

# Understanding of Entrepreneurial Learning

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2011-09-18

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## **Abstract**

Understanding of entrepreneurial learning has become an increasingly emphasized topic. Many studies have been made and many theories have been proposed. In this study I analyze entrepreneurial learning through a number of different models using my own experience as data. I try to seek an understanding of how the frameworks fit on my own experiences. For creating a better understanding of entrepreneurial learning I also suggest a new model explaining how I perceive the whole entrepreneurial learning process.

## **Introduction**

In 1984 Kolb suggested that the learning process in small ventures is of a cyclical nature, whereby knowledge is processed through transformation stages. In this process the entrepreneur not only has to experiment and experience, but must also reflect on the outcomes of such experience in order to facilitate experiential learning. The experiential learning cycle has ever since been used as a framework for analysing and understanding learning in small ventures. This can be seen in publications such as Gabrielsson and Tell (2009) where small business owners' learning behaviour shows to be closely related to the entrepreneurs' possibilities to reflect upon the actions he/she has taken.

Other research focused on the understanding of the learning process has sought to conceptualize the interactions between different stages of the learning process. Research conducted by Ardichvili, Cardozo, and Ray (2003) as well as Politis (2005) has resulted in theoretical models allowing us to further understand the "bits and pieces" of entrepreneurial learning and how they all connect. However, recent studies suggest a strengthened correlation among some of the factors of small venture learning (Cope 2005). Cope (2005) calls for further research in the area of conceptualizing and understanding the learning phenomena in entrepreneurial firms as a whole. Johannisson (2009) also underlines the importance of understanding the nature of entrepreneurial learning and the fact that there is a lot to be considered;

"It is our mind that looks for simplicity, not nature"

To understand the nature of entrepreneurial learning, one must understand the correlation between different processes within the entrepreneurial process, both in the learning cycle and within the general frameworks suggested by research. Recently, studies have been increasingly focused on understanding the different parts of the frameworks suggested by Ardichvili (2003), Cope (2005), and Politis (2005). By focusing on different parts of the learning process Gabrielsson and Tell (2009), Johannisson (2009), Staber (2009), Politis & Gabrielsson (2009), and Jiang & Yanqiu (2010) have drawn attention to some of the more important correlations among critical factors in the learning process. However, no framework has been presented to explain the cyclical behaviour of the entrepreneurial learning process. The understanding of how entrepreneurial alertness and the experiential learning process correlate has not notably been researched and analyzed.

This paper will investigate recent studies to create a better understanding of the validity of earlier concepts and frameworks and suggest an updated framework that includes new findings. The general framework for understanding entrepreneurial learning shall include cyclical learning, entrepreneurial alertness, and experiential processes. The suggested models are based on my own learning experiences and analyzed through an auto-ethnographic method.

## Theoretical framework

Research conducted by Kolb (1984) has played a fundamental role in the understanding of entrepreneurial learning. Kolb realized the importance of trial and error, but also conceptualized the learning process and highlighted the critical factor of reflection on concrete experiences from the entrepreneur. He suggested that without an analysis of “why things went like they did” in a certain occasion (including the process of building a theory, taking a decision, and actually taking actions according to those decisions) the entrepreneur is not able to learn from that particular experience. This theory has later been reinforced by Cope (2005) when analysing different studies of entrepreneurial learning.

Kolb’s learning cycle consists of four processes (Figure 1):

