as a way to improve processes, reflecting on progress, reflecting on customer reception, and reflecting on feedback.
BELIEF IN COMPANY	This category focuses on factors including having a strong belief in one's own technology, reaching a tipping point in one's view that the firm will succeed, believing in a particular use case or scenario, having confidence in one's own business, and feeling that one can outperform the market.
CHANGE OF APPROACH	This category is concerned with things like refocusing due to apparent interest, adjusting processes, making larger adjustments to the current approach, and going through changes. It also entails moving from theoretical viability to actual implementation, dealing with more fundamental issues, putting in place a more structured hiring procedure, creating a new plan, and experiencing successful results that diverge from the original plan.

CUSTOMER REVENUE	This area focuses on aspects like client revenues, self-financing, development support from commercial players, and establishing financial security and also how revenues enable extra resources. The category shines light on the revenue generated in the process to ensure the startup's financial stability and durability.
ITERATIVE DEVELOPMENT	This category focuses on topics like improving through iteration, iterative development, iterating on work processes, iterating on product functionality, iterating on product design, putting many small changes into practice, figuring out the logical next steps and trying again. x
PERSUASION	This category focuses on aspects like appealing to emotions, emphasizing formulations for initial criticality, communicating the significance of working in a startup for hiring purposes, assisting customers in perceiving value, effective persuasion, pitching, providing details about the product at a later stage, selling visions or ambitious ideas, articulating the company's value, generating instant acceptance, and employing subtle communication with customers.
GOAL ORIENTATION	This category focuses on topics including pursuing ideal customers, emphasizing goal-oriented strategies, putting in a full year of work to win a particular bid, attempting to improve clients' bottom lines through data insights, creating clear milestones, and taking into account one's own objectives.
AFFIRMATION	This category focuses on aspects like getting external affirmation and validation, having assumptions confirmed, getting positive responses, getting positive feedback from interest groups, getting feedback on strengths, encountering few rejections, being persuaded by feedback, and getting feedback that emphasizes potential.
TUNNEL VISION	This category focuses on things like difficulties setting personal boundaries, getting stuck in the same tracks, being excessively solution-oriented, not wanting to discuss difficult parts with others, and considering the possibility of changing course only when something is proven incorrect.

FEELING A MARKET PULL	This category focuses on aspects like sensing a market pull, getting asked to do customized products, customers being satisfied even with constrained solutions, market confirmation, positive market response, product-market fit, clear market demand, and growing market needs. It emphasizes recognizing and responding to market demands, matching products or solutions to consumer demands, and considering the shifting dynamics and requirements of the target market.
CHALLENGES IN TEAM	This category focuses on things like the ineffectiveness of stock incentives for everyone, poor expectation alignment, sentimental attachment, frustrating transition periods within teams, conflicts within the team, clashes between personality and job responsibilities, the contagious nature of negativity, intrusive follow-ups, feelings of unfairness, complex business structure, geographical disparities, difficult collaborations, and difficulties taking a step back from the situation.
NEW MARKET OPPORTUNITIES	This category includes factors like champions opening new doors, the identification of new market segments, locating technical opportunities and solutions, recognizing opportunities based on input from experts, new technological solutions creating opportunities, exploring new markets with distinct needs, new proposals from team members, and identifying opportunities for expanding product portfolio.
REALIZATION	This category includes things like realizing that revenue growth will take time, realizing the need for a more generalized solution, realizing that the simplest approach isn't always the best, acknowledging a poor solution or outcome, understanding patterns through recurring messages, realizing the need for a longer development time in the initial product, realizing that the original plan may have been limiting, recognizing a challenging market environment, understanding the importance of segmentation, recognizing that soft-funding does not equate to true valuation..

