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Online learning tools and their effectiveness in changing sales behaviour in the context of MNC

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ABBREVIATIONS

CEO	Chief Executive Officer
FES	Front End Sales
GE	General Electrics
IT	Information Technology
MNC	Multinational Corporation
PDA	Personal Development Appraisal
PG	Product Group
R&D	Research and Development
SDL	Self-directed learning
UTAUT	Unified Theory of Acceptance and Use of Technology

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ABSTRACT

The research focuses on two subsequent questions related to online learning effectiveness:

1) the effectiveness of various online learning tools in helping local sales teams to develop solution selling skills and product knowledge AND
2) the factors effecting on the learning outcome.

These two questions are studied in the context of a Multinational Corporation (MNC).

The research is a qualitative study conducted through semi-structured interviews in a MNC. The data was collected by face-to-face interviews and by Skype-calls. The data was analysed by comparing it to the five main dimensions identified in the research scope: organisational structure, learning climate, self-directed learning, tacit knowledge and Unified theory of acceptance and use of technology.

The findings suggest that the front-back organisational structure does not support effectively the online learning especially when discussing tacit knowledge. Tacit knowledge regarding customer information and "how to sell solutions" is located in the front part of the organisation, but the front-back model has given the global product ownership to the back part who is also responsible of creating the learning material.

The individuals' self-directed learning skills could be better utilized and developed with the help of management setting clear learning targets. The acceptance of the technology is on a good level and does not place any barriers to learning as such.

KEYWORDS: Learning effectiveness, tacit knowledge, online learning, MNC

1. INTRODUCTION

This thesis will introduce a theoretical and practical discussion of a learning challenge which multinational corporations face. The need for cost-saving learning solutions in a global environment creates various challenges and possibilities.
In order to provide a thorough background understanding for the reader; the introduction chapter is divided into three different sections. First the practical background of the research is presented; secondly the theoretical background is explained, and thirdly the research problem is introduced. After reading the introduction chapter the reader should have a generic understanding of the research problem.

1.1. Practical Background

"An organisation's ability to learn, and translate that learning into action rapidly, is the ultimate competitive advantage."

The above is a quote from Jack Welch, former GE CEO. It greatly summarizes the elemental challenge global organisations face: effective utilization of knowledge. Today there is an overdose of information, but the ones who are able to utilize the essential information are the ones who succeed. In addition to efficient learning, global companies need to be agile. World is changing fast mostly due to technology developments and the one who is the forerunner have the best possibilities to win customers' trust and consequently business. Global companies have also extensive cost structure, and they are facing various challenges due to different cultural and market requirements. In order to serve the customer in a most optimal way the global companies need to be innovative in the way they organize their functions. The challenges Multinational Corporations (MNCs) face can be categorized into three types: 1) global efficiencies 2) multinational flexibility and 3) worldwide learning (Griffin et al. 1998; p. 374-375).

According to Griffin et al (2006) it is difficult to manage all of the three aspects properly. The MNC studied in this thesis has chosen to manage the challenges with its front-back organisation structure. The challenges and the solution to them: "the front-back organisation" is explained in more detail in the following paragraphs.

Front-back organisation structure supports global companies by helping the company to be more present locally, and to utilize leverage by organizing back-end functions centrally. For example, sales offices are local, and manufacturing units are global. This enables them to utilize leverage, and to be close to the customer by providing local support. Being close to the customer creates a foundation for flexibility in operations.
To put it more precisely; the front part of the organisation is close to the customer taking care of the sales operations, and customer communication. While global efficiencies are gained by utilizing the back part of the organisation in centralized functions as supply management.

In order to understand why the organisation structure plays a role, it is important to understand that particular product is manufactured and designed in the back side of the organisation and eventually sold to the customer through front part of the organisation. The thesis will discuss both back and front part of the MNC, but the emphasis is on a specific product group. Product group refers to a nominated product type which is dedicated to a specific part of the global organisation. The back unit which is studied is responsible of manufacturing, Research & Development (R&D), marketing, training; while sales offices are locally spread all over the world.

In the MNC studied the back part of the organisation is responsible of R&D, but it also has the global responsibility of the whole product group. This means that they have designed the product, and are responsible to develop it further based on customer and market requirements. The highest level of competence regarding the product is in the back part of the organisation due to the designated global responsibility, and the back part is responsible to share the knowledge to the front part of the organisation.

It is important to note at this point that the organisation is traditionally product-focused. Product-focused means that for example when selling the product, it is natural to discuss about the product's features rather than the value it brings. The MNC is an engineering company, and products are its core business. However, due to the changes taking place in the business environment, the change towards solution focused business is inevitable. Solution selling or servitization as it is called later in the thesis requires different type of

competence than solely product and its feature based knowledge. The way of thinking in the whole business environment is changing, and this creates challenges both in the back, but also in the front part of the organisation. Customers are becoming more demanding, competition is intensifying and therefore the companies need to be more customer-focused.

The front part of the organisation, which is present locally, is responsible of the sales. They have the customer contact, and they know how the market operates. In this thesis the term Front End Sales (FES) will be used when discussing the local part of the organisation. FES usually is responsible of sales of several different product groups and the products require different level of expertise. Some of them are categorized as high technology products, while others purely components which do not require so detailed product competence. The product group which is discussed in this thesis is a high technology product, and in order to be able to sell it, the sales person needs to have a thorough understanding of the product and its features, but more importantly he also needs to be able to accommodate the features into customer's needs, and expectations.

It is obvious that the organisation structure as front and back creates challenges when knowledge needs to be distributed. There is different type of knowledge in the front and in the back. The main source of the product knowledge is in the back end of the organisation, but the customer knowledge remains mostly in the front. The back end needs to get feedback from the market in order to further develop the product.

Global learning was one of the major challenges introduced in the beginning of this chapter, and as Jack Welch stated: "*knowledge is the main driver of competitive advantage*". In MNCs the knowledge is widely spread, and in order the organisation is able to fully utilize the knowledge, knowledge needs to be distributed. Global learning – term refers to this challenge, and each MNC has to find their way how to gain most out of the knowledge spread in different parts of the organisation. One cost-effective way is to exploit the online learning tools, as in the case company's case is done.

How can this MNC manage the knowledge in order not to lose its

competitive advantage? Traditionally the MNC has distributed the knowledge through classroom training courses, but currently mostly due to high cost pressure, demand for online training material have increased. In addition to cost-effectiveness, online training material is useful when knowledge needs to distributed to a large group. Cost control, big audience and MNC's complex organisation structure creates a need for better utilization of online learning tools. Also the power structure between front and back creates challenges, as the back organisation has the global responsibility of the assigned product, and they are responsible of leveraging the knowledge to the front. The knowledge should also flow from front to back, but is there such a loop? And is it clear what type of knowledge is needed?

Customer requirements play an important role when the sales person tries to identify what (s)he needs to learn. Language, market needs, cultural dimensions offer a foundation for learning requirements. In the interview data was a remark that the customer's own learning base has become weaker, and they require more thorough service from their suppliers. The effects of outsourcing are becoming visible, and also globalization limits the knowledge in the customer's organisation due to quite often centralized nature of the organisation. This creates challenge in the learning effectiveness and in the quality of the learning material.

When online learning tools are discussed in this thesis, it will consist of three types of training tools: webinars, e-learning courses and how-to videos. **E-learning courses** are online courses, which contain presentations, interactive sections and quizzes; **webinars** are live presentation on the web, which often are recorded as well, and they can contain an interactive question and answer session; **videos** are short "how to" –videos, which give specific guidance on a specific task.

Online learning tools	Access	Duration	Pace	Interactive	Quiz	Mode of presentation
e-learning course	Registration, mostly internal	0,5hr - 2hr	Own pace	Partly	Yes	Specific software with which the course is created. Can contain animations, ppt-slides.
webinar	Registration, mostly internal	0,5hr - 1hr	Live event moderated, recorded own pace	Q&A in the end	No	Powerpoint-slides
video	Free access, also internal videos available	2mins - 12mins	Own pace	No	No	Animation, live actors, presenters, slides

Figure 1. Summary of online learning tools.

Figure 1 presents the summary of the online learning tools. The **access** describes how the tool is available for the user. This can be of importance when talking about the ease of using the tool. Second column is duration. **Duration** varies a lot while videos are clearly the fastest way to gain knowledge. **Pace** is an important factor when talking about online learning media – as later it will be explained in more detail – self-directed learning is a key element in learning online, and therefore it is necessary to understand what is the pace in the learning activity. Also **interactivity** plays a role in learning and from the table it can be seen that videos are the only tool that does not have an interactive part. **Mode of presentation** shows what the learning platform looks like. Videos stand out also in this part due to their movie-like nature.

As earlier have been described; management is very keen on utilizing online learning tools mostly due to their cost-effectiveness, but there can be seen some reluctance among the sales personnel. Do they see the online training tools useful and do they actually learn by using them? This will be found out during the research process.

1.2 Theoretical Background

The chapter 1.1 "*Practical Background*" introduced the practical approach to the thesis, and the challenge the MNC is facing when knowledge is distributed in different forms and in different parts in the organisation. The responsibilities regarding knowledge transfer and learning have been assigned as product in focus, while the actual challenge is to transfer the solution knowledge from one organisation to another and from one individual to another individual. The knowledge flows and responsibilities are illustrated in figure 2 below.

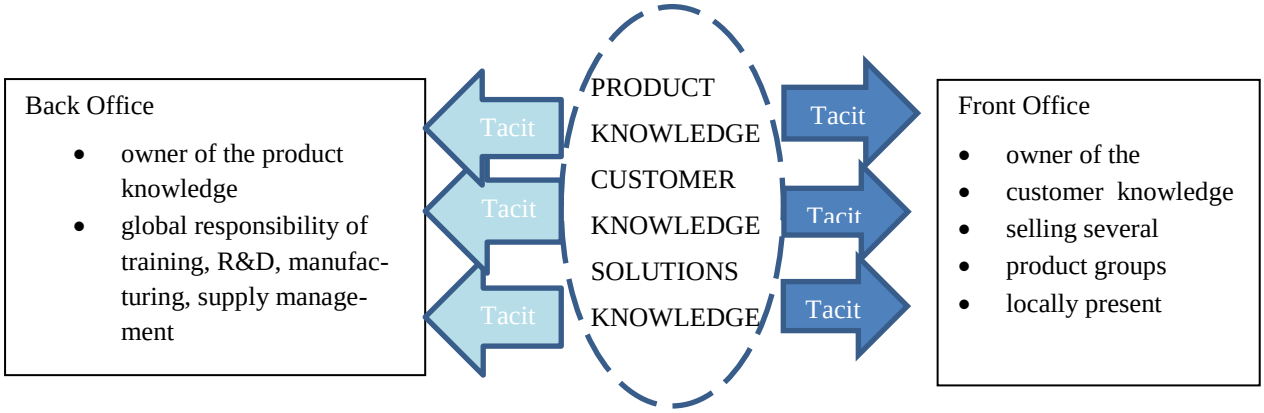

Figure 2. Knowledge flows between Back and Front Offices.

As the knowledge runs in both directions (see figure 2), and the organisation faces management requirements to utilize online learning tools for learning mostly due to cost-pressure; the learner has to take greater responsibility of the learning process.

The level of knowledge varies in different parts of the organisation. In Figure 2, it has been framed that knowledge runs in both directions, but the flow is weaker from front till back. This is partly due to the designated power structures in the organisation – back organisation is responsible of the product knowledge. The weakness in knowledge flow from front till back creates a dilemma. As was mentioned earlier, the business environment is changing towards selling solutions rather than products and in order to know how to sell solutions, the sales organisation should possess customer knowledge, their expectations and on the value they expect. Solutions generally are answers to customer's problems, and one could argue: is it possible to learn customer-specific (later referred as solution selling, servitization) selling through online methods while the organisation structure is still quite product-centric?

In figure 2 the knowledge transferred between back and front is circulated with a dotted-line. The dotted-line here illustrates the knowledge type which is required when selling solutions. The knowledge is more than just product knowledge; it includes elements from the market as well. The market specific knowledge can include for example: customer knowledge, customer behaviour, and the knowledge on the values the customer appreciates and is ready to pay for. This type of knowledge is considered to be tacit by nature, which refers that it is not easily transferred or explained. However, in the thesis

the focus is not on knowledge transfer as such, but in learning and its effectiveness. In the next paragraph it is explained the difference between the two, and clarified why learning is considered to be of importance.

The terms "knowledge transfer" and "learning" can be confused with each other due to their usage in similar contexts. Knowledge transfer is part of Knowledge Management, and research has dedicated significant focus on the topic. Knowledge transfer is part of the learning process; thus learning will be the end-result of a successful knowledge transfer.

The main difference between learning and knowledge transfer is the outcome. When learning takes place – an individual changes his behaviour and the level of the effectiveness of learning can be evaluated through possible changes in his actions. Therefore learning is in focus rather than sole knowledge transfer. The thesis does not look just any type of learning, but the learning tools plays vital role. The learning effectiveness is evaluated when learning takes place through online learning tools.

Learning has been defined by Richard Mayer (2003:5) as follows: "*learning refers to lasting changes in the learner's knowledge, where such changes are due to experience. Thus, learning is defined as a relatively permanent change in someone's knowledge based on the person's experience"*. The confusion between knowledge transfer and learning can be identified when quoting Knowles (2005), the forerunner in adult education research, when he summarizes the term "learning" as "*the process of gaining knowledge and expertise*" (Knowles, 2005:174).

The thesis will discuss five different theoretical frameworks: organisational structure, learning climate, self-directed learning, tacit knowledge and Unified Theory of Acceptance and Use of Technology (Venkatesh, et al. 2003). In the following paragraphs the reasoning behind choosing these frameworks is explained.

1.2.1. Organisational Structure and learning climate

The front-back of the organisation has been explained in previous paragraphs, but it plays an essential part in the thesis by creating the foundation for the learning climate. Learning climate is the atmosphere to which learners are exposed, and it has an effect on their learning experience. These two dimensions are closely related due to their intertwined nature, and therefore it is relevant to study both of them separately and partly together as well.

The knowledge transfer occurs mostly from the back to the front part of the organisation due to nominated global product responsibilities. Back end of the organisation is the main source of product knowledge and it is their responsibility to distribute the product knowledge to the front.

1.2.2. Self-directed learning

The front-back organisation structure creates a challenge especially for the front part, because the sales person is facing the customer, and needs to find solutions to their challenges. Does the material provided by back part provide a possibility to gain an effective learning outcome? The learner in the front end needs to take responsibility of his/her own learning, and due to the nature of the learning material provided (online), he/she needs to be self-directed. Therefore in the thesis the learning process will be looked from one particular learning theory point of view, which is self-directed learning.

1.2.3. Solution selling as tacit knowledge

The back end of the organisation is the owner of the product knowledge, while the front understands the customer and their challenges. The product which is in the scope of the thesis is a high technology product, which creates the need that the local sales understands how the features of the product will solve customer's challenges. Solely transferring the product knowledge is obviously not enough, but the knowledge needs to

be applied on a case by case basis. In the thesis this knowledge application will be called as “solution selling” as the MNC is trying to meet the customer requirements by offering solutions to customer’s problems. How is this knowledge transferrable when management wants cost-effective, fast solutions? Solution selling can be seen as tacit knowledge because every situation is different, and sales person needs to be able to apply the product knowledge.

The empirical part was done by interviewing a sample of case company’s sales persons from different locations. Therefore the approach of the study is from the sales person’s aspect, rather than the MNCs strategic views.