**Abstract Conceptualization:** Thinking and forming concepts on pre-existing knowledge.

**Active Experimentation:** Actively experimenting and taking actions according to prior knowledge.

**Concrete experience:** Experiencing something new out of the actions taken based on conceptualization.

**Reflective Observation:** Reflecting over the outcome of the decision making.

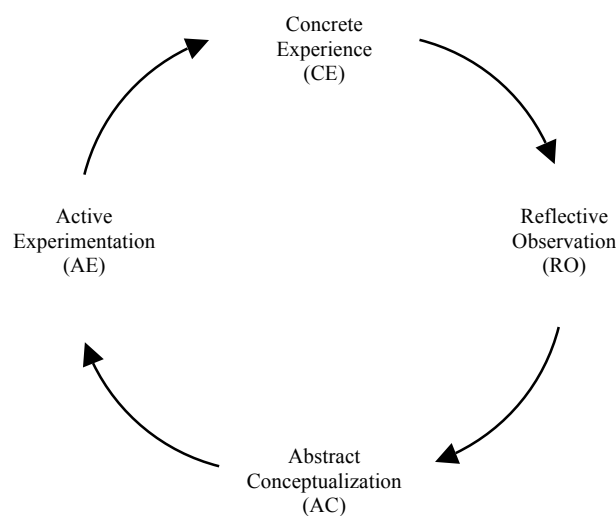


Figure I – Kolb’s Learning Cycle

The model is cyclical, meaning that reflective observation ultimately leads to new knowledge and understanding of the pros and cons of the experience. The entrepreneur hence acquires more knowledge for upcoming conceptualizations and projects. Gabrielsson and Tell (2009) successfully observed entrepreneurs and analyzed their learning behaviour according to Kolb's learning cycle. They underline the importance of the entrepreneur taking both action and having time to reflect upon the actions taken.

The same cyclical process is expressed, yet not visually explained in the model of "opportunity identification and development theory", by Ardichvili, Cardozo, and Ray (2003). Ardichvili, Cardozo and Ray focus more in detail on the different units creating entrepreneurial alertness. Entrepreneurial alertness can be described as the entrepreneurs' ability to capture or discover business opportunities. Everybody has an EA, but depending on a number of different factors, the EA is high or low. Their framework explains the bits of the "learning puzzle", hence understanding what factors are most important when realizing new business opportunities. Research and analysis conducted by Ardichvili et al. (2003) presents us with an explanatory model of opportunity identification based on the method of theory development by Dublin (1978) (Figure II). This model describes the correlation of the individual entrepreneur's prior knowledge, personal traits, and social networks with a form of alertness for entrepreneurial recognition of opportunities, later explained by Ray and Cardonzo (1996) as the Entrepreneurial Awareness (EA). In this paper entrepreneurial alertness and entrepreneurial awareness are considered as synonyms. In order to fully understand the model, one has to know that different factors, described below, influence the EA, which later determines what type of opportunities and how the opportunities will be handled according to what kind of person realizes the opportunity.

