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School of Business and Management
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Master's Thesis

E-orientation: Implementing E-learning in New Employee Orientation
E-perehdyttäminen: e-learningin hyödyntäminen uusien työntekijöiden
perehdyttämisessä

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ABSTRACT

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<p>E-orientation is an electronically supported learning process for the familiarization of new employees. A qualitative case study is based on interviewing new employees that have been familiarized through e-orientation and employees that have developed the e-orientation program in the same organization. Analysis reveals that there are multiple factors that organizations must consider when implementing e-orientation.</p> <p>E-orientation increases flexibility, learner independency, time efficiency, distribution possibilities, user satisfaction and cost savings, and enables automating the process of following up newcomers' orientation progress, but the creation of an e-orientation program takes resources and effort, it may decrease learning outcomes and the amount of interaction, increase the need to follow up, and it can't be used as the only method to conduct orientation.</p> <p>When implementing e-orientation, organizations must consider the pros and cons in their context, reserve adequate resources, use plenty of effort, utilize the expertise of multiple people, carefully plan how to implement new practices, be prepared to utilize also face-to-face training, and make choices regarding the technical realization, time aspect and learning material. After e-orientation has been implemented, the outcomes and consequences should be evaluated on individual and organizational levels.</p>	

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<p>E-perehdyttäminen on elektronisesti tuettua uusien työntekijöiden perehdyttämistä. Kvalitatiivinen tapaustutkimus perustuu e-perehdyttämällä koulutettujen uusien työntekijöiden ja e-perehdyttämisen kehittämisestä vastanneiden työntekijöiden haastatteluun. Analyysi paljastaa, että on olemassa monia eri asioita, joita yritysten tulee huomioida e-perehdyttämisen implementoinnissa.</p> <p>E-perehdyttäminen lisää joustavuutta, itsenäisyyttä, ajallista tehokkuutta, oppimismateriaalin jaettavuutta, käyttäjätyytyväisyyttä ja kustannussäästöjä sekä mahdollistaa perehdytysprosessin seurannan automatisoinnin, mutta e-perehdytysohjelman luominen vaatii resursseja ja panostusta, oppimistulokset voivat huonontua, interaktion määrä vähenee, seurannan tarve lisääntyä, sekä e-perehdyttämistä ei voida käyttää ainoana perehdyttämisen muotona.</p> <p>Implementoidessaan e-perehdytystä organisaatioiden tulisi arvioida hyötyjä ja haittoja omassa kontekstissaan, varata tarpeeksi resursseja, panostaa kehittämiseen, hyödyntää monien eri henkilöiden ammattitaitoa, suunnitella tarkasti uusien toimintatapojen käyttöönottoa, varautua kouluttamaan myös kasvotusten, ja tehdä päätöksiä liittyen tekniseen ja ajalliseen toteutukseen sekä oppimismateriaaliin liittyen. Implementoinnin jälkeen lopputulemia ja seurauksia pitää arvioida sekä yksilö- että organisaationäkökulmasta.</p>	

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“Life without knowledge is death in disguise”

~Hans Peter Geerdes

Imatra, 31.8.2017

Anniina Kujala

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1. INTRODUCTION

Almost every organization has to deal with the same problem regardless of the industry, size or type of the organization; and that problem is how to effectively train and familiarize new employees to be able to successfully perform in their work tasks, and to become valuable resources to the organization. Organizations need to constantly hire new employees to sustain, and these new employees need to be trained to be able to work towards achieving the organization's goals (Antonacopoulou & Güttel 2010, 5). New employees enter organizations on a constant basis, which means orientation processes are repeated countless times during an organization's existence, which takes a lot of resources, including time, money, and facilities.