1.2.4. Unified Theory of Acceptance and Use of Technology

The learning tools provided by the MNC are distributed online; and this might create some challenges either culturally, infrastructurally or language-wise to name a few. The technology is used as a tool to transfer the knowledge and enable learning effectiveness in the front. The Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh, et al. 2003) is needed in order to be able to understand how technology effect on the effectiveness. In the UTAUT report the researchers have summarized eight different theories in the field of information technology acceptance and created as a conclusion the Unified Theory of Acceptance and Use of Technology. It will provide a useful insight to understand how technology is accepted in various front offices.

1.3. Research Questions and aims

Noe et al (2010) have summarized “*a framework of knowledge sharing research”.* From the framework it can be seen that environmental factors including context where knowledge is transferred required further research. In addition to the practical problem, there is an academical gap on the topic as well. Therefore the focus on online methods is justified.

Through this research the aim is to understand how the back part who possess the

product knowledge is able to teach the customer-centric knowledge to the front office. The study will focus on how effective are the online learning tools in a multinational corporation.

The focus will be on the learning rather than just transferring knowledge. When learning takes place; the sender of the knowledge is expecting the receiver to change his/her behaviour.

Therefore the research questions are formulated as follows:

RQ1: How effective are various online learning tools in helping local sales teams to develop solution selling skills and product knowledge?
RQ2: What factors affect the learning outcomes / process?

The study will seek answers to the research questions by interviewing a sample of front and back organisation's sales personnel. The interviews were done on a semi-structured basis, and discussion topics varied from the interviewees' experience on online learning tools to their relevant business area knowledge. The whole spectrum of the discussion was important in order to be able to understand how the sales persons perceive online learning tools, does the use of them actually change their behaviour and what factors prevent the learning, and on the contrary: what factors enable the learning process.

The learning effectiveness is considered in the light of changing sales behaviour. Learning has happened when the sales behaviour has changed due to the utilization of online learning tool.

1.4. Scope of the study

This study is limited to the learning process and the learning outcome of one particular MNC business unit and its front-back organisation. The study will focus on the learning process, and the factors effecting on the process, but especially focusing on the learning

through online tools. Three different online tools will be studied, and discussed. However, the focus is on the tools, rather than on the quality of the learning material provided through the particular tools. The study will purely look from an individual perspective how knowledge is transferred into learning, and what factors effect on that. The main themes of this thesis is summarized in figure 3 below:

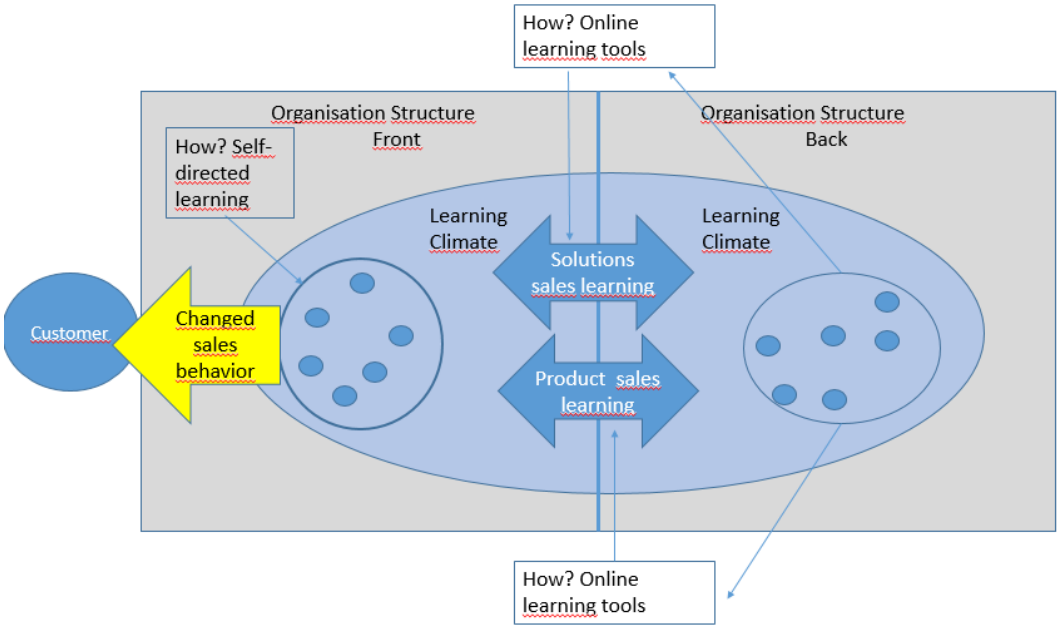

Figure 3. Relationships between the different factors effecting on the learning outcome.

Figure 3 shows the key theories and dimensions the research is focusing on. The organisation structure creates the framework where the front and back organisations' personnel act. Back organisation has been given the global responsibility of the product, and therefore they are creating the learning material for product and solution selling which is to be distributed through online learning tools. Front organisation receives the information from the back by utilizing the online learning tools. Individuals and their learning performance are evaluated through the lenses of "self-directed learning" theory, and "Unified theory of acceptance and use of technology". All this should eventually change their sales behaviour, and have an effect on the customer. Learning climate defines in what type of atmosphere the learning takes place; is the learning appreciated, is there a culture of error-avoidance and does the environment support learning. Both

back and front might have different types of learning cultures, and this will have an effect on the outcome of learning activity.

1.5. Structure of the thesis

The thesis is divided into six different chapters. The first chapter discusses the practical and theoretical background of the study thus providing an explanation why the study is justified. It also introduces the research questions, the aim and scope of the study. Second chapter introduces the literature around the area. First it will discuss on the MNC perspective and its effect on the learning outcome by looking at the organisational structure and the learning climate. Then the focus is on the type of knowledge needed; namely tacit knowledge. Thirdly the individual learner's dimensions will be discussed by exploiting self-directed learning and the UTAUT framework. Third chapter introduces the research methodology. The research design and sample are discussed. It will also clarify how the data was collected and analysed. As a conclusion the chapter will outline the strengths and limitations of the research methodology. After the research methodology have been clarified; the data will be analysed and research questions are answered. In the conclusions chapter the thesis will be summarized. Also the limitations of the research are presented and implications for future research and practical improvements are suggested.

2. LITERATURE REVIEW

In this chapter the theory framework is presented through which the empirical data is later on analysed. The study is structured around five main themes: organisation structure, learning climate, self-directed learning, tacit knowledge, and Unified Theory of Acceptance and Use of Technology. These are the main characteristics which have an effect on the learning outcome and its effectiveness.

First, the literature review will place an emphasis on the organisation structure and learning climate; does it provide a foundation for effective learning, and what is required in a supportive learning climate? These questions are studied from the academical perspective, and later on reflected on the gathered data.

Organisation structure focuses on the front-back organisational set-up. Although there is relatively little research on the topic – it is one of the crucial elements in understanding the knowledge transfer and learning between the front and back. The front and back organisation in a MNC can include several different factors which do effect on the learning effectiveness; for example the language and the organisational power given to different units. The knowledge is transferred from one country to another, and this certainly will play its role in generating an effective learning outcome.

Learning climate discusses the three different dimensions of learning climate: facilitation learning climate, appreciation learning climate and error-avoidance learning climate (Nikolova, 2014). These dimensions will be flavoured by the cultural factors due to MNC's organisational structure.

In the thesis the knowledge consist of solution and product selling skills, and how the online learning tools will change the sales behaviour. The literature review will study the tacit knowledge incorporated in solution and product selling. Therefore, it is imperative to introduce the ideology behind solution selling; namely servitization and the tacit knowledge which is a crucial element in learning especially solution selling. As solution selling is not just selling features, but it includes understanding the customer and their

behaviour, it is important to understand the hidden aspects in sales activities related to selling solutions.

After understanding what literature says about learning climate, the organisational structure, tacit knowledge and solution, product selling; the individual learner's characteristics will be reviewed. What effect on the learning outcome when looking solely on the individual? The self-directed learning (SDL) theory is taken into more detailed focus, due to its close relationship on how online learning is executed: individually, and at its own pace. SDL introduces the attitude which is needed when utilizing online learning tools. This is relevant to understand in order to be able to estimate the various constraints and enablers of the effectiveness of online learning.

Finally, the literature review explains the Unified Theory of Acceptance and Use of Technology which provides a framework on how we can conceptualize the online learning and the different dimensions involved in the process. Understanding UTAUT helps in identifying the limitations, and success factors in learning online. It provides theory background to understand how technology is accepted and used in different surroundings; and since the thesis discusses online learning tools it is a useful dimension to be clarified.

2.1. Organisation structure

In multinational corporations knowledge has to be shared, and assimilated even in the most complex organisation settings, and without the possibility to have face-to-face interactions as Szulanski (2000) has stated.

MNCs who want to be present locally, but utilize their global leverage can be organized as "the front-back organisation" (Evans et al. 2011; p. 182). Front-back organisation includes two parts; obviously named as front and back. Back side of the organisation consist of the parts where global leverage can be utilized; for example supply chain management, R&D, and manufacturing. While front side of the organisation is the part of

the organisation facing the customer, and knows the markets and the business extensively. The fundamental objective is to maximize the end-user satisfaction.

There is relatively little research on the front-back organisation and their effect on learning effectiveness. The organisational structure does have several standpoints which play a role in knowledge transfer between front and back. Front and back side of the organisation are usually located in different countries, and therefore the cultural differences might create challenges in learning outcome. For example, if an e-learning course done in Finland is distributed to Vietnam, the language goes through several phases and the intended learning outcome might be something different than originally aspired. In the case company, the learning material is mostly done in English, and most of the users and creators are non-native English speakers.

Zellmer-Bruhn and Gibson (2006) indicate that the organisational structure of local responsiveness versus global integration does have an effect on learning. According to them local responsiveness adds independence on local subsidiaries which is essential when creating new processes and products. However, they do have a need to create the competence globally as well. Local responsiveness –term can be used in parallel with the front end –term, as one of the main factors behind choosing the front-back organisation structure is the need to serve the customer better and more cost-efficiently. Global integration refers to the back-side of the organisation; and also the term "global efficiencies" have been used in the same context (Griffin et al. 1998; p. 374-375).

As mentioned earlier, there is relatively little research done on MNC's front-back structure, but Galbraith (1997) has published a paper called "*The front-back hybrid organisation*" which gives an insight what benefits and challenges organisations face when choosing the front-back structure. Front-back structure can be a controversial solution for a MNC. Front part of the organisation often have different targets than the back part, but nevertheless they need to work together. This contradiction can cause conflicts; and conflicts – they are never easy to manage, and surely not in the case where there are different cultures, languages, time zones involved (Galbraith, 1997).

Galbraith (1997) presents three topics which the management needs to solve in order to gain the most benefit out of the front-back structure: "*Which functions are placed in the front and which are in the back? What is the balance of power between the front and back? What management structures and processes are used to link the front and back*?"

Brady, et al. (2006) introduces in their article "*Charting a path toward integrated solutions*" an organisational structure which consists of three different elements: back-end, front-end and strategic centre. The researchers are setting new guidelines how to organize when aiming to be profitable when selling solutions. The organisation must be built on "*customer's current and future needs*" (Brady, et al. 2006: 43). The organisations should be "*reconfigurable around each customer's needs*" (Brady, et al. 2006:43). The ideology is the same as in the front-back structure discussed in Galbraith's (1997) work except the introduction of the strategic centre. In addition to Galbraith's (1997) work, Brady et al (2006) bring in the solutions dimension which updates the research into current business atmosphere.

2.2. Learning Climate

Although we are discussing in this study online learning methods, it must be underlined that technology is only a tool for transferring the knowledge, and learning itself takes place between individuals' and groups' encounters (Akgun 2003). Social environment plays an important role in learning due to its effect on the learning climate (Cabrera, 2002).

Nikolova et al. (2014) has given various interpretations on what is learning climate, and why it is important to understand it. One definition is "*as employees' perceptions of organisational policies, and practices aimed at facilitating, rewarding and supporting employee learning behaviour*" (Nikolova, 2014). Based on her review on previous research it was concluded that "*learning climate is a precursor of valuable outcomes, such as employees' learning intentions, positive attitudes towards learning and participation in learning activities*." Research has also found that learning climate predicts innovative behaviour, which is one of the core values in the case company (Sung, 2014). Learning climate has also been found to increase for example job satisfaction (Egan

2004; Govaerts 2011; Mikkelsen, Saksvik, & Ursin, 1998). In addition Szulanski (2000) stated that trustworthy source has a role in successful learning experience: "*a capable and trustworthy source is more likely to influence the behaviour of the recipient*".

The organisational structure has been discussed in details earlier, but there is a need to reflect on that particular dimension at this point. As shown in figure 3, learning climate exists inside the organisational structure – and it probably is different in the back and front sides of the organisation. Dardan et al. (2009) have studied "*distance learning*" and "*the role of individualism and collectivism*". As in the thesis MNC the front and the back are located in different countries, cultural aspects do play a role when defining the learning climate. In the study they used Hofstede's (2017) cultural dimensions as comparison where the terms individualism and collectivism are explained in Hofstede-insights –webpage as follows: "*Individualism can be defined as a preference for a loosely-knit social framework in which individuals are expected to take care of only themselves and their immediate families*" while on the opposite it is collectivism, which "*represents a preference for a tightly-knit framework in society which individuals can expect their relatives or members of a particular in-group to look after them in exchange for unquestioning loyalty*" (Hofstede, 2017).

Dardan et al. (2009) study found that individualistic cultures are more likely to feel satisfied in distance learning than collectivist cultures. Learning climate was introduced as an important factor in learning effectiveness and the relation between learning climate and effectiveness was found to be more positive in individualistic countries than in collectivists. This finding is interesting due to the fact that the interviewees in the study come from both, individualistic and collectivist countries.

There seems to be non-existent research on the "front-back" and "learning climate" combination, but for example when concluding the Dardan et al. (2009) study it can be understood that the front-back organisation structure does have an effect on the learning climate. However, if we look solely on learning climate definition, it can be seen that e.g. Nikolova et al. (2014) has made categorization on learning climate, which will then be discussed together with the front-back organisational structure.

Nikolova's categorization of learning climate consist of three different parts: facilitation learning climate, appreciation learning climate and error-avoidance learning climate (Nikolova, et al. 2014).

There is another dimension in addition to front-back, which needs to be taken into consideration when talking about learning climate and its effect on learning effectiveness. The learning which is expected to take place is tacit in its nature, and mostly customer-related. Wang (2015) has published a paper "*Learning climate and customer-oriented behaviors: the mediation of customer knowledge*" which has resulted in a finding that high learning climate enables salespersons to improve customer-oriented behaviours. The term high learning climate refers to an environment where learning is beneficial, and the above mentioned Nikolova's (2014) categories are fulfilled.

First of the categories by Nikolova et al. (2014) facilitation learning climate has been noted also by Marsick (2003), who clarifies that it is not irrelevant how the organisation supports the professional development. It has a direct effect on employees' actual learning experience. Also the UTAUT (Venkatesh, et al. 2003) talks about the facilitation of learning, but the angle is bit different. This will be presented in chapter 2.2.

Appreciation learning climate is defined by Tracey (2005) in two different aspects: 1) organisational support and 2) managerial support. These refer to the incentives the organisation offers to its employees and how the management shows appreciation in learning activities. UTAUT also presents the "social influence" which is used in co-operation with the appreciation learning climate.

Error-avoidance climate is one of the most salient aspects of learning climate. When company's competitive edge is in knowledge and innovativeness, its learning climate has to have profound error-avoidance climate. Baer et al. (2005) states that "*a culture that emphasizes error-management, as opposed to error-avoidance, enables employees to learn from accidents and unsuccessful practices through constructively managing employee learning errors*."