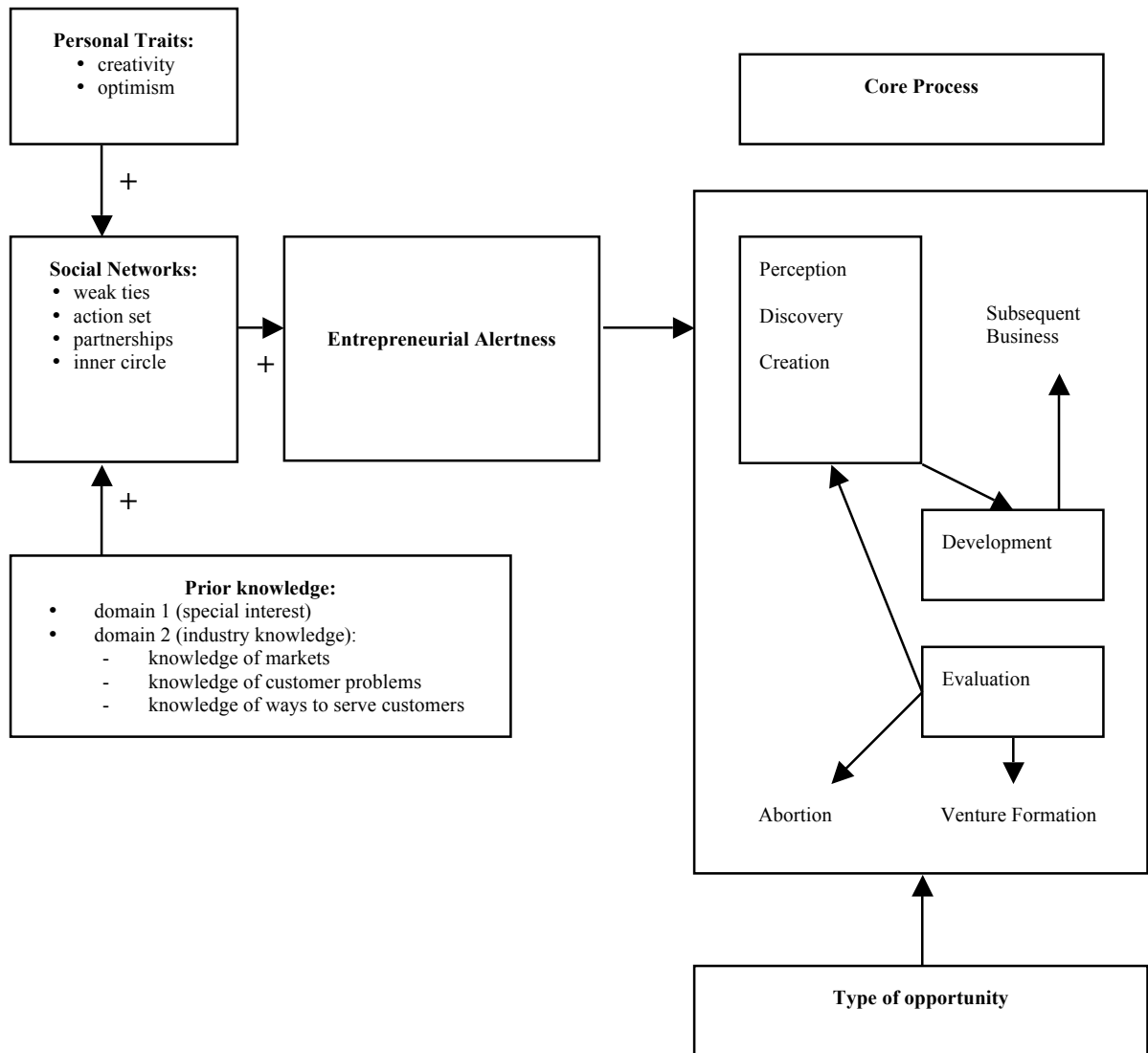


Figure II – Opportunity identification and development theory

### Personal Traits

Research has found that the entrepreneurs’ creativity and optimism are highly correlated to the ability of opportunity recognition. Creativity has in recent research by Chan & Yang (2009) shown to be an important success factor in new ventures in Taiwan, as well as by Eckhart & Shane (2003). The theory of optimism being an important factor has been strengthened by Politis & Gabrielsson (2009) when describing optimism as a synonym of positive attitude toward failure;

“A positive attitude towards failure can be a significant asset for entrepreneurs as it can help them to deal with and learn from their mistakes and to move forward.”

## **Prior Knowledge**

The prior experience of an entrepreneur has shown to be correlated to the opportunity recognition process as well. In their research, Ardichvili, Cordozo, and Ray categorized prior knowledge into two domains, the first one being the knowledge acquired in an area of special interest for the entrepreneur, often described in terms of fascination or fun. The second domain being the knowledge acquired over the years while working with a certain job. Research on the transformation process by Politis (2005) also strengthens the theory of experience being an important factor.

## **Social Network**

The social skill-set of an entrepreneur is highlighted in the framework. Social traits partly derive from the personal traits and prior knowledge, and are explained as the set of weak ties (a network used to gather general information that could lead to identifying an opportunity or to answer a general question), partnerships (start-up team members), inner circle (long-term stable relationships), and action set (people recruited by the entrepreneur to provide necessary resources for the opportunity) of the entrepreneur. The importance of social traits has also been strengthened by recent studies stating a positive correlation between network intensity and density and explorative learning. According to Johannisson (2009)

“Entrepreneuring is even more about collaborative efforts in order to enact new realities, reflected in the importance that practitioners ascribe to personal networking. The personal network is to an entrepreneur what the stick is to a blind (wo)man.”

Ardichvili et al. (2003) argue that Personal traits, mainly creativity and optimism, and prior knowledge in various forms, positively affect the individual entrepreneur’s social network, ultimately generating the outcome of an individual’s EA. The theory explains that Personal Traits and Prior Knowledge can compensate for each other. Similar to Ardichvili’s framework, Politis (2005) argues that opportunity recognition is strongly correlated to the entrepreneurs’ career experiences, however not directly but rather through a transformation process (Figure III).