Education can sometimes fail to adequately teach students how to apply theoretical subject knowledge in real life situations, which leads to problems for employers, as even excellent students and experts may have difficulties in applying their knowledge and problem-solving skills in their work (Mandl et al. 1994, 40). Organizations must excel in familiarization training to ensure that newcomers are able to do the work they are hired for. Formal orientation training is used by most organizations and it is one of the most common types of training programs in organizations (Saks & Ashforth 1997, 433; Bassi & Van Buren 1998, 21). Despite the widespread use, there has been only little research on orientation training programs, and academic literature is especially lacking in examining the impact of these programs or figuring out the most appropriate structure for these programs (Wanous 1993, 137; Klein & Weaver 2000, 48).

Orientation has been researched by e.g. Holton (1996), Davis & Kleiner (2001), Sanders & Kleiner (2002), Kjelin & Kuusisto (2003), Giacalone (2009), Kupias & Peltola (2009), Irwin (2011) and McNeill (2012). However, as current research has been mostly focusing on psychological and sociological perspectives, there is a clear need for more studies conducted from organizations' point of view (Antonacopoulou & Güttel 2010, 6-11). Current literature on organizational orientation is mostly consisting of practical guidebooks, and the theoretical literature and empirical research is still rather scarce on the subject (Ketola 2010, 72). For

example Feldman (1981), Ostroff & Kozlowski (1999), Saks & Ashforth (1997), Klein & Weaver (2000) and Bauer et al. (2007) point out that more research is needed that examines orientation training in organizations, in order to assist organizations in implementing the best orientation practices (Dai et al. 2011, 166). Even though the importance of newcomer training and staff orientation is recognized by organizations, the familiarization process is neglected to a surprising extent in many companies (Kjelin & Kuusisto 2003, 14). Companies may use a lot of time to acquire and hire new employees, but when the work starts, newcomers may be hung out to dry, even though they are expected to perform well in their work from the beginning (Smith & Mazin 2004, 61). Negligence of orientation may be caused by the fact that it takes plenty of resources, time and effort from the new employees and their colleagues, mentors, and supervisors to successfully conduct orientation.

One way to increase the efficiency of learning in orientation programs is to utilize e-learning and computer-based tools (Jochems et al. 2004, 9). Traditional teaching and training methods may not always work in a business environment, but technological tools and e-learning make learning more flexible to suit various needs of employees (Barab et al. 2000, 14). There are several reviews that have been published on e-learning, e.g. those conducted by Salas et al. (2002), Strother (2002), Burgess & Russell (2003), Kosarzycki et al. (2003), Welsh et al. (2003), Derouin et al. (2005) and Falconer (2006), but the existing research in organizational settings is still scarce, as the majority of e-learning studies research the subject in educational environments. As organizations and schools have fundamental differences, research findings from educational settings may not be applicable to organizations (Derouin et al. 2005, 934-936). There is a substantial need to study e-learning further especially in organizational settings to make it more effective, attractive and efficient (Jochems et al. 2004, 8), as well as to increase understanding on what situations e-learning suits best and how to ensure e-learning's effectiveness in those cases that it is being used (Welsh et al. 2003, 252).

In recent years, the development of virtual tools and e-learning platforms has allowed the emergence of a new way to train and familiarize new employees: e-orientation. In e-orientation, web-based tools are used to make the process of new

employee training more resource-efficient and less time consuming for trainees and mentors. Virtual tools enable customized and flexible learning as newcomers can go through e-learning material in a pace that suits them the best, and e-learning platforms enable newcomers to learn more independently without the presence of a teacher. Even though both orientation and e-learning have received some attention in research as separate entities, these two subjects have not been researched enough together in organizational settings to find out more on how e-learning can be utilized in orientation. It is however important to research this matter, as newcomer training through the utilization of computer-based platforms can tremendously increase the efficiency of training, save resources, and enable the creation of customized learning paths.

1.1. The aim of this research

The aim of this research is to shed more light on e-orientation, i.e. the utilization of e-learning in new employee familiarization. The aim of this Master's Thesis is ultimately to establish a useful framework and theory regarding e-orientation, as the subject has not been previously researched thoroughly. This study addresses the current research gaps on orientation, e-learning and especially e-orientation and clarifies what factors organizations needs to consider when implementing e-orientation practices. This research examines the advantages and disadvantages of e-orientation, and what needs to be taken into consideration prior, during and after e-orientation has been implemented in order to improve e-orientation programs. This research also provides a conceptual framework for e-orientation implementation that can be utilized by academics to study e-familiarization further, or by practitioners who are in need of a framework when implementing e-orientation programs in organizational settings.