To summarize the literature on learning climate, it seems that there are several factors effecting on the learning effectiveness. Firstly: the front-back sets guidelines on learning climate as front and back are situated in different cultures. There are most probably differences in the learning climate if the location of the learner is in individualistic or collectivistic culture as Dardan's (2009) study acclaimed. The learning effectiveness and the utilization of online learning tools in collectivistic countries might be more challenging than in the individualistic countries, where person is expected to take care of only themselves and their close family. This finding is relatively interesting for this thesis, and it will be analyzed further in the "Discussion" chapter.

Learning climate and the organisational structure are two key elements of the learning environment where the learner is positioned. Next will be discussed the type of knowledge that should be learned in this particular learning environment. First the literature review will discuss the tacit knowledge; and in addition to that more specifically servitization. Servitization consists partly of the tacit knowledge which needs to be taught through the online learning tools.

2.3. Tacit knowledge

2.3.1 Knowledge and its forms

Before going any further with the concept of "tacit knowledge" one should understand what is meant by the term "knowledge" in general. Knowledge is more than information, because it contains also "know-how": how to apply the knowledge (eg. Kogut & Zander, 1992). Traditionally knowledge has been divided into two categories: explicit and tacit.

Cabrera et al. (2002) have given explanations on explicit and tacit knowledge, which helps in understanding their difference: "*Tacit knowledge includes hard-to-communicate skills, know-how or practical knowledge (e.g. being able to ride a bicycle, sell a financial product or build excellent automobiles). Explicit knowledge, on the contrary,*

refers to forms of knowledge that can easily be communicated to others (e.g. facts, concepts, frameworks)". The definition given by Cabrera et al. (2002) however has a paradox with the definition on the knowledge stating that "*knowledge is applied information and includes know-how*" giving the statement a similar nature than tacit knowledge. In this thesis the contradiction will be covered by using the term "tacit knowledge" when discussing knowledge which is hard to communicate. For example, sales capabilities have been identified to be tacit, because these skills require previous experience, and they are integrated in an individual's existing knowledge (Rajala, 2015:10). Nonaka and Takeuchi (1995: Mooradian, 2005) have also earlier come to the same conclusion that "*Tacit knowledge is personal, context-specific, and therefore hard to formalize and communicate*". Sales capabilities is a good example, because the thesis focus on learning through online methods in a sales environment.

Learning tacit knowledge through online methods have been studied to some extent and research has shown doubts in successful tacit knowledge transfer through online methods. Many researchers have come to the conclusion that before tacit knowledge can be transferred it needs to be made explicit. (Greatorex, 2002; Cheah and Abidi, 2005; Falconer, 2002; Herschel et al. 2001).

As an example of explicit knowledge could be a "play" button in a product. It is relatively easy to teach other party to understand what happens when pressing the "play" button. However, if we add some intelligence on the "play" button – for example, the user should know when it is important to press the button, and the consequences of the pressing the button might differ based on the circumstances. This type of knowledge is tacit, because the learner should be able to exploit the knowledge by accommodating it to a specific situation. Solutions knowledge generally is situation-specific, it is related to customer's challenges and on the perception how the customer wants the challenge to be solved.

2.3.2. Solutions, and product selling and their tacit knowledge components

One of the aims of the study is to understand do the online training tools provide an effective way to teach solution selling skills and product selling skills to a local sales person. As mentioned earlier the back office is seen product-centric, while the front has to be customer-centric. Customers are expecting that company's products and services bring them value and answers to their challenges.

When trying to solve customer's problems, it is usually not enough to just discuss the technical features. Customers want more; they want to understand how the features help them to be more profitable, effective etc. Rada and Vandermerwe (1988) introduced a concept called "servitization" in 1988, which consist of solution packages offered to the customer. An example of such package could be a technical product added with an after-sales service. In literature this has also been called as a "solution" (Levihn, 2016). This combination can provide a competitive benefit to the MNC in case it is used in a correct situation. Tukker (2004) has categorized this type of a solution as "product-oriented service". However, solution selling can be more than just service + product combination selling. In the case company MNC solution selling includes also the cultural knowledge, customer relationships, language utilization etc. The terms servitization and solution selling are used as synonyms.

Polsa et al (2011) have created a framework where they introduce "*building blocks and practice elements*" for managing solution sales (Polsa et al. 2011:39). The building blocks consist of strategic, managerial and sales practices. The framework emphasizes the change in sales business models' from traditional product selling to solutions selling. There needs to be more competence for example in identifying the business opportunities and presenting the solutions. A concept of Value-Based Selling (VBS) is also discussed when talking about solutions-selling. The VBS consist of several tacit components as well –for example the value of the solution to the customer is situation-specific and therefore it is hard to communicate. (Rajala, et al. 2015:102).

Product sales and solution sales require different types of capabilities, as Levihn (2016) has studied. They also propose in their paper that product sales and solution sales should be in different organisations. Product sales is more traditional way of selling the product, and its features while solution selling provides an answer to the customer's challenge (Levihn, 2016).

The above mentioned are important examples of tacit knowledge in solutions selling. In traditional product selling the tacit knowledge is more difficult to identify, the focus is rather on the explicit knowledge – on the product's features; on what the product actually does. The focus has not so much been in what value the product's functionality brings to the customer. As Polsa et. al (2011) cleverly marked, the business models are changing, and the role of knowledge as competitive edge is gaining more importance; especially the role of tacit knowledge which is hard to copy.

The viewpoint that knowledge provides the basis for competitive edge, has been acknowledged by several academics; such as Nonaka and Takeuchi, Davenport and Prusak and von Krogh, has concluded that "*company's individual and organisational knowledge is a central resource that serves as a basis for sustained competitive advantage*" (Voelpel et al, 2005).

2.3.3. Transfer of tacit knowledge

Tacit knowledge is said to be especially important when having competitive edge in knowledge (Spender, 1994). It has also been stated that transfer of tacit knowledge can be problematic and demands high level of integration (Kogut, Zander, 1992; Grant, 1996).

Falconer (2006) concludes based on Polanyi (1966), Baumard (1999) and Haldin-Herrgard (2000) that big part of information and knowledge valid in organisations is tacit; and the challenge to be solved is related how to get information and knowledge "*moving around the learning cycles*". Learning cycle has been introduced in figure 4.

Falconer (2006) introduces the concept of making tacit knowledge into explicit by using help of IT and different e-learning techniques. Falconer (2006) clarifies the term e-learning: "*refers to use of online technologies to deliver learning materials and to facilitate communication and collaboration amongst learners and between the learner and tutor*".

Based on Falconer (2006) e-learning techniques can be utilized in the learning cycle's first and second steps, which are the tacit knowledge acquisition and "*its transformation into explicit knowledge*".

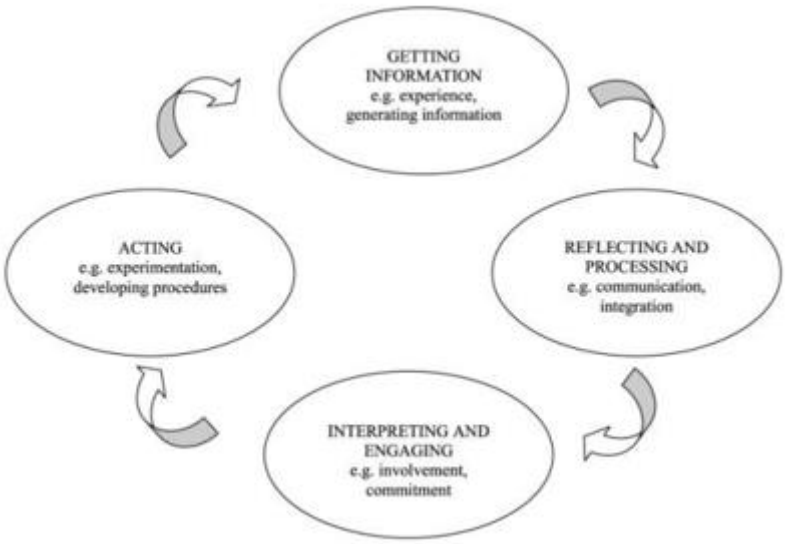

Figure 4. Learning cycle (Falconer, 2006)

General assumption is that tacit knowledge could be better utilized, but it has been found to be difficult due to its immaterial nature. However, Jankowicz (2001) challenged this assumption by arguing that "*all knowledge creation proceeds from the intuitive and tacit*".

2.3.4. Elements of successful transfer of tacit knowledge

Jensen, Johnson, Lorenz, Lundvall (2007) have studied the transfer of tacit knowledge and the prerequisites a successful transfer requires. In order to transfer successfully tacit knowledge it usually requires some pre-knowledge on the subject. Also Nonaka and Takeuchi (1995) have come to the same conclusion; but in addition they stated that "*tacit knowledge can only be transmitted to others by sharing mutual experiences and active participation in real-time face-to-face interaction*". An example of this was given in previous paragraph with the "play" button example.

The research have identified some prerequisites which are required in order to transfer tacit knowledge. Transfer requires trust and relationship skills therefore a longer term co-operation is needed. As Spender (1999) has claimed there is a paradox in having knowledge as a competitive edge due to the difficulties to transfer tacit knowledge.

Trust plays a significant role in tacit knowledge transfer. Zimmermann (2011: 66-67) elaborates that virtual communication even increases the amount of limitations in trust building. Henttonen and Blomqvist (2005) support this finding, and indicate that personal, and face to face conversations are in vital role in trust building. It has also been identified that trust plays an important role in multicultural settings by enabling to exceed the communication barriers and cultural differences (Gibson and Gibbs 2006).

Venzin (1998) has also identified that the cross-cultural organisation settings create a challenge at its own to knowledge transfer. Knowledge is originally created in one particular language, and cultural environment and has to be interpreted by another, perhaps totally different setting.

Several researchers have found that trust is one the critical elements also in learning, especially in knowledge-based view of the firms as trust can be seen as implicit. (Nonaka, Takeuchi, 1995; von Krogh 2001; Kogut and Zander, 1992). Trust plays especially big role in virtual teams as "trust needs touch" (Handy, 1995). However, it has not been proven to be impossible to gain trust in virtual teams as was seen in relation of "electronic prisoners' game" (Zheng, Bos, Olson, Olson, 2008).

Johannessen et al (2001) do not see the value of IT in tacit knowledge transfer, and also Haldin-Herrgard (2000) is doubtful on the effectiveness of teaching tacit knowledge through IT. Haldin-Herrgard (2000) states that "*tacit knowledge requires face-to-face interaction and exchange of experiences*".

In the research literature related to tacit knowledge transfer the term "*ba*" was introduced. *Ba* comes from Japanese, and it means a shared context (Konno and Nonaka, 1998). It is a place where "*energy, quality, and medium to perform the individual knowledge conversions in ongoing and interacting spirals of socialization, externalization, combination and internalization*" (Konno, Nonaka, 1998). *Ba* is essential in order to transfer tacit knowledge successfully. Based on the literature it was suggested that online environment can be a *ba* as well.

Also the role of the subsidiaries in the global organisation is of significance. Lindqvist et al. (2006) did an exploratory study where they found out that "*the more locally embedded the subsidiary tacit knowledge (such as customer knowledge), the higher is the need for subsidiary autonomy*". It has also been noted that in order the tacit knowledge transfer to take place there is a need for informal knowledge transfer opportunities as well.

2.4.Self-directed learning

In order to understand whether tacit knowledge can be transferred through online methods; and whether the target group plays any role – we need to understand how adults learn. This provides us a foundation on explaining whether online methods are applicable in learning.

The concept of adult learning has been introduced as early as 1920s. First book ever published on the area is from 1928: Thorndike's Adult Learning. Jack Mezirow (1978) has also contributed in "adult learning". In his theory it is explained that person needs a context in order learning to be able to take place. There needs to be previous experience, and only adults do have this kind of experience background. As Mezirow puts it:

"*learning is understood as the process of using a prior interpretation to construe a new or revised interpretation of the meaning of one's experience in order to guide future action*" (Mezirow, 1996, p. 16: Extract from Taylor 2008, p. 5).

Mackeracher (1996) describes adult learning as "*multicolored and multifaceted lens of a kaleidoscope*". It consists of emotional, social, physical, cognitive and spiritual processes. Merriam (2001) has also been inspired to describe adult learning in descriptive ways "*ever-changing mosaic, where old pieces are rearranged and new pieces added*" (Merriam, 2001:1)". The mosaic consists of traditional adult learning theories as andragogy, self-directed learning, and transformational learning; but also more emergent theories (Merriam, 2001).

Based on Caffarrella, Baumgartner and Merriam's book "Learning in Adulthood" (2007) there are several different learning theories which could be reflected on learning the tacit knowledge. Theories presented in the book are: andragogy, self-directed learning, and transformational learning. Authors also introduce newer approaches to learning: embodied, spiritual and narrative learning; learning and knowing; and critical theory, postmodern and feminist perspectives. Merriam et al. also summarizes that "*online learning is a fourth site of learning, one that spans formal, non-formal, and informal learning"* (Merriam et al. 2007 p.29).

Learning can be mechanical or additive. In mechanical learning the learner is not able to relate the learning into any previous experience while in additive the learning cumulates with the existing knowledge (Illeris, 2003; p.171). Learning can also be accommodative, which means that learner utilizes parts of the previous knowledge and based on those creates new scenarios. (Illeris, 2003; p.171). There is a synergy with the additive learning definitions with the tacit knowledge. Both of them add to previous knowledge, and are utilized in different scenarios.

In the next paragraphs the focus is on self-directed learning due to its independent nature which suits to online learning methods.

The lenses through which learning will be looked at is "cognitive approach" (Mayer, 2003: 7), where the outcome performance is evaluated through learner characteristics, learning process and learning outcome. See figure 5.

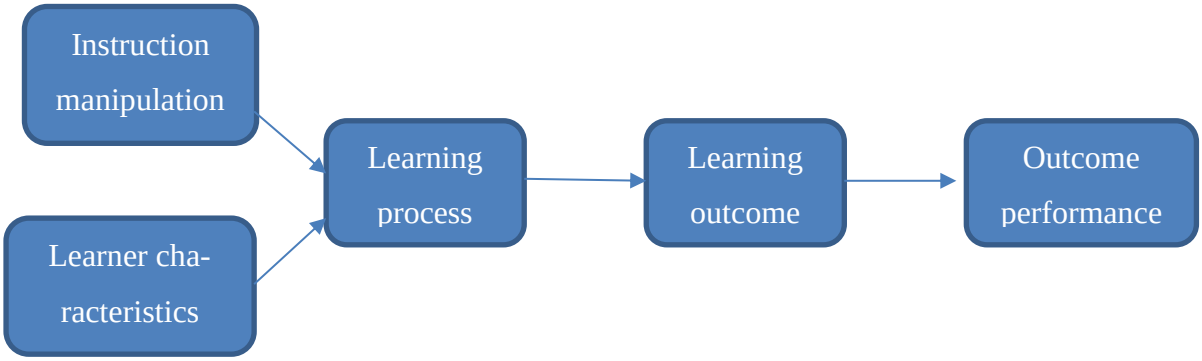

Figure 5. Cognitive approach to learning (extract from Mayer, 2003:7)

Garrison (1997) has identified three dimensions in self-directed learning: self-management, self-monitoring, and motivation. All these three dimensions are critical when talking about online learning. The learner needs to decide when he has time to take the course, or webinar, or watch the video, he needs to take the responsibility of learning – there might not be any direct organisational requirements on taking the course, webinar or watching the video, but he needs to understand that he is able to get the additional knowledge from that. This in turn will create the motivation to do the learning exercise.