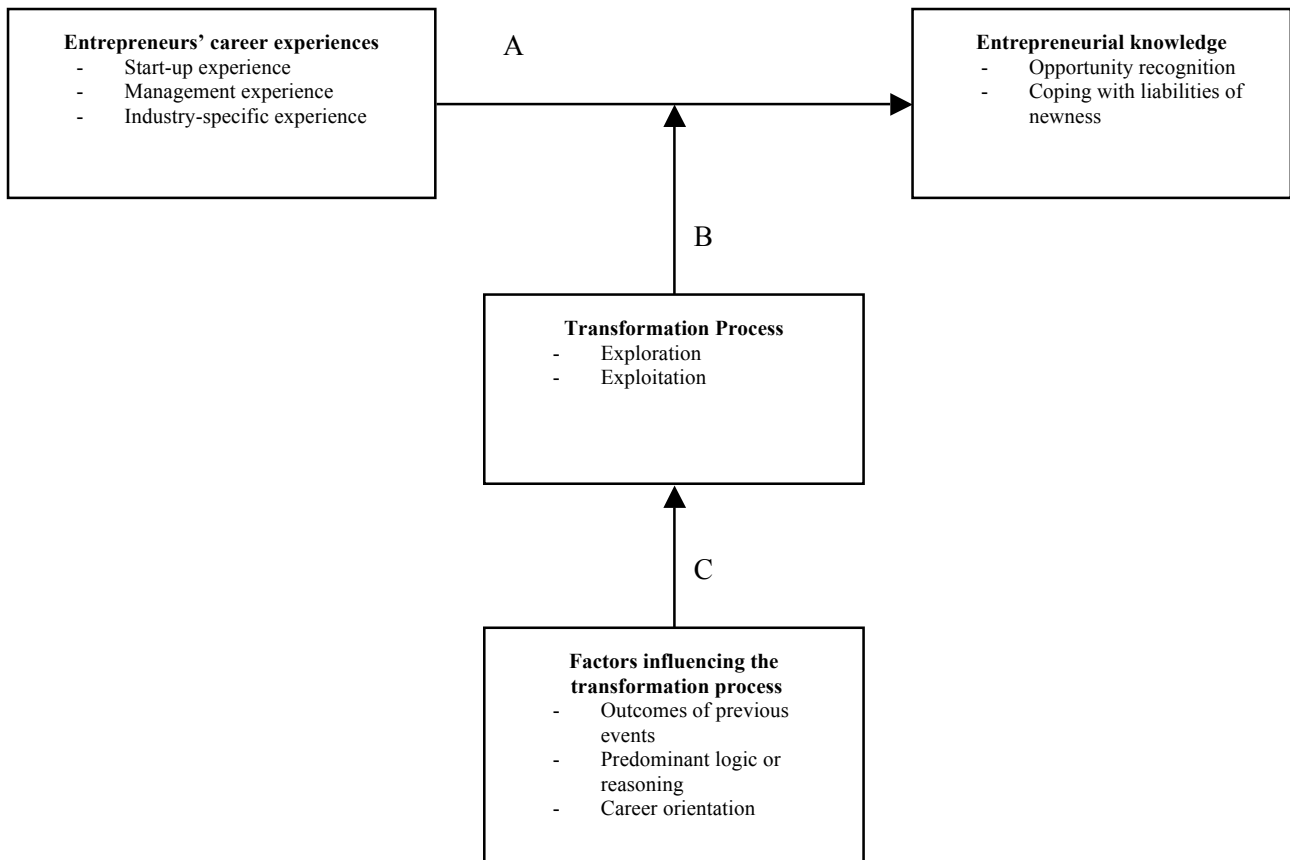


Figure III – A conceptual framework of entrepreneurial learning as an experiential process

According to Politis the entrepreneurial learning takes place first after the entrepreneur has challenged his experienced learning when making important decisions of either exploitation or exploration of a business opportunity. More thoroughly explained, the entrepreneur can either exploit their pre-existing knowledge by choosing actions that replicate or are closely related to actions one has already taken, or explore opportunities by choosing new actions different from prior experience. Politis also mentions three main factors influencing the predominant mode of transforming experience into knowledge; the outcome of previous entrepreneurial events, the predominant logic or reasoning of the entrepreneur, and the entrepreneur’s career condition. This theory highly corresponds with Kolb’s learning cycle where attention is focused on the necessity of reflecting over actions in order to make meaning of actions taken, hence creating new knowledge.