1.2. Research problem and research questions

There exists a research gap regarding the utilization of e-learning tools in new employee familiarization, despite a few studies that have covered the subject (e.g. Ketola 2010, Johnson & Senges 2010, and Stein 2013). Even though regular training in organizations has been researched from the point of view of utilizing e-learning tools, e-orientation requires its own research as there are major differences

between normal training and newcomer training, as newcomer training heavily impacts newcomers' organizational commitment, newcomer training is repeated every time a new employee is hired, familiarization needs to suit the newcomer's unique learning needs, and the effectiveness of new employee training affects the organizations' ability to hire and train new people (Klein & Weaver 2000, 52; Davis & Kleiner 2001, 43; Kjelin & Kuusisto 2003, 178; Antonacopoulou & Güttel 2010, 5).

The research problem is that there is not enough knowledge on how new employee training through e-learning tools should be conducted in organizations, and there is no existing framework for organizations to utilize when creating e-orientation learning material or an e-orientation program. The existing theoretical literature and research on e-orientation is still scarce, and there is a need to develop a deeper understanding on how virtual tools and web-based courses can be used in training new employees and familiarizing them to the job, the organization and its culture, values, norms, and strategy. There exists a lack of research on e-orientation which should be covered for academic and practical reasons. This research provides a comprehensive outlook on what factors should be taken into consideration when organizations implement e-orientation by providing answers for the following research questions.

The primary research question is:

How to implement e-orientation in new employee familiarization?

The supplementary research questions are:

What are the advantages and disadvantages of e-orientation?

What factors need to be taken into consideration prior to implementing e-orientation?

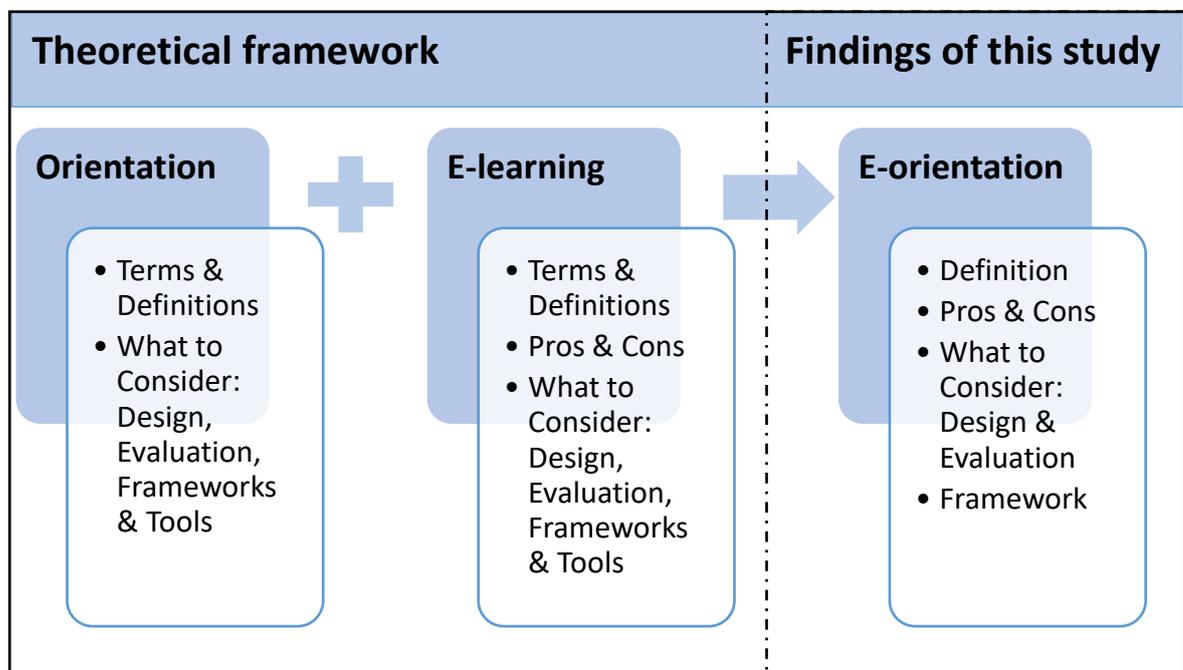
What factors need to be considered in the design and development of an e-orientation program?