Garrison (1997) continues that "*the degree of self-direction will depend very much upon the learner's proficiency (abilities and strategies) in conjunction with contextual and epistemological demands*." Bandura (1986) claims "*that there are three self-regulated learning processes: self-observation, self-judgement, and self-reaction*." This means that during the learning process the learner has to take responsibility of the learning as Garrison (1997) suggested in his three dimensions. It is obvious that in order to be able to learn efficiently through online methods, one has to have excellent self-discipline, motivation and time management skills.

To summarize self-directed learning has been said to "*have as its goal the development of the learner's capacity to be self-directed*" (Knowles, Tough 1985).

Richness of channels has also been identified to play a role in the knowledge transfer (Kwok et al. 2005, 2006). The researchers found three different success factors in knowledge transfer: extrinsic motivation, absorptive capacity and richness of channels. Although this thesis is not focusing on knowledge transfer as such, but similar factors are relevant in learning through online as well. Richness of channels will enable people to use the channels when appropriate; they are not limited by time, or place.

Cramton (2001) brought up a problem related to "mutual knowledge" which is a challenge in online learning. The creator of online learning material has to be aware to some extent what the users of the online learning material already know in order to be able to provide them information what is useful for them. This is a challenge especially when talking about tacit knowledge, because it is something that cannot be explained in similar manner and its understanding depends on the learner's previous experience (Nonaka, Takeuchi; 1995).

Merriam et al. (2007, p. 40) present a wide set of different barriers on online learning. Although the book "Learning in Adulthood" has been published in 2007, we can still claim that the barriers mentioned there are relevant. Authors specify as one barrier the access to online learning tools, which can be seen relevant in a multinational corporation as well. For example, in some parts of Africa the internet connection is poor, and the access to the online courses therefore limited. Other factors presented were "*uncertainty about change, fear of technology, need for guidance, inexperience, relevance, the social context of the persistently impoverished county and the perceived need*" (Page, 2005, p. 334). All these are related also to the UTAUT.

Merriamm, Caffarella (2007), and others have summarized obstacles to adult learning: time, cost, confidence level, personal and social responsibilities (Merriam and Caffarella, 2007; Valentine and Darkenwald, 1990). They have divided the barriers into situational and dispositional. In online learning both categories are relevant. Situational

factors (cost, time, life situation) is very much related to self-directed learning when prioritizing and planning the learning. Online learning material itself is free of charge.

2.5. Unified Theory of Acceptance and Use of Technology

The study is looking the learning process and outcome especially by using online training tools. Therefore it is important to have an understanding how technology is used and accepted in the population.

Unified Theory of Acceptance and Use of Technology (Venkatesh, et al. 2003) is a combination of eight different theories. In the report the researchers have summarized different theories in the field of information technology acceptance and created as a conclusion the Unified Theory of Acceptance and Use of Technology.

Unified Theory of Acceptance and Use of Technology (UTAUT) provides a foundation for the technology acceptance among people. As stated in Im et al. (2011:1) "*The UTAUT model consists of four core variables –performance expectancy, effort expectancy, social influence, and facilitating conditions – and four moderating variables – gender, age, experience, and voluntariness of use.*"

Performance expectancy tells us the level of expectations on performance the user has towards the IT system (s)he is going to use (Venkatesh et al. 2003:447). Effort expectancy is related to the ease of use. (Venkatesh et al. 2003:450). Social influence reflects to the idea what user has on the importance on the system usage (Venkatesh, et al. 2003:451). Facilitating conditions are described as "*the degree to which an individual believes that an organisational and technical infrastructure exists to support the use of the system*" (Venkatesh, et al. 2003:453).

Im et al (2011:1) point out that there are various factors in in the adoption rate of IT in different cultures. He mentions examples like government policy, industry lead and market environment. This statement provides an interesting view point to this study due to the multicultural sample of interviewees.

Also Heikkilä and Smale (2011:306) have summarized UTAUT as follows: "*UTAUT differentiates between intention to use (behavioural intention) and actual usage (use behaviour) where the former is argued to influence the latter*."

Language might bring challenges in a multinational corporations although in the case company MNC the official language is English. The online training materials are made in English, and this might have an effect on the perception of the e-learning material. The role of language has been invisible when going through the studies made recently regarding user acceptance of information technology (Venkatesh, et al. 2003).

2.6. Summary of literature review

The literature review has covered five different themes which are related to each other due to the scope of the study. The scope of the study has been presented in figure 3: first we looked at the organisational set-up consisting of front-back, secondly its effects on learning climate, thirdly the review focused on tacit knowledge and its components, fourthly the discussion continued on the self-directed learning and finally on the acceptance of technology.

The current research is multi-faceted in nature; there is lot of variance in the level of research within different areas. The front-back organisational set-up has limited amount of research available, only few papers could be identified – and the amount of papers got even scarcer when adding the term "learning climate" as a search criteria. Therefore lot of the discussion on the organisational set-up and learning climate is practical as its nature. However, learning climate as such provides good foundation on research, and there is definitely a future research need for combining the learning climate and front-back organisational structure. This would create a valuable input to MNCs who work in multilevel organisations.

Knowledge management is an area which is widely researched, and tacit knowledge within knowledge management has gained its share of research as well. However, the

practical implications on tacit knowledge, and especially focusing on solutions selling could benefit from further research as well.

Learning tacit skills through online methods is also a relative new area of research, but the results seem to be coherent. There is not much optimism in learning tacit skills through online methods – the researchers seemed to be unanimous on that.

The accepting of information technology is well covered with the UTAUT, by covering eight different theories. This provides a good framework for integrating the research into MNC environment.

3. RESEARCH METHODS

3.1. Research approach and strategy

The research has two main research questions for which the research is trying to find answers. The aim of the study is to find out firstly how effective are various online learning tools in helping local sales teams to develop solution selling skills and product knowledge and secondly to understand what factors affect the learning outcomes/process.

The reasoning on how to find answers to the questions has not been simply just one type; inductive or deductive, but in between which is abductive. The research is not trying to build a new framework nor is it going to critize any earlier theories. The aim is to seek answers to the research questions from the current situation by interviews and by comparing the theories with the data collected through interviews.

Rossman et al. (2017, p. 9) also discuss on the reasoning process which qualitative researchers go through. Inductive being that focus is on the practice and relating that to a theory; while deductive starts with theory and "*tests its applicability*" (Rossman et al. 2017, p.9). This research follows a typical nature of qualitative research. It starts with identifying theory framework applicable to the field of study, gathers interview data, and applies it to the theory framework identified. However, the study is not purely deductive in its nature due to the fact that during the interview process some additional, relevant issues emerge, and these resulted to the theory framework restructuring. For example, at first several learning theories were studied (for example andragogy), but later, after the interviews, it was found out that it is not relevant to study other theories than "Self-directed learning" which can be directly linked to the online learning and its features. The research goes in a loop, and therefore it can be stated to be abductive in nature.

The research will combine existing theories and compare those in relation to one another. The comparison created new research needs: for example discussing front-back organisation in conjunction with learning climate provides new insights on the field. Therefore the research can be said to be exploratory, because the combination of different theories provides new views on the topic. However, some viewpoint could suggest that research has also explanatory features as well. This viewpoint is justified on the fact that the research aims to explain why things happen; why the learning process is successful or unsuccessful?

The chosen methodological choice in research design is qualitative. While the purpose of qualitative research is learning; it was a self-evident choice as a research design. As the whole thesis is focusing on learning; there is a need to dive deeper into the subject. Learning is a subjective experience and therefore qualitative approach is justified. Rossman, Rallis (2017, p. 4)) have summarized qualitative research: "*qualitative researchers seek answers to their questions in the real world*".

Qualitative research focuses more on depth rather than breadth (Rossman, et al. 2017, p.8). The scope of the study has to be well-defined in order the study to be reasonable. The researcher uses always personal lenses through which (s)he interprets the data (s)he has gathered through the research (Rossman, et al. 2017, p.8). The study should be descriptive, analytic and admitting the fact that it is always objective.

Rossman, et al. (2017, p.12) identify three aims of a qualitative research; 1) analytic descriptive studies, 2) evaluation or policy studies, and 3) action research. This study is of evaluative nature. Its main goal is to find out whether tacit learning is possible through online methods. As mentioned earlier learning is a subjective matter, and the interview data has been gathered from individuals who have used the online methods in order to gain further knowledge.

The study will seek answers to the research questions by interviewing a sample of front and back organisation's sales personnel. The interviews were done on a semi-structured basis, and discussions covered from the interviewees' experience on online learning

tools to their relevant business area knowledge. The whole spectrum of the discussions was important in order to be able to understand how the sales persons perceive online learning tools, does the use of them actually change their sales behaviour and what factors prevent the learning, and on contrary, what factors enable the learning process. The research is built on one particular MNC, and therefore it is relevant to introduce the MNC in more detail.

3.2. Background information on the MNC

Earlier in the thesis it has been presented that the MNC has organized its functions in back and front sides. It is obvious that the organisation structure as front and back creates challenges when knowledge needs to be distributed. There is different type of knowledge in the front and in the back. The main source of the product knowledge is in the back end of the organisation, but the customer knowledge remains mostly in the front. The back end needs to get feedback from the market in order to further develop the product. The knowledge needs to go in a loop in order to be able to provide right type of training.

3.2.1. Back part of the organisation

The case company studied in this thesis tries to make most out of the front-back organisation structure. In the thesis the focus in online learning tools which are created in the back part of the organisation and distributed to the front part. In this chapter the process of creating the online learning material is explained, and background information on the interviewees is presented. It is relevant to understand how the process of online learning material creation goes, because it helps in understanding the distinction between product and solutions selling. The back part of the organisation does have a global responsibility of the specific product group, and are responsible of the product knowledge. This means that they have designed the product, and are responsible to develop it further based on customer and market requirements. The highest level of competence regarding the product is in the back part of the organisation due to the designated global responsibility, and the back part is responsible to share the knowledge to the front part of the organisation, as well.

Product group refers to a nominated product type which is dedicated to a specific part of the organisation. The back unit which is studied is responsible of manufacturing, Research & Development (R&D), marketing, training; while sales offices are locally spread all over the world.

In the online learning materials the focus is on one specific product group. New products are created in R&D projects, which are the responsibility of the back of the organisation. Traditionally the input for a new course comes from a R&D project. However, recently the scope has expanded in creating learning material also for sales and solution skills. However, there is not a systematic input for this type of learning material, and it has remained to be under individual's interests whether they are willing to create sales skills related learning material. The only official requirement from the R&D project is the product training.

R&D project does not distinguish whether the learning material should be e-learning, video or webinar. This decision is made by the back part of the organisation and their customer training team. Quite often the training team decides to prepare "a release webinar" when product has been released to the market, and an e-learning course. E-learning course is subcontracted from a supplier, and it is a longer project which requires project management skills as well. Videos are not regularly done in relation to R&D project, only few are available. They are still seem to be a bit complicated to prepare, although there is good example of one training video which has gained relative good success in YouTube.

3.2.2. Front part of the organisation

The front part of the organisation, which is present locally, is responsible of the sales. They have the customer contact, and they know how the market operates. In this thesis the term Front End Sales (FES) will be used when discussing the local part of the organisation.

FES usually is working for several different product groups and the various products require different level of expertise. Some of them are categorized as high technology products, while others purely components which do not require so detailed product competence. The product group which is discussed in this thesis is a high technology product, and in order to be able to sell it, the sales person needs to have a thorough understanding of the product and its features, but he also needs to be able to accommodate the features into customer's needs, and expectations.

As FES personnel is working for several different product groups, it is understandable that they need to gain their knowledge in a format which is easy to digest. There is very much data and information available for the local sales offices, and there is a challenge to be able to identify the right type of material to be studied.

3.2.3 Interviewees

Since the research questions are aiming to find answers on changed sales behaviour and on the barriers, enablers of effective learning – mainly focusing on individual's experiences, interviews were the natural way to collect the data. The interest is also on gaining as much knowledge as possible by executing semi-structured interviews which give more space for discussion.

The interviewee sample was selected based on the business criticality to the MNC's back side of the organisation; main criteria being the turnover volume sold to that particular country. Finnish interviewees were chosen because they had experience on working in local sales offices as expatriates, and they were requested to reflect the questions on those experiences.
Countries and their sales representatives who were approached first were: Turkey, Sweden, Finland, Spain, Argentina, Malaysia, Croatia, Vietnam, Indonesia, and Romania. Appendix 1 introduces the e-mail sent to the sales persons in respective countries. Responses were received from Turkey, Sweden, Finland, Argentina, Vietnam and Indonesia. All these countries and their sales representatives were chosen to participate in the interview.

The interviewee job scopes are different from each other; some have more technical background while others were purely working with sales. Two of the interviewees worked as supervisors. Two of them also had expatriate experience.
The age structure of the interviewees is presented in the table below. However, interviewee from Indonesia did not reply to the age inquiry, as it was done after the actual interview situation. All respondents were male.

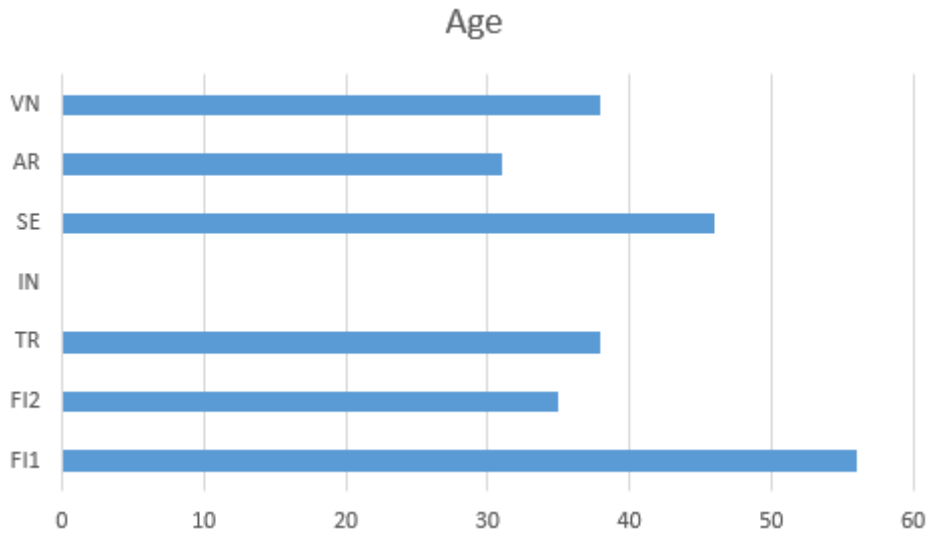

Table 1. The age structure of the interviewees.

The age structure shows that the average age of the interviewees was 40 years, which is close to the MNC's typical age structure.

3.3. Data collection and analysis

The interviews were done during 10 – 29 March, 2017. There were seven interviews out of which two were made face-to-face and five with Voiceover Internet Protocol service; Skype. No video was used, although this would have been possible. However, people are not that comfortable yet with the camera and therefore it was decided not to utilize the video option.

Usage of skype is very common in the case MNC, and therefore the disadvantages presented in the literature regarding telephone interviews (Saunders, et al. 2012:406) were minimized. Although Skype as such is not a telephone, its utilization is similar and therefore the disadvantages can be discussed in the context. Saunders et al. (2007:341,342) present challenges like "*no personal contact*", "*not being able to take notes at the same time*", "*not being able to witness the non-verbal communication*", "*participant is not willing to provide you enough time*" and "*creating complex questions is more difficult than face-to-face*". Below is explained how the disadvantages were minimized.

The geographical dispersion diverted to use Skype, and the challenges had to be noted. The lack of personal contact was mitigated due to the fact that the researcher has met the interviewees earlier face-to-face. The personal relationship between the interviewer and the interviewees helped to create a trustworthy atmosphere. Of course the possibility of bias needs to be considered as well and the way it was tried to be minimized is explained in the reliability and validity chapter.