According to Ardichvili et al. the entrepreneurial alertness touches all parts of opportunity recognition. A higher entrepreneurial alertness will affect not only the perception, discovery, and creation of the business opportunity, but also the development and evaluation of it. The process of opportunity development will not be further described in this paper since it holds no relevance in this particular study.



## **Hypothesis**

As most research above suggest, the theories and frameworks need to be further investigated in the pursuit of understanding entrepreneurial learning. In this paper I investigate the suggested frameworks by implementing my own experience during the start up phase of two companies. By using my own experience I examine the relevance of the theories.

## **Limitations**

When mentioning learning I refer to both the learning of the individual entrepreneur, but also for the firm as a whole, since the entrepreneur is the main decision maker in these ventures.

The theoretical framework used in this study have many limitations. For analysing a specific event according to the models mentioned a lot of different variables have to be considered. The authors of the articles referred to have emphasized the importance of having valid measurable data when implementing models. The data I have used are solely used from my own work and has not been quantified in certain aspects to fit the criteria of the theories. My work can only be used as a tool for creating better understanding of certain models and the learning cycle's nature. I therefore accentuate the fact that my subjective understanding and beliefs of the certain area has come forth and should not in any ways be interpreted as scientific in a broader sense.

## **Methology**

By using data collected over a five-month period of my own learning experiences in a highly creative environment, I seek to analyze the data using an analytic autoethnographical method. During the period of study, two main projects where initiated; the first one named The Dental Health Tray, the second one named Omniflit. The data was recorded as short explanatory films about my learning outcomes at the end of each week. By using my own experience as data, I try not only to include objective data, rather I encourage myself to use my own feelings, emotions, and perspectives in order to understand the entrepreneurial learning cycle. Anderson (2006) explains in his paper about autoethnography:

“The five key features of analytic autoethnography that I propose include (1) complete member researcher (CMR) status, (2) analytic reflexivity, (3) narrative visibility of the researcher's self, (4) dialogue with informants beyond the self, and (5) commitment to theoretical analysis.”

These five points are highly taken into consideration when writing this paper. Analytical reflexivity is well expressed in the discussion chapter, as is the commitment to theoretical analysis in the theoretical framework chapter. Furthermore, this is a Master Thesis committing to all rules that apply. Through the course of the five-month period I have sojourned in a creative environment working in high connection with one of Scandinavia's top universities, Lund University, and one of Europe's fastest growing business clusters, Ideon Science Park.

“By virtue of the autoethnographer’s dual role as a member in the social world under study and as a researcher of that world, autoethnography demands enhanced textual visibility of the researcher’s self. Such visibility demonstrates the researcher’s personal engagement in the social world under study. Autoethnographers should illustrate analytic insights through recounting their own experiences and thoughts as well as those of others. Furthermore, they should openly discuss changes in their beliefs and relationships over the course of fieldwork, thus vividly revealing themselves as people grappling with issues relevant to membership and participation in fluid rather than static social worlds.”

## **Theoretical Reflection**

This paper focuses on the process of learning in one concrete learning outcome; the fact of minimizing risk through the writing of agreements.

During a five-month period, while enrolled in the Entrepreneurship Programme at Lund University in Sweden, I was asked to explore the business opportunities of a business idea. The business idea was of my own choice and could be anything of business interest. I had earlier during the programme worked with another project but was left out since I was not chosen by the team leader to continue with that project. I was left alone without any project, which meant I could either join another project, hence working with another team, or come up with my own business idea to explore the opportunities of. There was no particular requirement of the business idea being valid as a business proposal in the end. However the business idea had to be researched and a business plan was to be written and handed in as a thesis to the university. Since I had no business ideas at the moment, I chose to work with another group consisting of two persons. The business idea derived from an organisation linked to a Swedish hospital, trying to commercialize business ideas from the employees at the hospitals. This organisation had presented us with a business idea of a tray that was supposed to be easily attached to the existing bed tables at the hospitals. The functionality of the tray was to keep the equipment nurses were using sterile.