F. Images from the open and axial coding process

Image 1 - First round of sorting

Image 2 - Second round of sorting

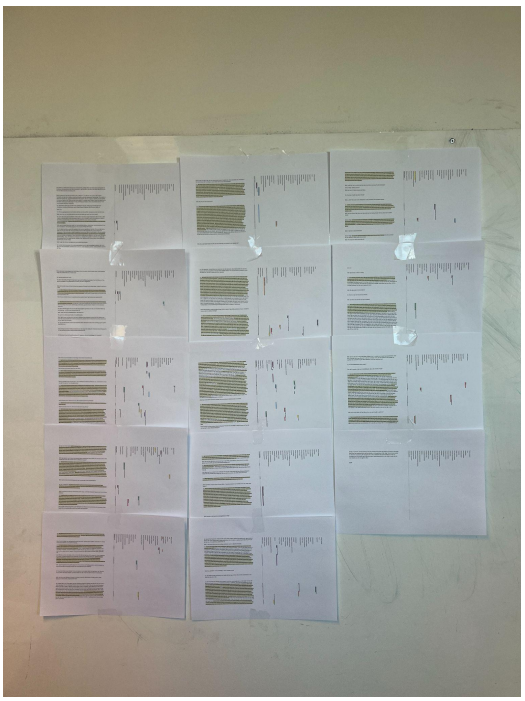


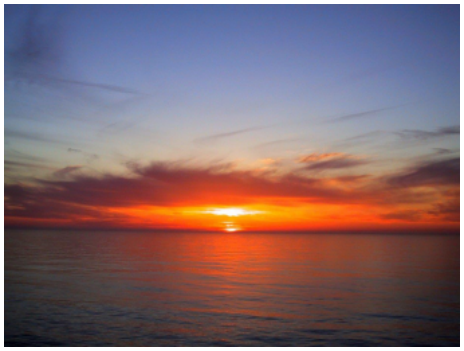
Image 3 - Connecting the constructs

G. The example sent to the interviewees regarding choice of pictures

See example attached with two pictures (no. 1 and no. 2) that describe "*thoughts and feelings about the Beach Kiosk*" including some keywords explaining why the picture was chosen. Also included is an example of a "wrong" picture – the type of picture we do not want you to include (no. 3).

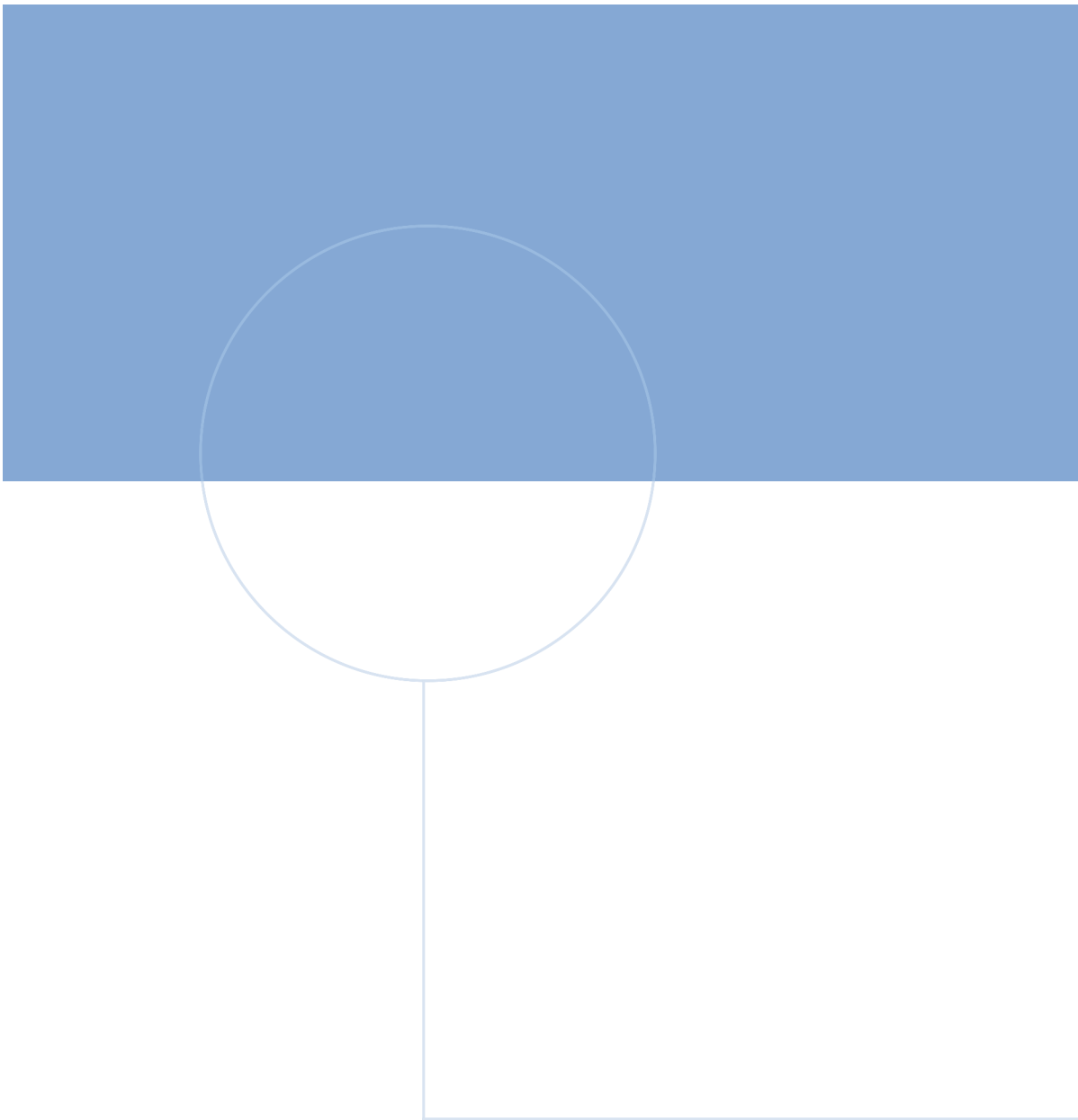
Note: You do not need to add any text to the pictures; they are only for illustration purposes in the example. The pictures will only be used during the interview to facilitate the conversation with you.

PICTURE 1: "*...because one of my fondest summer memories from my childhood is buying ice cream or something delicious at the store together with my brother…* "



PICTURE 2: *"... Because I remember that we always watched the sunset over the North Sea from where the kiosk is located… "*

PICTURE 3 (Wrong!): *"This is the kiosk."*



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