Taking notes was overcome by recording the interviews and later transcripting them. The non-verbal communication challenge could have been overcame by usage of video, but this was not preferred – therefore this one remained as a challenge. Usage of time was not an issue, the nominated time was enough for all interviews. However, the usage of foreign language and understanding each other was at times challenging and forced the interviewer to repeat and explain several times some questions. As a summary, the data collection method was the best one available due to the limitations of travelling.

Interviewees presented following countries: Finland (2), Sweden, Vietnam, Argentina, Turkey, and Indonesia. When inviting the interview a calendar invitation (appendix 2) was sent which introduced the purpose of the interview, and a brief agenda.

When starting the meeting the researcher asked permission to record the interview, and informed them that the recording would only be for her personal use. The purpose of the interview was introduced by telling them the degree she is studying for.

Interview was semi-structured (appendix 3) and it started with basic questions on the participants' role in the organisation and views on the market requirements. After that it continued in general perceptions on online learning and in more detail on the specified online learning tools: e-learning courses, videos and webinars. The various channels were explained in detail, and examples were given so that the interviewee surely understood what was the tool in question.

However, during the interview some relevant issues emerged, and the discussion focused on those outside of the semi-structured template presented in appendix 3. For example, some of the interviewees were very eager to explain technical details on their products. Although this was not part of the interview scope as such, the researcher found it important to let the interviewee talk and then gently guide them back to the topic. By letting the interviewee talk about the topic they are familiar to, the researcher built on the feelings on trust in the interview situation.

The duration of the interviews varied from 30 minutes to 1 hour. All of the interviewees had experience on online learning, but the depth of their knowledge varied. Also the terminology was unfamiliar to some of them, and had to be explained during the interview process several times. For example, e-learning and webinars were confused with each other, but after explaining them in detail and giving examples, they identified the correct tool. This was confirmed by the researcher when the interviewee was able to identify a specific course in connection to the tool.

As qualitative data is "*based on meanings expressed through words*" (Saunders, et al. 2012:547) it requires a thorough analysis, and certain lenses through which it will be scrutinized.

As the main target of the study is to evaluate the learning outcome and the possible barriers to it, the interview data was analysed through four different dimensions: 1) the organisational structure 2) the learning climate 3) self-directed learning and 4) use and acceptance of technology. The interview data provided a cultural viewpoint, but also

attitude and expectations played critical role.

The interviews were recorded, and transcripts were written afterwards. The transcripts consisted of 32 pages full of text (line space 1). Data analysis was prepared based on transcripts; first the theory frameworks were reflected on the interview data with the intention to try to find some common concepts with the literature. However, this was found to be a bit artificial, and therefore it seemed relevant to go directly into coding – phase. Rubin (2005:201) explains that coding can be done preferably by extracting and systematically coding than confirming your original ideas. This statement also supported the idea that the interview data should speak for itself rather to artificially try to connect it to the literature.

Next step was to go through the interview transcripts and identify common patterns from the data. The patterns which emerged were for example: customer requirements, sales skills needed in selling solutions, attitude towards online training and limitations of online learning. There were more codes related to in more detailed reflections on a specific tool.

After the coding phase, themes were created. For example codes "Sales skills needed in solution selling" and "other sales skills" were categorized under theme "Competence". After categorizing the codes under the themes, the relationships were established between different themes. The relationships are collected and described in more detail in the findings chapter.

3.4. Reliability and validity

As qualitative research is seen as a window to people's lives and the conditions they face and experience, it was natural to choose an interview setting for conducting the research (Yin, 2009). However, in order the research to be credible, it has to meet certain requirements: it has to be reliable and valid.

Saunders et al. (2007:150) have defined the research to be reliable when "*data*

collection techniques and findings will yield consistent findings". Validity, on the other hand, is about "*the relationship between two variables*" and is it "*a causal relationship*" (Saunders, et al. 2007:150).

The data collection technique used in this thesis was interviews from a chosen sample. The sample was chosen based on its business-criticality to the back part of the organization. This sample choosing technique might not result to give a complete picture of the research problem and therefore it has possibilities to have an influence on the consistency of the research. If the interviews would have been done with another target group, for example newly hired personnel, it might have ended up with a different result. However, the reasoning why the sample was chosen this way, was that it was critical to the business and to the practical implications. It is important to the back part of the organisation to understand how the FES sees the learning material and is the learning material creation investment in current format feasible.

The interview questions were within the sample similar to each other, and this resulted that within this sample the results are consistent. If the research is to be done with a similar scope it will give a snapshot of that particular target group's situation in future as well. Also transparency of the research data is evident and therefor it increases the reliability by displaying direct quotes and explaining the data collection methods and techniques in sufficient detail.

However, there are challenges to meet the requirements of reliability and validity. Saunders et al (2007) have summarized these challenges to reliability as follows: subject or participant error, subject of participant bias, observer error and observer bias.

For validity the challenges are history, testing, instrumentation, mortality, maturation and ambiguity about causal direction. In the following chapters it is explained how these challenges have been overcome in this thesis, and what challenges still remain to be valid.

3.4.1. Challenges to reliability

First of the challenges to reliability is “subject or participant error” (Saunders, et al. 2007:150). This challenge was present during the interviews because the terminology used was new to some of the participants. It had to be checked several times that the person has understood for example what tool is meant with the word “e-learning”. They quite often confused it with the webinar-definition, but this was noticed and terminology was explained to them with examples.

Second challenge presented by Saunders et al. (2007) is “subject of participant bias”. This is also a relevant challenge which needed to be taken into consideration while doing the interviews. As it was mentioned earlier in thesis, trust plays an important role in the interviews, and trust-element was used to overcome this challenge. The interviewer and interviewee were familiar with each other from earlier encounters, and from the comments it can be seen that “trust” was in place. The interviewees were able also to give criticism regarding the online learning tools, and the discussion seem to be honest in nature. Also the fact that the interviewees were convinced that the discussion is confidential in nature will create the trusting atmosphere.

As the researcher has been working in the “customer training”, she possess superior level of knowledge from the field compared to the respondents. The interviewees were not that familiar with the area. There is a gap; the researcher present an authority when asking the interviewees questions regarding the area of her expertise. This factor was tried to diminish by explaining them that the interview is part of her studies, and by choosing the interviewees in such a manner that they had a personal relationship, and they knew they can be honest with the researcher. Also the fact that they will actually help me her providing honest, and thorough answers was considered to increase the reliability.

Third challenge introduced in Saunders et al. (2007) is “observer error”. The interviews followed a semi-structured schedule which helped in keeping the conversation on the right level and focusing on the right topic. The interviewer focused on listening and not trying to answer on behalf of the interviewees.

Final challenge which was faced is the “observer bias” (Saunders et al. 2007). The creation of semi-structured interview template with descriptive and clear questions helps in overcoming observer bias. However, this study is a qualitative study, and there most probably is always “observer bias” to some extent present. The attempts to mitigate are done by precise transcriptions of the interviews, and focusing on listening during the interviews. The interviews were made mostly online and this can be seen also as a mitigating factor as the body gestures were not present. These could give a pressure or motivation to try to interpret the answers in a desired way. Although there are two sides of this coin as well, but verbal communication is simpler to interpret than taking the “body language” in to account as well.

Overall, the challenges related to reliability were well met and the research can be seen as reliable.

3.4.2. Challenges to validity

Threats to validity by Saunders et al. (2007) were multiple: history, testing, instrumentation, mortality, maturation and ambiguity of causal direction. The study was cross-sectional due to its master’s thesis nature (limited amount of time), and therefore the history did not pose a challenge to its validity. Testing is related to the perception that the result of the research will affect the respondent in a negative way – this study did not include that type of measuring, but the replies were of qualitative nature and not linked with any type of compensation model. Also the instrumentation did not happen because the respondents could not prepare themselves to the interview in such a manner – it would not helped them to do as much e-learning courses as possible before the interview. Mortality did not play a role, because all interviewees who accepted the invitation, participated in the interview, and also responded to questions sent to them afterwards; except one who did not answer the age question. Maturation reflects for example to the definition that the respondents have been chosen in a way which could lead to incorrect analysis of the situation – in this study the respondents have been chosen based

on business criticality and therefore their understanding and opinions are of great value when evaluating the effect of online learning tools.

Most interesting and valid challenge to validity in this research is the "*ambiguity about causal direction*". What causes what, and is there a linkage between the events? Because the respondents were chosen on business criticality being the main criteria, it led to the fact that all respondents are quite experienced in their work. Therefore this might be a relevant challenge to keep in mind when analysing the findings, because the findings indicate that the online learning tools are suitable only for teaching basic knowledge. The research does not show the other side – how do the persons who are not that experienced see the situation? Is the learning outcome more effective when they do not have that much background information, do they even learn tacit knowledge because they do not have the any observer bias when conducting the courses? This would require an additional research and to extend the sample base.

As a conclusion regarding reliability and validity, it can be concluded that the research has done sufficient attempts to mitigate the effects of the challenges and have been aware of the risks they expose.

4. FINDINGS

The aim of this research is to find answers to the following research questions:

RQ1: How effective are various online learning tools in helping local sales teams to develop solution selling skills and product knowledge?
RQ2: What factors affect the learning outcomes / process?

These questions were reflected on the interview data, and the findings are discussed in the following chapters.

From the interview data five themes were identified: learning environment, management, online training tools, profile and competence and customer requirements. All these have an effect on the learning outcome and the effectiveness of the online learning tools. Figure 6 shows the themes and their relationships with each other.

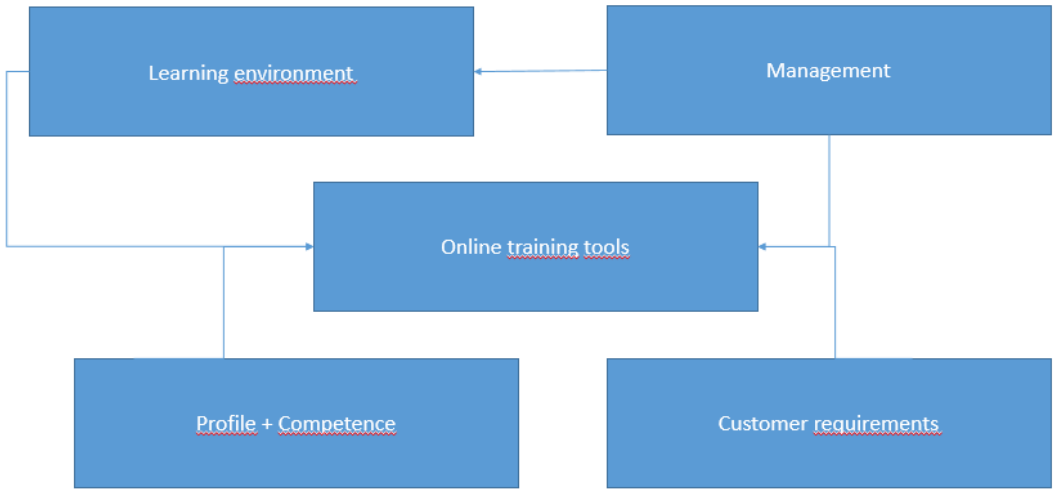

Figure 6. Themes and their relationships summarized.

When going through the interview transcripts the figure 6's themes were evident. Customer requirements and the interviewee profile and the competence had a direct effect on the attitude and utilization of the online training tools. Also management played a critical role with their attitude and target setting towards online learning. Management

had an effect on the learning environment and how it supported the learning effectiveness. However, learning environment theme consisted also other codes as well: the infrastructure, language and what type of learning was preferred.

In the following chapter the themes are opened in more detail, and the relationships are explained more thoroughly.

4.1. The effectiveness of developing solution and product selling skills through online methods

In this study learning has been defined to be effective when it has resulted on changed behaviour. The learner has changed something in his actions due to the learning experience. In the following chapter the different themes are discussed in relation to the research question 1: "How effective are various online learning tools in helping local sales teams to develop solution selling skills and product knowledge?"

4.1.1. Profile and competence

Table 2 presents the interviewee sample: the country they represent, their job role, and their experience on a specific online learning tools. Frequent user is a person, who finds it comfortable to use that particular tool, and generally feels positive about it. Occasional user mostly uses the tool when it is mandatory, or a certain event takes place through the tools (for example: new product release webinar). Persons defined having "little experience" were either not aware of the tool, or have heard about it, but has not been using it for learning purposes.

Country	Job role	Experience		
		webinars	videos	e-learning
FI1	Sales Manager	Frequent user	Little experience	Frequent user
FI2	Sales Manager	Frequent user	Occasional user	Frequent user
VN	Product Marketing Manager; former Sales Manager	Occasional user	Occasional user	Occasional user
SE	Sales Manager	Occasional user	Little experience	Little experience
TR	Utility Sales Manager	Occasional user	Occasional user	Occasional user
AR	Technical Sales Specialist	Frequent user	Frequent user	Frequent user
IN	Sales Manager	Occasional user	Frequent user	Occasional user

Table 2. Background information on the interviewee sample.

From the interviewee sample it can be summarized that all interviewees had some experience on each of the tools, but the videos seem to be less utilized while webinars shows to be the most exploited.

Finland's interviewees present back-end of the organisation, and in the back part of the organisation there is already established practice on using webinars, and e-learning courses for learning purposes. The established practice can be explained by the organisational power nomination as back has the global responsibility of the product. Both interviewees are frequent users of those particular tools. The Finnish interviewees have been working as expatriates in local sales unit. They were requested to reflect on those experiences during the interview. In the MNC it is typical to have similar job titles both in back and front. Therefore the title "Sales Manager" can be seen in various places in the organisation.

Vietnam, Sweden, Turkey, Indonesia, Argentina interviewees are all working in the front part of the organisation, and they can be seen as customers to the back-end regarding the learning material.

When looking at webinars exploitation rate, four out of five are occasional users, while one is frequent. Argentina's interviewee also has a bit different role than the remaining, he is working as technical and solutions support as well. This might indicate that he is more used to acquiring knowledge than the sales persons due to the job's nature: customers approach with technical challenges which need further investigation. Regarding videos there does not seem to be any difference between front and back, but in overall videos are not utilized to their full potential. Also e-learning courses have potential to be accomplished.

As a summary, the performance expectancy was on a very basic level; nobody really expected to learn tacit skills through online learning. The interviewees saw the data in the online learning material to be profound, and help in the beginning of the career, but in-depth knowledge should be acquired through experience. Following sentence summarizes the attitude towards online learning tools:

"the basic information is available regarding the products, the material does not go very deeply into the topic. The basic information for sales can be taught digitally, but you cannot create any deep knowledge with these tools – that you have to acquire somewhere else"

4.1.2. Customer requirements

Customer requests play a role in performance expectancy and gaining the advantage from the learning. One interviewee presented a case, where he had a project for a customer and he needed to understand how a specific communication solution works. He completed an e-learning course for this particular topic, and had a clear objective in mind what he wanted to accomplish. The content of the e-learning course included more than just a product presentation. This detail proves that it is possible to that an e-learning course provides more deeper knowledge. However, it seems to be related to the learner's existing knowledge base. In this case the learner was technically experienced and very highly motivated, so he was able to learn through the e-learning course.

One interviewee commented that customer's level of knowledge has changed during recent years. Customers have outsourced some parts of their business and they do not possess anymore such competence as earlier. For example when selling high technology products, there may not be a person who is technically competent to discuss on that specific topic. This might result to a lower competence level need also from the supplier side, and a better opportunity to sell more advantaged products. It is also common to develop partnerships with the customer and the customer is placing high level of trust in the relationship. Customer does not see the need to be an expert in the supplier's field, but trusts the supplier's competence. This levels up the competence need in supplier's end, and basic online knowledge plays an important role in the beginning of a sales person's career.