One of the members of the team soon left, while the other one was not very interested. The one who was still in the project had serious doubts that the tray would actually have business value. While he was worrying I took the problem into my own hands and started developing a prototype of the product. After a meeting with a teacher of industrial design, I came up with a good solution for making the tray fit to all the existing bed tables at the hospitals. Close communication was kept with the inventor of the idea in order to create a product after the needs of the hospital. I had been assigned a mentor who early on warned me about the fact that some things regarding the property rights and royalties were unclear. Not paying too much attention to what my mentor had told me, I enthusiastically continued the prototype development. After a meeting with the organisation I felt that my colleague was very worried. During the meeting, the project manager of the organisation said that there were no guarantees that there would be a market for the product. Since I had been working hard on the prototype and wanted to have a good relationship with the organisation in order to carry out future projects as well, I developed a second even more advanced prototype. At this point my colleague had left the project and pursued other

opportunities. During the last meeting with the organisation I presented my prototype and was told that a real prototype was to be manufactured by the hospital and that another producer was going to produce it in the future. Of course in this situation I was furious. But there was not much to do. There had clearly been a misunderstanding about what I actually was intended to do. In my mind I had a clear picture of what kind of venture I wanted to start up from this project. However the organisation had the perception that they only let students work on a “live“ case, and that no business was to be derived from the project. When talking to former students in the project they had the same understanding as me and said that they were even told that some sort of royalty would be offered if the prototype fitted the needs of the hospital and if it got produced in larger quantities.

I must say that I was very enthusiastic about building the prototype and my vision for the company I was to establish was very bright. According to theory, my entrepreneurial alertness would be higher when being optimistic (Ardichvili et al. 2003). Also high creativity in building the prototype suggests the same outcome. However, my prior knowledge in the area was vague and my knowledge in doing business was equal to none. My social traits were high, but not used in the right way. I had chosen a strict effectuation approach as described by Sarasvathy (2001). The risk of losing control over the project in an instance never occurred to me. Huge personal efforts were made in trying to solve the issue I had with the organisation. I wished at least to be compensated for the efforts I had put into the project.

After discussions with my mentor and the organisation I realized there was no point of arguing. I had to move on, but I knew that I would never make that same mistake again. Supporting Kolb’s study (1984) I had time to reflect on the situation and could learn the actual importance of clearing ownership issues before doing other people’s work. I had successfully gone through all the stages of the learning cycle. I conceptualized my task and made an assumption of how I thought everything should be done in order to succeed. I then actively experimented by creating a prototype and presenting it to the organisation. The concrete experience turned out to be an unfortunate one, but by reflecting over the outcome I could understand my learning outcomes, which would be of great benefit when dealing with by upcoming project.

Having failed during the first project, I now had to find another project to work on in order to get my final grade. I was invited by two classmates to join another project. The project was about reducing the amount of cars on the streets. By creating an intelligent application for smart phones we were to solve the issues of commuting. In order to develop the application we had to initiate contact with the developer. My bad experience in the prior project of not clearing the ownership issues now paid off. Agreements were put on the table and signed early in the process. Reinforcing studies of Politis (2005), I went through the process of experiential learning. I had successfully transformed my experience from the last project by transforming my prior knowledge through exploitation. I had successfully used the knowledge that I had gotten from a previous experience. By exploiting my knowledge I could easily put the experience into the new situation, thereby minimizing the risks of failure. This clearly supports Cope (2005) citing

“There is the notion that, through reflection, individuals are not only able to learn from events and experiences, but that they are also able to “bring forward” this learning in new situations and circumstances”.

What should also be noted is that all the units of the opportunity recognition model by Ardichvili et al (2003) had changed. I felt much more optimistic about this business idea since it was something I was invited for and I chose myself. The project with the Dental Health Tray however was more pushed on me. I had no particular interest in the project, which also affected my optimism. My knowledge from prior experience had clearly improved as well as my social traits. When analysing the second project in the opportunity recognition model by Ardichvili et al (2003) my action set had clearly improved since I had been enrolling in a lot of courses and expanded my business network. My greater network now allowed me to ask more questions about different areas of weakness, strengthening my understanding of business, and how to proceed with future projects (Cope 2005).