Meeting customer expectations was fulfilled in several occasions, but mostly due to the experienced sales person. The online learning tools were used merely as a tool to create presentation material. Therefore it can be summarized that online learning tools help sales persons' in meeting customer requirements, but it always requires previous knowledge on the topic to be able to fully utilize the material.

Customer requirements on competence level has influence as well. If sales person is required to go to a customer site to help in a specific task; he needs to know what he should do there. One interviewee had utilized videos in these cases, and found the needed information from those and therefore was able to help the customer. It should be noted that this was a specific technical problem, and as mentioned earlier the video provides the best means for that type of learning experience.

Customer influence is probably the most powerful learning motivator, because the learner really has to know what he is doing when performing the task. Management expectations are rarely followed up; except in terms that the learner has completed the course. The learning outcome is not measured as such. In real life customer encounter the sales person has to know what he is talking about, otherwise he will not gain trust in that relationship.

4.1.3 Online training tools

During the interview the interviewees were asked about their expectations related to different online learning tools used: e-learning, videos and webinars. Expectations vary, and are highly dependent on the used tools. However, one common identifier could be found: expectations are not very high. The case company is an engineering company with high product-focus; employees are used to a product-centric view and expectations are not placed on any tacit skill learning; especially when talking about online learning. General impression based on the interview data was that the online learning material available currently is merely focused on a simple presentation format and it has only been used to train sales personnel to understand what is the product offering and what are the products' features. The sales should be able to present a general solution for the customer after completing an online learning course, but any in-depth knowledge has to be gained elsewhere:

> *"you are not able to create such in-depth knowledge with our webinars, e-learning courses – no matter how good they are, you need to get that knowledge somewhere else or study more"*

From webinars the interviewees mostly utilized the presentation material done by the back office. This required in some cases translation to local language as one interviewee stated:

> *"I got the presentation from that webinar, and I shared to the customer. So I used that presentation and adapted it in Spanish, of course and anyway it was useful for the first approach."*

Important notification in the above sentence are the words "first approach". This tends to be systematically present in every interview. The material provided by the back office is useful, but it is basic product information, and therefore no tacit knowledge cannot be seen transferred.

Webinars were also used for interaction with the presenters, who quite often came from back-office.

"And also for the webinar is good, that sometimes you can ask the presenter some questions, even the stupid questions."

Learning effectiveness through e-learning courses has similar outcomes as in webinars; they are utilized as basic introduction on the product and its features.

However, in the webinars it was found out that the questions are not well answered, and this created dissatisfaction towards the webinars:

"the questions are not so well responded and that's why I lost some intention to attend"

The recording of the webinars is found to be especially beneficial, because you are able to watch them afterwards; not depending on the time or place.

There were contradictions between the interviewees regarding the general quality level of online learning in the case company. Those who had previous work experience from other employers did not appreciate case company's way of teaching, but those who were less experienced thought that teaching is on a good level. This supports the fact that tacit learning is not taking place through online learning, and the more experienced person cannot see the value in the basic training courses case company offers.

When using e-learning courses learners expect to get summarized information:

"E-learnings are the best thing; it is like summarized information"

and when using webinars, learners are expecting to get interaction and answers to their questions:

"when I'm learning I always try to use the webinars to make questions"

There are two types of webinars available; live ones and recorded ones. There seems to be a tendency that the recorded ones are used when learner wants to quickly have some specific information or get some specific knowledge on specific topic. It has not been used as a method of transferring tacit knowledge as such, but rather product-centric.

One interviewee summarized this as follows:

"I remember when I was visiting some customer then I the day before saw this webinar and try to see what is the new xxxx and what is important."

The tacit knowledge is found to be hard to get through online learning:

""because lots of the discussion with the customer, I also get competence, sometimes it's not relay related."

Online learning was not expected to support in in-depth knowledge creation:

"On the other hand, it is not possible, to create in-depth knowledge through online learning material – that you have to acquire from practical experience."

Learning effectiveness through videos was mainly achieved when the learner had a specific, very detailed target in mind. However, video did not seem to be very popular when striving for learning experience, rather it was proposed to be used in marketing activities.

One interviewee told that he had taken e-learning courses related to sales skills, but he was unable to identify which ones he has taken and what he has learned from them:

"But I took some e-learning courses from sales point of view, like value-based selling e-learning courses. I took so many of them, but now actually I cannot say easily what I took."

This notification emphasizes the fact that there is lack of follow-up and self-directed learning is not so well structured that the learner would have clear targets in mind when attending a course. It mostly seems to be that the learners are taking the courses, because they either "have to" or they are curious to learn "something". This is especially in case of e-learning courses and webinars. For videos it is more specific, and there the learner usually has a learning target in mind when watching a particular video.

"*When I see these webinar, e-learning courses I try to attend those like there was one for xxx from the US; actually I was not able to take it. I will take the next one*"

When using videos, the expectation was to find a solution to a specific problem:

"for instance your computer broken, you have to solve it. So then you find out the video how to solve it."

The knowledge gained through videos is rarely containing any tacit information and it is utilized merely on very specific task resolutions. Another interviewee gave a similar perception on the utilization of videos:

"my expectation is that the video explains how to we can learn and learn about xxx product"

"But for the video you find only limited information, because there is only the introduction shown,"

In addition to product webinars, the back-office has arranged webinars related to sales arguments. In these webinars the focus has been on the value provided to the customer. These were found to be useful, because during the webinars different phrases related to

the discussion partner (technical, managerial) were presented which could be utilized during the sales meetings with the customer. However, there cannot be seen any common practice to prepare such sales oriented webinars, because this particular one was done by a person who has experience from both back office and front office.

He summarized the reasoning for preparing "sales argumentation" webinar as follows:

"I wanted to teach them in practice [in a webinar] certain themes, phrases which our local sales guys can use when promoting our products to certain target group, to a certain person or when they face competition; like the customer has good relation to a competitor. I wanted to offer this type of pointers in practice"

Feedback from this particular session was good, but lack of the information on its effectiveness and utilization of the new knowledge afterwards is lacking.

One participant had experience on a webinar, where MNC's product was compared with the competitor's similar type, and subsequently the differences were discussed. This type of comparison can be seen as an elementary state of transferring tacit knowledge, because the recipient is provided some comparison information based on which he can make own conclusions.

The main findings on online learning tools and their effectiveness is summarized in table 3.

	Videos						
	FI1	FI2	VN	SE	TR	AR	IN
Objectives clear	Yes	No	No	No	Yes	Yes	Yes
Objectives met	Yes	No	No	No	Yes	Yes	Yes
Learning happened	Yes	No	Yes	No	Yes	Yes	Yes
	Webinars						
	FI1	FI2	VN	SE	TR	AR	IN
Objectives clear	No	No	No	No	No	Yes	No
Objectives met	No	No	No	No	No	No	No
Learning happened	Yes	Yes	Yes	Yes	Yes	No	NO
	e-Learning courses						
	FI1	FI2	VN	SE	TR	AR	IN
Objectives clear	No	No	Yes	No	No	Yes	No
Objectives met	No	No	Yes	No	No	Yes	No
Learning happened	No	Yes	Yes	No	No	Yes	No

Table 3. Objectives and learning effectiveness summary.

Summary shows that generally learning is not very well planned, since majority do not have objectives in mind when attending the training. However, videos are a slight exception and as it has been noted that they are often used for a very specific occasion. In most of the cases learning happened, although there were no objective-setting. An exception here are the e-learning courses which majority saw that no learning happened. This has a direct relationship with the learner profile and the e-learning content – the material provided is on the basic level.

Below are some extracts from the interviews regarding learning effectiveness on different tools:

<u>Videos</u>

"I use how to configure the program or something like that. Very powerful"

" I used to go through the specific tool's videos, and I learned a lot. They fit to my

situation at that time"

"I really like to get the protection mentality and selectivity let's say, those kind of trainings I really like to watch ,and I actually like to follow them up. On those kind of training. "

Webinars:

"when I'm learning I always try to use the webinars to make questions and sometimes the questions are not so well responded and that's why I lost some intention to attend to that but anyway it is very interesting. I think that it is more useful to read by yourself and then ask the questions later. So I see that for the webinar it is very good actually , and if you lost the contact because the questions are not so simple to answer or there is no time so I don't know. Or maybe the person talking you can look at your own before, and I use the webinar only for questions and answers. That would be more richful"

"Yes, actually for the webinar, for the xxxx, the guys from the factory show, they highlighted a feature, of the equipment, what is the difference between xxxx compared to the xxxx and xxxx. I think through the webinar we can know what are the advantage of the xxxx compared to the conventional switching devices, I think that is the first thing"

e-learning:

"Very simple to explain, We got a project containing almost 16 protection and we had to connect XXX. For a customer. So this was the objective, I would call it. To understand.

Q:: Yeah, and did you understand afterwards?

A:. yes,yes"

"I think I took many e-learning course. The last one could be something about legal things, like contract law. I don't remember exactly, but e-learning is... And for my staff, I push them to do some e-learning course, I think experience about e-learnings - I think

e-learnings is good but sometimes lack of interaction of the presenter and learner, like the webinar. Yeah, for sure; the e-learning structure, we have some lecture and finally we take the examination, and from the examination we just choose multiple choice or xxx, but sometime you know when you study something you need to have the teacher, you need to have someone, to ask some question. But anyway e-learning is good"

These tool-specific comments summarize the main findings: 1) videos are used for specific purpose and product learning takes place. Learning is quite often self-directed, 2) in webinars pre-knowledge on the topic helps in putting the knowledge in context, but without it the focus is on learning the product-knowledge. Learning is self-directed. Interactivity is appreciated in webinars. And thirdly management uses e-learning courses as a mandatory tool, and therefore learning through it is not self-directed.

4.1.4. Learning environment

Language has been seen as one constraint in facilitating the online learning. This is an issue especially in Southern America. Although the MNC's official language is English, it is not very rare that a person who has worked 20 years in the company is not able to speak proper English. Most of the e-learning courses, videos and webinars are in English; and they need to be translated locally.

The infrastructure in general regarding online learning is found to be good enough at least in most of the Europe. Some challenging areas however were identified. When travelling for example in Africa, the network is not sufficient enough – and this is a challenge in online learning. As have been notified online learning material is on the basic level, and the third world countries are the ones which would need this type of information. However, the infrastructure does not fully support the utilization of the online learning tools.

Also the mobile functioning is seen as an issue, because the e-learning courses are not available through mobile. However, recorded webinars, videos can be watched through mobile.

4.1.5. Management

The organisational structure supports the different roles that are in place when creating the online learning material. As the back side of the organisation has the global responsibility of the product knowledge, it also creates most of the training material which is then distributed to the front. Merely no official knowledge transfer takes place from front to back; considering that the scope is limited to online learning tools. Online learning tools is developed solely in the back part of the organisation. Therefore the approach is product-centric rather than customer-centric.

Management expectations on learning are mostly originating in the back side of the organisation; front side's targets are on purely on revenue. Nearly all of the interviewees from front office agreed that management places targets only on financial figures, not on learning. This is substantially different in back office, where also learning targets are discussed and some are given targets to either support or create for example webinar material.

The expectations placed by the management played a role especially in e-learning context:

"all the internal policies are done by e-learning so we must do it."

The management commands might reduce the motivation, which is essential part of self-directed learning. The learner does not have clear personal expectations in mind what he should be expecting to learn from the course. Management prefers online learning due to its cost-efficiency, and easy way to distribute knowledge for larger groups in a short time. However, they do not really follow-up what the learners have learned through spending their time with online learning. This has an effect naturally to the learners' motivation; if the managers would follow-up the learning outcome more efficiently, leaners' motivation would most probably increase.

When the requirement is coming from the management; the online learning is utilized because "*we must do it*":

"Yeah you know, all the internal policies are done by e-learning so we must do it. That's why."

However, in this case there is not an option available to choose whether to do the course or not. There is a strict follow-up routine on the completion of the courses; but not on the realized learning outcomes.

In some cases the management places targets in Personal Development Appraisals (PDA) as well. These are done on a yearly basis, and they might have an effect on person's bonus payment level.

From management perspective it is expected that the employee is self-directed in their learning activities. One interviewee concluded why he sees self-directed learning skills essential in the success for his team members:

"because you know in xxx no one will teach you in detail, and sometimes you need to find the library and self-study, and I think e-learning is good."

However, the management does not really follow-up on the learning outcome which is not in line with the invested time in learning activities.

When asked from one manager "*why he has assigned online learning targets to his team?*" he stated

"I think it is good repetition or even learning new things. I want to ensure that there is one more channel from which we are engaging the learner"

To summarize the management does not set clear objectives to learning and persons are able to choose how to utilize the online learning tools. There is lot of potential to be achieved by a more effective competence management and follow-up.

4.1.6. Summary

All five dimensions were discussed which emerged from the interview material regarding learning effectiveness: learning environment, management, online training tools, profile and competence and customers' requirements. They are all interacting with each other while the utilization of online training tools makes their connections visible.
The interview material and the findings concluded that there is lot of material available, but the learning events are not very well planned. The content of the learning material is quite often a mismatch with the audience; it is too basic in order to create any learning experience. Although most of the interviewees answered that learning occurs, it could be seen that the learning was not planned, and the learning was combined with their previous knowledge and competence. The online learning tool as such did not produce the learning experience, but it was nearly always connected to previous knowledge and applied in a context.

There still remains lot of potential for management to manage more thoroughly the learning process. Many of the interviewees informed that they do the learning activities *"when they have the time"* and it was not set as a target.

4.2. Factors affecting the learning outcomes

Second research question focuses on the factors which have an effect on the learning outcomes. These were screened from the interviews through following questions:

1) How do you feel about learning though online media?
2) Which media do you feel most comfortable with? Can you explain why is that?
3) Which media do you feel most uncomfortable with? Can you explain why?

Other areas of discussion contained elements on the barriers and enablers of learning outcomes, and they are reflected here as well.

4.2.1. Introduction of findings

The interviewees mentioned several common barriers why the usage of online learning tools is difficult. Lack of time was mentioned; as it has been notified there is not effective measurements in place regarding learning online and therefore it is obvious that interviewees are not investing their time on learning online. Especially persons who already had gained experience and had good relationships with customers found it difficult to find time for online learning. This is of course related to the fact that the content of the current online learning material is basic rather than in-depth. One interviewee found it more beneficial to discuss directly with the customer when wanting to deepen their customer based knowledge rather than to spend their time on the computer:

"it's question of time, because lots of the discussion with the customer, I also get competence, sometimes it's not relay related"

"I don't very often during the work; you maybe take them later or something but it's a good tool."

Also the learning effectiveness does not support the time investment, because the interviewees already possess the basic knowledge that was available through the tools. This also resulted to the fact that lack of motivation was in place.

The interviewees also wanted to learn more hands-on practical things rather than just online. Practical learning was emphasised also in another comment in the interview data:

"when you meet with the customer and talk to them and they ask questions"

"we are discussing on things related to the [product]. That's very interesting and you learn also, and you meet the customer, like those are important. You learn in different way."

Internal motivation was seen as the major enabler when learning online. Personal interest on the topic creates motivation to learn more, and the management incentives do not play a big role in that case.

Motivation is definitely a key factor in successful self-directed learning; one interviewee informed that he does e-learning courses

"from pure interest, so I can see how it looks"

There is not any specific learning target in mind, but the topic in general is so interesting and the learner is so motivated that he is willing to take all information in what is possible. This aspect was shown in another interviewee's comment as well:

"Because when I talk to the colleagues from [another] factory in China he also mentioned about the R&D activity that XXX is taking place about the new insulation, that we don't use the SF6 anymore and then I read the information about the Hannover fair, where XXX introduced this. And that's why I had to find the video about it."