## **Discussion**

By analysing the different frameworks in a specific case, a lot of the theories are reinforced. However no connection is made between the business development process (Ardichvili et al 2003) and new knowledge. The framework suggested by Ardichvili et al. does not visually give the understanding of the cyclical learning process. Rather it explains only what type of ventures one might create depending on different sets of Entrepreneurial Alertness. The same stands for the transformation process suggested by Politis (2005). It can very well be argued that the frameworks should be process oriented in a cyclical manner. Much similarity can be found between the works of Ardichvili et al. and Politis. By analysing the two studies, it is fair to say that they are in some ways describing the same issues. Both experience and entrepreneurial knowledge is explained in both of the models, just using different words. The definition of the Entrepreneurs’ career experiences in the conceptual framework of entrepreneurial learning as an experiential process by Politis (2005) is very similar to the unit called Prior Knowledge in the opportunity recognition model by Ardichvili et al (2003). Similarly, the definitions of Entrepreneurial Knowledge and Entrepreneurial Alertness are found to be highly related. By combining the concept of the cyclical process as explained by Kolb’s (1984) learning cycle with the frameworks of Politis (2005) and Ardichvili et al. (2003), a new model is suggested for overcoming the limitations of the theories discussed earlier in this paper. The suggested model includes the inevitable fact of a cyclical process as well as the transformation process as part of a reflective understanding and all the presently valid critical factors related to the full understanding of entrepreneurial learning. By integrating the transformation process (Politis, 2005) with the opportunity identification and development model (Ardichvili et al. 2003), a cyclical model has been created based on the logics of Kolb’s (1984) learning cycle.

The model presented below has been created in order for entrepreneurs and researchers to better understand the actual ongoing process of the learning cycle. I have chosen to call it “The Learning Cycle in Depth”, since it explains the learning Kolb’s learning cycle on a more detailed level. The model described by Dublin (1978) describes in detail what parts of the entrepreneurs personality and prior

knowledge that has most relevance in understanding how entrepreneurs act when seeking new business opportunities. The transformation process as described by Politis (2005) then creates a better understanding of how actual experiences can be transformed into entrepreneurial knowledge. By combining the two mentioned processes and using Kolb’s learning cycle as the foundation, one is presented with a better understanding of how opportunity recognition and entrepreneurial learning connect to each other. In the model below (Figure IV), the whole learning cycle is displayed in detail.