However, there was an example of lack of taking responsibility of own learning by a European employee:

"ok I hear what you say but we need the support line here"

In many occasions the questions sent to support line are rather easy, and the answers could have been found from the online learning material. If the person is not willing to invest the time in learning how to answer the question by themselves, or rather wants to learn through communicating with another person; this doesn't support the effectiveness of online learning.

Based on the interviews the major benefit of the online learning is that you can study them whenever you have time. This way the learner is able to plan their own learning process, as in self-directed learning framework it is defined to be done.

Cultural knowledge is something which is difficult to learn through online methods. One interviewee stated that for example in Saudi Arabia; you need to be very considerate that you know the cultural status of different persons and how you should behave with them. One interviewee had 3,5 years expatriate assignment there and he learned the culture by living in the country. Also the possibility of speaking the local language, even only a little bit, helps in getting settled in the country.

In the next chapters the tool specific features are discussed.

4.2.2. Webinars

Webinars were experienced to be a difficult tool to use mainly due to the uncertainty of participation:

"the WebEx is very difficult because you ask for many people to come and almost 20% 10% come and also they come very late. So it is very uncomfortable for me to make a webinar because of the attendance."

However, webinars were found to be useful to distribute onwards for example to the customers and they were found to be beneficial to use due to their interactive nature.

4.2.3. e-learning

Also e-learning was found to be a bit complicated, because it does not provide the hands-on knowledge what was expected to be achieved. Also the platform which is in use received some criticism, and people found it difficult to use. There was also lack of knowledge how to share the e-learning courses to customers.

4.2.4 Videos

Videos are found to be very effortless tool to use due to their independence of time and space. The user is also able to find the knowledge they acquire very fast. One interviewee had an example where he had prepared detailed instructions in an e-mail to a customer; explaining step by step how to do a certain function. The customer refused to read the e-mail, and the interviewee had to prepare a video on the same topic.

"So it was very frustrating when you are in the other side and trying to explain something that you are not seeing. So it's like guessing"

Videos were also utilized in marketing purposes during different customer events. They were played on screen during breaks, and lot of discussion aroused based on the video. This shows video to be an effective tool to raise communication in live events as well due to its high level of visuality.

4.3. Summary

Figure 7 summarizes the enablers and barriers discussed in previous chapters. Common enablers: motivation, not time dependent and cost-effective were mentioned. However there were counterclaims in the barriers section: for example lack of motivation and lack of time. This implies that the online learning has not standardized its role in the MNC, and there is lot of variation between individuals on how they use the tools and how they see the benefits. Lack of planning and identifying learning needs can be seen as one of the root causes why learning is not seen motivating or worth of time investment.

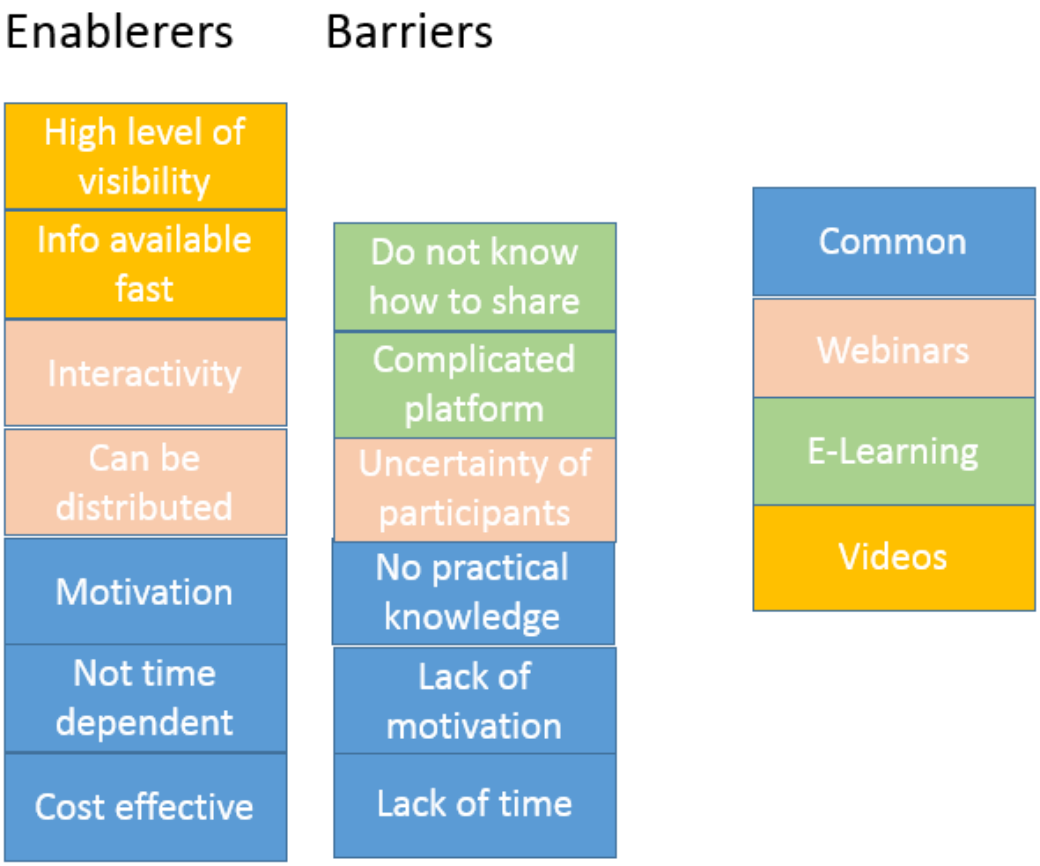

Figure 7. Summary of the enablers and barriers to online learning.

Webinars were seen mainly as positive, but e-learning had only barriers: "*complicated platform*" and "*do not know how to share*". If the platform is complicated it is not worth of the time investment and definitely if the user do not see the value in learning through e-learning, it is not worth of learning to use the tool. Videos were found to have only enablers: high level of visibility and info available fast. However, they are not utilized too widely in learning purposes, and therefore there is room for improvement.

As a summary, it can be stated that there is lot of potential available in the online learning tools and their effectiveness. At the moment it seems that the learners and the creators are not talking the same language, both figuratively and in practice. Back office creates material for product knowledge, which is already quite familiar to experienced personnel. More depth in the learning material is required.

5. DISCUSSION

The discussion chapter combines the literature review and the findings chapters. It will provide an insight how the empirical data is related to the theoretical findings, and whether the practice meets theory. The aim of this study was to find out how effective are different online learning tools in helping the local sales teams to develop solution and product selling knowledge, and in addition to find out how the various factors affect the learning outcomes and process.

5.1. The effectiveness of online tools in developing solutions and product knowledge

The learning effectiveness has been defined in the thesis as follows "when the behaviour of the learner changes". The study has included various different dimensions affecting on the effectiveness; starting from the organisational structure and learning climate and adding to those the individual's own dimensions as self-directed learning and accepting of the technology. Next paragraphs will conclude the literature and practical findings regarding learning effectiveness.

There is relative little amount of research available of the front-back organisational structure and therefore this research provides more of practical implications on how the organisation could be better utilized in order to improve the effectiveness of learning. The figure 8 concludes why front-back organisation was chosen in the case MNC: "*building customer intimacy and operational efficiency*". Both of these dimensions can be found from the case MNC's strategy as one of their value pairs state: "*relentless execution and customer focus & quality*".

Strategic Focus	Organizational Solution
• Leveraging subsidiary competence	• Differentiated network
• Fostering global optimization	• Globally integrated enterprise
• Building customer intimacy and operational efficiency	• Front-back organization

Figure 8. Configuring the Multidimensional Organisation (Evans, et al. 2011 p. 110)

In the case company the relentless execution includes the operational efficiency mentioned in figure 8. The front-back organisation structure supports operational efficiency by maximizing the global efficiencies and utilizing the leverage which global companies have. Local presence is essential in order to support the case company's strategical target: customer focus & quality. Customers value that services are available locally, and that they receive the services in their local language and accommodated to their culture, and infrastructure.

Galbraith (1997) placed three questions which the management needs to consider when considering the front-back organisational structure: "*Which functions are placed in the front and which are in the back? What is the balance of power between the front and back? What management structures and processes are used to link the front and back*?" Based on the interview data and the discussion related to the usefulness of online learning material it seems that the last questions are left in vague especially when discussing learning effectiveness. The management structure and processes regarding general business are probably better organised than the online learning content. This is a field which has a lot of potential when properly managed.

Brady et al. (2006) also discussed back-end, front-end, but he added the concept of strategic centre to the scope. The case company has combined strategic centre and back-end while front-end remains as a sales office. The combination of the strategic centre and back-end enforces the product-centric business culture, because the highest level of product competence is in the back-end and the customer knowledge lies in the front. This creates a paradox – how can back-end teach front-end customer-centric knowledge? By implementing a separate strategic centre as proposed by Brady et al (2006) could be considered to bring some further advantage. It could act as intermediator between front and back by combining the product and customer knowledge and to transform it to solutions knowledge.

Zellmer-Bruhn and Gibson (2006) also discussed the organisational set-up, but they excluded the strategic centre. Their conclusion was that local responsiveness versus global integration does have an effect on learning. Local responsiveness increases

independence on front offices, which can cause conflicts between back and front, and the communication might not be so effective due to possible internal competition (Galbraith, 1997). The internal competition was not mentioned or studied in details during this research and this might be a relevant topic for further research. The independence mentioned in the local responsiveness can also cause lack of communication between front and back which is essential since the front possess relevant customer knowledge which in turn is needed in the back in order to be able to create proper online training material.

The organisational set-up influences on the learning climate which in turn has a direct effect on the effectiveness of learning. Learning climate as Nikolova (2014) has introduced includes three different dimensions: facilitation learning climate, appreciation learning climate and error-avoidance learning climate. The interviews showed that in front offices no targets were set on tacit skills learning; this obviously does not increase the motivation in learning online. However, in the back side of the organisation there are personal targets on completing online learning courses, but this as such does not necessary lead to effective learning. It is though a starting point to encourage a positive facilitation learning climate which supports individual's learning.

Dardan (2009) discussed the learning climate and its relation to learning effectiveness by bringing up the international dimension. His study came to a conclusion that learning effectiveness and learning climate relation is more positive in individualistic countries than in collectivists. In this study, the interviewees came from both type of countries. Indonesia's individualism score is 14 while Sweden's is 71 in a scale from 0 – 100 (Hofstede, 2017). This implies that in Sweden the learning climate is in more essential relation with the learning efficiency than in Indonesia. The research did not focus specifically on this relationship, and due to limited data it will not be discussed further. However, this is something which could be beneficial to understand when developing the online learning material in an international environment.

Considering the first research question which discusses the effectiveness of different online learning tools it can be concluded that the organisational set-up does not support

the effectiveness by having overlapping roles in front-back, and missing learning targets and follow-up. Missing learning targets and follow-up have an effect on the learning climate, and they have an effect on the self-directed learning. The organisational set-up also has a negative effect on the distribution and creation of solution selling knowledge due to unclear roles and responsibilities.

The definition of tacit and explicit knowledge as presented by Cabrera et al. (2002) concludes well the dilemma between product-centric and customer-centric organisation structure (front-back): Front possess the tacit knowledge, while explicit knowledge on the products is in the back of the organisation – although the responsibility of training the local sales units to sell is given to back side of the organisation.

Learning outcomes are not measured in similar manner than the execution of the learning material. The management does not place an emphasis on follow-up what the learners have learned. The emphasis is on the completion of a particular course, or webinar or video; not really on the outcome. Also the difference on the follow-up varies between different parts of the organisation and even between different managers. If the case company would be able to synchronize the follow-up on learning outcomes this would have a direct impact on a positive learning climate, which in turn would increase the effectiveness of learning. However, there are differences in the different parts of the organisation on how the target-setting is managed, but the learning efficiency is not followed-up either in front or back.

When transferring the focus from the organisational dimension to the individual's dimension it can be concluded that online learning needs all the required dimensions in self-directed learning as proposed by Garrison (1997): self-management, self-monitoring, and motivation. For example, the employee from Argentina summarized his self-management and motivation as follows*:*

"when I'm learning I always try to use the webinars to make questions"

He also emphasized that it is important to do the pre-work before any training in order to be able to do the questions. He showed an extreme level of self-management, self-monitoring and motivation which supports his learning outcomes. However, the result was not consistent among all the responses so no generalization can be done in respect the level of self-directed learning in the organisation.

One of the core dimensions of self-directed learning is self-management (Garrison, 1997). The interviewees seem to lack of self-management skills in relation to online learning as they do not have clear targets in mind when starting the learning process. However, in order to gain learning effectiveness it would be important to set targets for learning. Self-management as Garrison (1997) has defined it, has room for improvement. It can be said that interviewees were not greatly self-directed in their learning, although this approach would create better possibilities to utilize online learning tools more effectively. Videos are mostly used for a particular learning purpose, and with a clear target in mind – therefore the utilization of videos in learning purposes could be exploited more.

The nature of the knowledge plays also a role and in this thesis the focus is on tacit knowledge consisting of solutions selling knowledge. Generally literature is doubtful in successful transfer of tacit knowledge through online methods. Nonaka and Takeuchi (1995) have discussed in their research that tacit knowledge can be shared only when sharing mutual experience base. That was also one key finding from the study; when learner had previous background and knowledge he was able to apply the knowledge gained from online learning. For example in facing the customer, the online material was often utilized in presentations, but it was just a basic introduction and additional information was given based on the sales person's competence.

There seems to be a lack of solutions selling –oriented learning material. Solutions selling defined by Rada and Vandermerwe (1988) consist of concept called "servitization" which includes solution packages offered to the customer. This business requirement has been identified also in the study's MNC, but creating such learning

material requires more thorough co-operation between the front- and back parts of the organisation. The knowledge loop from front to back should be re-enforced in order to enable creation of solutions-oriented learning material. The organisational culture in front and back seem to be quite distant, although attempts have been made to bring them closer for example with the Value Based Selling e-learning courses which were mentioned by one of the interviewees. By combining the knowledge from both parts of the organisation the learning material could reach its next level and it would enable creation of new knowledge. It would give the back part of the organisation valuable knowledge of the customer requirements, and combining them with the product's features would most probably unleash the full potential of the offered solutions.

Also the dispositional factors (beliefs, attitudes, confidence) as presented by Merriam, Caffarella (1999) et al. plays a major role when relating them to self-directed learning and UTAUT. Based on the interview data it can be concluded that the younger generation was more willing to utilize the online learning material, while the older generation did not plan it as effectively as they could have done.

Trust has been identified to play an important role in tacit knowledge transfer (Zimmermann, 2011: 66-67). However, the online learning limits the trust building and as a result if limits the effectiveness of the learning.

Trust was introduced as one core element of successful knowledge transfer, and especially the term "swift trust" (Meyerson, Weick and Kramer, 1996) is supported by the interview data. Online learning material is created by the technical experts in the back office, and due to their global responsibility they have gained the substance required to build high trustworthy material. This was also supported by the interview data, as few stated that they do not have any issues with the provider and they do not question the content.

The question and answer session commonly integrated in the end of the webinar session is the most valued part of the webinar since many of the interviewees brought that up.

This can support the transfer of tacit knowledge as online learning environment can provide a "ba" as suggested in Nonaka et al's (1998, 2004) research.

Richness of channels was found to be one success factor in knowledge transfer (Kwok, et al. 2005, 2006) as stated in the literature chapter. Especially online learning support the variety of channels due to its independent nature.

As a summary, the learning effectiveness takes place when the learner has clear targets, the management supports the learning, and the learning material content is on the right level. Especially the learning material content did not meet the requirements due to its high product-oriented nature

5.2. Factors affecting on the learning efficiency

Falconer (2006) introduced the learning cycle, which proposes that tacit knowledge is possible to learn in the first two steps of the cycle: knowledge acquisition and reflecting and processing. The learning cycle is presented in figure 4. However, it proposes that tacit knowledge has to be made explicit until it can be transferred, and the transformation is done during the second phase of the cycle. This is one example from the literature showing that there are strong doubts that it is possible to learn tacit knowledge without transferring it to explicit. The MNC studied in the thesis has not done any attempts on transferring tacit knowledge into explicit, but majority of its focus has been on the explicit knowledge. However, it could be worth of identifying in more detail what type of knowledge is considered to be beneficial for the front part of the organisation in order to improve the learning efficiency. There are also other studies stating the same conclusion: tacit needs to be made explicit (Jensen, et al. 2007; Nonaka et al. 1995).

As successful tacit knowledge transfer requires trust (Spender, 1999) the organisational set-up might cause challenges as Zellmer-Bruhn and Gibson (2006) have declared. The attempt to utilize the local responsiveness and global integration might create tensions between front and back by increasing the level of independence in the local organisations. (Zellmer-Bruhn, et al. 2006). There might be reluctance to share the knowledge

from front to back due to power nominations in the organisation. Internal competition can cause conflicts.

Learning climate acts as a foundation for effective learning (Nikolova, 2014). It enables the motivation to learn, the positive atmosphere for learning and engagement in learning activities. Based on the interviews it can be seen that the learning climate is not optimal for online learning as the interviewees lack self-directed learning skills. In addition the atmosphere for learning should be scrutinised in more detail; this research claims that on the surface the atmosphere is positive, but in reality the interviewees found difficulties to nominate time for learning. However, this statement can be criticised due to the interviewee sample which consisted of experienced sales personnel. The lack of more advanced online course material might reflect on the positive learning climate regarding online learning.

The MNC's international business environment and the fact that back and front parts of the organisations are geographically dispersed can cause challenges to the learning effectiveness. For example, Im et al. (2010) has studied that there are cultural differences in the adoption rate of IT. This statement was not evident in this research, perhaps mostly due to the organisational culture and the high-technology nature of the company.

From personal perspectives, motivation is seen as one part of self-directed learning (Garrison, 1997), but the lack of personal targets, and in some cases management's commands "just do the course" did not increase the motivation. As mentioned in the previous chapter – the content introduced in the learning material did not meet the requirements of the learners, and this could be seen as one of the major reasons why the level of motivation was not high.

The interviewees however appreciated highly the fact that online learning can be done at your own pace, and when you have suitable time. Self-management of the learning was not done in intention, but "whenever I have time", and the interviews showed that there is not too often time.

Planning of when doing the online learning is also a critical element in the effectiveness, and part of self-directed learning framework. The interviews did not show that planning for online learning was the dominating factor; it rather showed that learning is done when needed and on ad-hoc basis.

As Garrison (1997) has stated: self-discipline is one of the key dimensions. The existence of self-discipline was shown in the interview data; for example following statement was made:

”but it requires a lot of self-discipline as well, if you want to learn new stuff”

An interviewee from Argentina also claimed that online learning is not the best way to learn how to use hardware:

“*But if you are learning hardware, I think you must go to yourself and touching the things, it [the e-learning] has nothing to do with the hands-on practise. For hardware, for hands-on it is the only way."*

UTAUT also discusses the facilitation of use of technology, and this definitely plays a role in effective learning. If the infrastructure does not support the learning, it is nearly impossible to learn online. Online learning and the infrastructure was not seen as a constraint at least not in Europe. However, globally this possess a possibility to decrease the learning effectiveness and the use of technology. Not all countries and continents are on the same level infrastructure wise.

Venkatesh, et al. (2003) introduced the Unified Therory of Acceptance and Use of Technology (UTAUT). The framework which combines eight theories the role of language was discussed and seen one of the constraints in facilitating online learning. The language dimension was also discussed in the interviews and seen as a constraint in effective learning transfer. Especially in countries where English language is not

majority's language, not even as second language, the material had to be translated in to local language and the message might disappear or change during this translation process.

As a summary regarding the factors affecting the learning effectiveness could be concluded that the motivation level could be improved by more efficient management and more targeted content. There is also space for improvement in the time management skills in order to better plan the learning process. The infrastructure and the general acceptance of technology does not show any significant limitation on the learning effectiveness.

6. CONCLUSIONS

This chapter concludes the thesis and summarizes the main findings. It also discusses the limitations of the research. During the research process some research areas were found to be poorly studied, therefore implications for further research is also discussed. Practical implications are included as the research is highly practical in its nature.

The research questions about the effectiveness of online learning tools and the barriers, enablers for the effective learning have got their answers in the scope of this study and these will be summarized in the next chapters.

6.1. Main conclusions

The online learning tool effectiveness especially related to solutions selling and in sales organisation has many dimensions which influence on the desired outcome: changed behaviour due to learning experience. In the thesis the scope has been outlined to consist of the organisation structure (front, back), learning climate, online learning tools, self-directed learning and the acceptance of the technology.

6.1.1. Organisational structure

The organisational structure introduces various challenges to the online learning and its effectiveness: communication, product-orientation and power nominations within the organisation. Also the managerial practises could add more value on the learning effectiveness.

Communication is a challenge in complex organisation set-up and especially when the online learning content should include tacit knowledge. The power nominations within the organisation do not support the efficient communication, because the learning needs seem not flow from front to back. Back part has the global responsibility of the product, but the solutions knowledge should be a combination of customer specific knowledge and the product knowledge. The front part of the organisation understands the customer, and this knowledge should be shared with the back part of the organisation. Lack of

strategic centre who acts as an intermediator between front and back can cause more confusion, because back part needs to combine several roles. To summarise: the knowledge loop between front and back should be strengthen in order to be able to combine the customer specific knowledge with the product knowledge and as a result create solutions specific learning content.

Although the online learning content as such was not part of the research scope, it is relevant to discuss few issues related to that. It has a direct connection with the organisation set up. Due to the power nominations and the fact that back part of the organisation is responsible of learning content creation; the learning content was highly product-oriented. This in turn is intertwined with the knowledge loop, and lack of sufficient customer knowledge in the back part of the organisation.

Managerial practises should include more clear targets and follow-up on the learning quality. In front part of the organisation there is no official follow-up on the online learning, and in back part the follow-up is mainly focusing on the completion of a specific online learning course. The MNC apparently has efficient processes in place regarding business, but could improve the processes regarding learning. As a summary for managerial practises: the general set-up of processes and organisation does not support the effectiveness of learning.

6.1.2 Other factors effecting the effectiveness

The organisational set-up does have an effect on the learning climate, which in turn reflects on the self-directed learning. During the interviews it was apparent that the organisation supports learning in theory, but however in practise it seems that personnel had difficulties to find time for learning. This was an interesting finding, and shows that there is still room for improvement in enhancing the learning climate. The managerial practises definitely plays a role in enhancing the learning climate as was mentioned in the previous chapter.

The interview sample was chosen by business value, and therefore it might not have been the most optimal sample for the purpose of the study. However, it provides a guideline how the development of online learning tools could be continued. The interviewees were mostly experienced sales persons, and this reflects on the depth they were able to utilize the online learning material. They were able to put the learning in context. For example when watching a "how to video" they were able to explain the similar content to the customer in a different context. If a junior sales person would try to do a similar action, it most probably would have bigger possibilities to fail.

As the managerial practises did not really support the self-directed learning, it did not seem to be on a very high-level. Generally, self-directed learning could be improved by better planning and target-setting and more proper follow-up from the management perspective. All the theories presented in this thesis are related to each other and by starting with the organisational set-up and moving towards to improving the online learning climate could result to a more advanced self-directed learning skills. However, the self-directed learning skills require motivation, and motivation needs allocated material and productive time investment.

One of the themes identified when analysing the interview data was customer requirements. This has not been covered in much depth earlier, but it is relevant to discuss this aspect in brief. Quite often the need for changes in business environment comes from changing requirements from the customers, and as MNC is going through a change from product to solutions business this results a need for change also in the learning processes. Customers are placing more complex requirements, and at the same time their own competence becomes more generic due to outsourcing, and they rely more on the suppliers' expertise. The MNC, and any other company, exists because of the customer, and this notification should be taken seriously. Customers rely on competence, and those who have it and are able to utilize their knowledge base most efficiently will be the winners in the race.

6.1.3. Barriers, enableres of effective online learning

Time was seen as a barrier, but also as an enabler for an effective learning experience. Lack of time was seen as one of the main barriers to utilization of online learning tools. On the contrary, time was seen one of the main benefits of learning online. Learning activity is not limited to space or to a specific time.

The barrier of finding the time for learning is resulted from the learning climate, and the self-directed learning skills. If the persons' competence consist of strong time-management skills, clear learning targets and management support, the time would most certainly be available for learning.

The organisational structure effects on the learner's expectations as well. During the interviews it was apparent that learners were not expecting to learn nothing but product related knowledge through online learning. This reflects to the transformation the MNC is experiencing: from product to solutions. The organisation might not yet be ready to utilize online learning for tacit knowledge. If the knowledge loop between front and back will be strengthen and the customer knowledge (tacit) would flow more freely to the back, there would be better possibilities to create solutions related learning material.

Utilization of different tools for online learning did not provide any major differences. Usage of videos and webinars were more self-directed than e-learning courses. Management seem to use the e-learning courses as the main media for online learning. However, they follow-up on the completion of a specific course, not really on the quality of learning.

The MNC's official language is English, and therefore it is the language used in online learning tools. However, English is not very well spoken in all countries and within all target groups. This results to a limitation in learning and requires translation resources from the organisation.

Usage and acceptance of technology did not show any major significance related to the learning effectiveness. The MNC is a high-technology company, and it is assumed that everyone is capable of using and accepting the technology. This was apparent also during the interviews.

6.2. Limitations of research

The interviewees were all experienced sales persons. This most probably had an effect on the learning motivation due to the not-relevant content of the learning material. The result might have been different if the interviewees were newcomers to the company.

The research could have benefited more thorough discussions on the knowledge loop between front and back especially regarding tacit knowledge. In this research the discussion was mainly related on the surface: how people perceive the learning material and how they utilize it.

6.3. Implications for research

The organisational structure and online learning effectiveness was very limited in available research; especially when focusing on the practical implementation of the organisation structure in a MNC. The front-back set-up needs more research, and it would most probably benefit a lot global companies who are aspiring to get most benefit out of the cost-effective online learning media. Also the front-back and learning climate combination was scarce in research. They are closely related and have an effect on each other, so it would provide an interesting insight to a MNC.

The apparent poor communication loop between front and back has potential for further research especially regarding solutions selling and transferring customer specific knowledge to the back part of the organisation.

The studies have shown that lack of communication between front and back can result to internal competition. Zellmer-Bruhn, et al. 2006 discussed that local part of the organisation (front) will benefit from independence in relation to local responsiveness.

This topic might be interesting for further research: Local responsiveness and its effects on internal communication.

Trust plays a role in transferring tacit knowledge, and research has shown that earlier relationship is needed in order trust be present. Trust was not studied in detail in this research and therefore it could have potential for further research. How does trust effect on the online learning effectiveness?

Knowledge and knowledge transfer has gained popularity among research field, but many of the researchers have suggested that tacit knowledge should be made explicit if transferred online. Can tacit knowledge then be a competitive advantage or has it become explicit and can be copied? Perhaps further research could be nominated especially on tacit knowledge and online learning in order to find ways to make it possible.

When looking at the practical execution of the delivery of online learning through utilization of different tools, it can be said that videos have most potential to be unleashed. Videos were found to be precise, spot-on training events. However, regarding solutions selling it is not clear how videos could be utilized. Therefore more research on this topic might be beneficial, because the learners impression on videos were positive.

6.4. Implications for practice

One of the main findings was the fact that management did not follow-up on the learning quality. The back part of the organisation did place targets on execution of online learning, but not on the learning result. By mechanically completing the course the learner might not gain any new knowledge, but he is only performing an action which completes the required course. The awareness of substance gained will remain unknown.

The management practises would also help in developing the self-directed learning skills. By nominating time for relevant online learning would help in better utilization of the online learning material and gaining the full benefit of it.

The knowledge loop between front and back should be improved, and it can even be reconsidered whether the solutions selling competence should be taught horizontally: from front to front. Lack of separate strategic centre also seems to have an effect on the learning effectiveness, especially regarding solutions selling. Perhaps a strategic centre which is closer to the customer than the back-part of the organisation could be more efficient in collecting the customer-specific information and distribute it to the front and back.

If the power nomination remain untouched, and the global product responsibility stays in the back part of the organization, the knowledge loop between front and back should be radically improved. The strengthening of knowledge loop would benefit also the creation of learning material especially regarding solutions selling. If the back part of the organization creates the learning material they need more information on the customers in order to be able to apply the knowledge on product context. However, establishing a separate “strategic centre” as Brady (2006) has proposed could create a further advantage.

The cultural differences cannot be ignored when talking about learning effectiveness. Comparing the Hofstede’s (2017) collectivism versus individualism rates could benefit the creation of learning material in an international environment.

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APPENDIX 1 Contacting the interviewees

Hello!

I work as a Training manager for MVP in Finland. I'm doing master's thesis on international business. My thesis topic is concentrating on how xxx is able to teach online different skills.

I need to interview one of you during weeks 9 or 10. Any volunteers? Duration is max 1 hr and will be done through Skype. Interview will be recorded, but is confidential.

There are two prerequirements:
You work in Sales and you have done some of our e-learning courses, or attended webinars.

Appreciate if you could let me know if you are willing to participate by Tu 28 Feb. We will then agree on specific time.

Thank you for your support!

Br,
Marjo Keturi

APPENDIX 2 Info given in the calendar invitation

Hello,

thank you for accepting. Here are the topics we will go through:

1) your organisational position and work description
2) requirements from the customer – are they changing and how?
3) Skills needed in facing the customer requirements?
4) Online training – does it meet the needs of the customer requirements and selling skills. We will go through each tools separately (videos, e-learning courses and webinars). I will ask you to tell me about your experiences on each tools, and your experience if the tools has helped you gain skills which are needed in your work

There is no right or wrong answer, I am only interested in your opinion and experience.

Br,

Marjo

APPENDIX 3 Semi-structured interview questions

Explain the purpose of the study in the invitation.

1. gender, age, country, organisation, employment duration
2. What is your brief work description?
3. What are the expectations from your management regarding sales work? Are you expected to sell products or solutions? Can you elaborate more.
4. Definition of terminology:
   webinars – presentations / meetings in web.

   how to videos – short videos which elaborate eg. how to configure a relay

   e-learning courses – an online course containing presentation, quizzes etc.
5. Which of these toolss have you used in respect of protection relays?
   a. how to videos
   b. e-learning courses
   c. webinars
6. How often do you utilize these training toolss
   a. how to videos
   b. e-learning courses
   c. webinars
7. Does your management place expectation on learning online?
8. Do you find the infrastructure (solid network, mobile usability etc) to support your learning virtually?
9. Why do you use the online training material?
10. What have been your objective(s) when taking the course/attending the webinar/watching the video?
11. Have your objective(s) been met?
12. Did you learn something you were able to utilize in the future? What was that?
13. Can you give an example of a sales situation where you utilized the knowledge from the online tools.
14. How do you feel about learning though online tools?
15. Which tools do you feel most comfortable with? Can you explain why is that?
16. Which tools do you feel most uncomfortable with? Can you explain why?
17. How do you feel about the DA Vaasa factory who is providing the online learning material? Do you find their competence trustworthy?