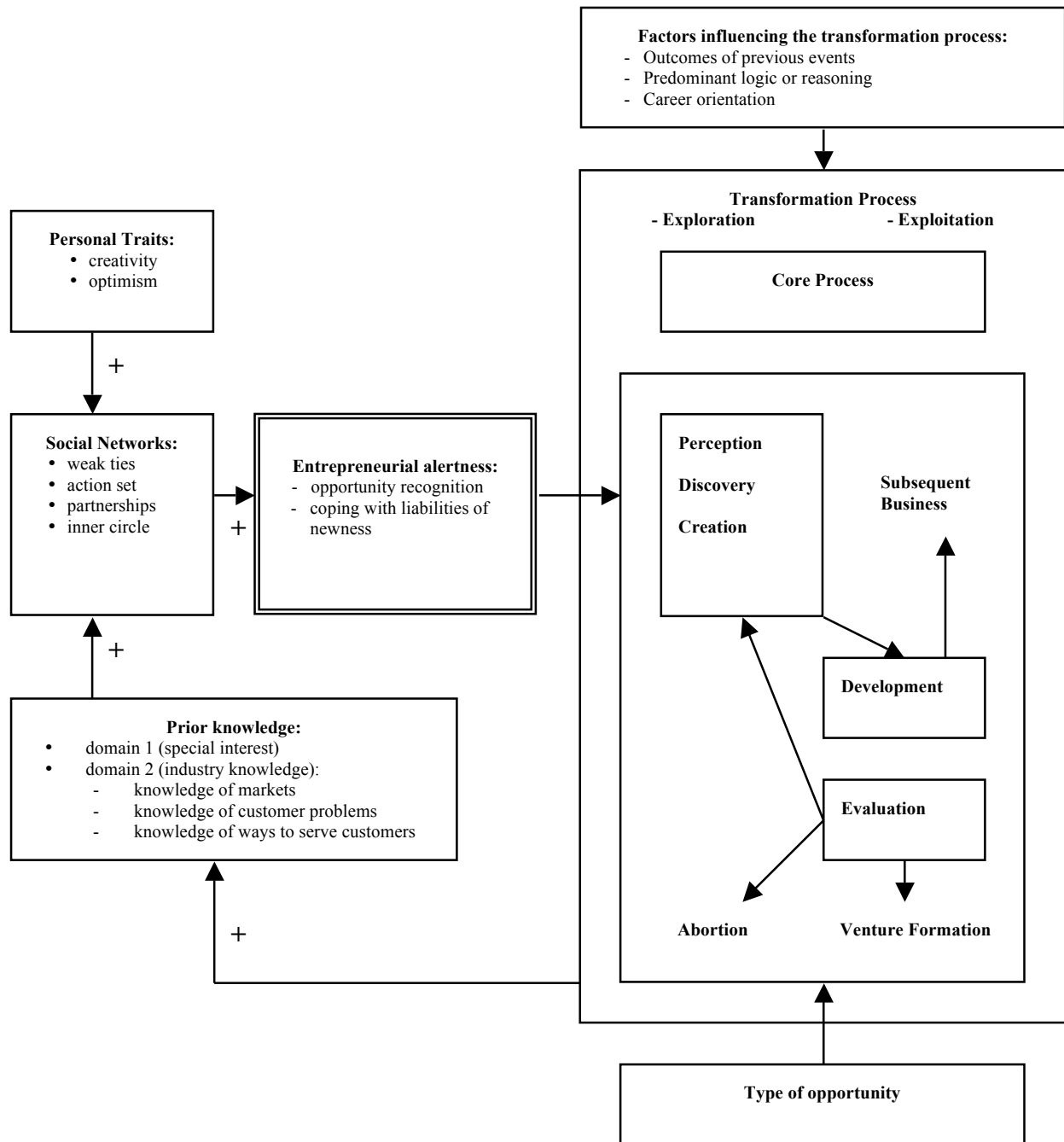


Figure IV - “The Learning Cycle in Depth”

It is clear that the research suggest certain areas as important in order to understand what level of entrepreneurial alertness the entrepreneur has. The EA determines what kind of actions the entrepreneur will take. This new model can in fact not only determine how an opportunity leads to venture creation or abandonment of an opportunity, but can in fact be used for all kind of decisions the entrepreneur takes. The fact that an entrepreneur perceives, discovers and creates a venture can be more widely used, saying that it in fact is a certain decision that will be perceived, discovered and created. According to the theoretical analysis in this study I would say that my EA was determined as described before in this paper, but my EA did not result or not result in any business creation, rather it resulted in a decision not to write an agreement or clarifying ownership issues. In the model presented I consider all actions taken by the individual as possible for analysis. All actions taken by an entrepreneur can be analyzed using the model. The decision, in my case, can be implemented either by exploration or exploitation. The decision is also, according to the transformation theory, influenced by outcomes of previous events, predominant logic or reasoning as well as career orientation. For an entrepreneur to actually learn from the actions he or she has taken, the experience of the particular decision has to be transformed into knowledge. Since I had the ability and time to reflect upon my decision and the negative outcome from it, I could transform this experience to knowledge, which ultimately adds up to my prior knowledge, resulting in a new more enlightened set of entrepreneurial alertness.

## **Suggestions for further research**

This study gives a brief overview of the learning outcomes in a particular case. I suggest more research in this manner, in order to get a greater understanding of how the current theories of entrepreneurial learning work in practice.

## **Conclusion**

In order to effectively study the entrepreneurial learning process it is important to understand how the different methods described in this paper relate and interact. These models are meant to reflect real entrepreneurial learning and thought processes which, in reality, are quite complex and overlapping.

Simplicity is beneficial for usability in academic models for studying behaviour. However, there is room for expanding on the current models to better understand the entrepreneurial thought and action process. In this study I have analyzed my learning outcomes with different theoretical models. The understanding of my actual learning outcomes ehre not very detailed described by using each model separately. I found that the models describe my case in different parts, which is why I chose to present a new model, “The Learning Cycle in Depth”, in order to create full understanding of how decisions are thought of and made as well as how the implementation of them and the experience gained from them can be turned into entrepreneurial knowledge, adding to the entrepreneurs’ full set of knowledge. The fact that the transmission process has to take place in order to facilitate entrepreneurial learning can be generalized into the whole process of opportunity identification and development theory creating better understanding of how the whole process adds up to the overall knowledge of an organisation or an individual.

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