What needs to be taken into consideration after the implementation of an e-orientation program?

1.3. Theoretical framework and key concepts

Regarding e-orientation, the existing literature is scarce as only a few studies have covered the subject of using computer-based tools in orientation. Thus, the theoretical framework of this study is created from the combination of orientation and e-learning. Orientation and e-learning are examined by presenting the most important terms and definitions, how orientation and e-learning should be planned and implemented in organizational settings, how they should be evaluated, and what kind of frameworks and tools exist for them. In addition to these, the pros and cons of e-learning are presented. The theoretical framework is presented visually in Figure 1. Based on analyzing of these two entities together, it is possible to develop a deeper understanding on e-orientation. The theoretical foundation, combined with the results from empirical analysis, will create a framework for e-orientation, which can be used by academics and practitioners.

Figure 1. Theoretical framework and its contribution to the empirical research section and findings of this study



The key concepts of this study are orientation, e-learning, and e-orientation. Orientation is a process, in which the organization helps the new employee to settle in to the new work environment by enabling the person to become socially

embedded in the organization (Robbins 2002, 8); and teaches the newcomer the objectives, responsibilities, and tasks of their work as well as the aspirations of the organization, so that the newcomers are able to perform well in their work (Lepistö 2000, 63). Orientation can also be referred to as e.g. familiarization or staff induction, and overall the process is being referred to by different terms with slightly different meanings.

The term e-learning is still relatively new, and there exists many comparable terms. E-learning is dominating as the term of choice in organizations, even though it is sometimes referred to as online learning, distributed learning, technology-enhanced learning, computer-based learning, or web-based training (Welsh et al. 2003, 246). E-learning can be defined as learning that utilizes Internet in the delivery, support, administration and assessment of learning (Kirschner & Paas, 2001, 350). Tavangarian et al. (2004, 274) define e-learning as all forms of electronically supported teaching and learning processes, which aim to construct knowledge by utilizing learner's experience, knowledge and practice by using specific information and communication systems to implement the learning process.

By combining the definitions of orientation and e-learning, e-orientation is an electronically supported learning process for the familiarization of new employees to the job, working environment and/or the organization, that aims to construct job related knowledge and support the newcomer induction process through computer-based training. E-orientation means the utilization of e-learning techniques, virtual tools and computer-based programs in familiarizing new employees to the organization and the work tasks.

1.4. Research setting and methods

This study was conducted as a qualitative case study. A case study is a form of empirical research, which focuses on examining a case in its real-life environment and gathering comprehensive data by observing real-life situations (Hirsjärvi et al. 2009, 155; Metsämuuronen 2000, 90). The observed case of this study is a large Finnish industrial company, and more specifically the e-orientation program of this organization. The case organization provided an intriguing setting for this research,

as it had recently started to utilize e-orientation programs on a larger scale for new employee training. The case organization will remain anonymous in this study.

Empirical material was gathered by interviewing seven employees; five of which were new employees that have been familiarized with e-orientation, and two of the interviewees represented HR employees that have participated in the design and development of the e-orientation courses and learning material. The interviews were individual and semi-structured, which means the same themes were discussed in the interviews, but there are some minor differences in the formulation and arrangement of the questions (Ruusuvuori & Tiittula 2005, 11). In order to study e-orientation from multiple perspectives, interview framework was divided into two distinct sections: interview A was conducted for employees that were familiarized to their work through an e-orientation program; and interview B was conducted among employees who participated in the e-orientation development project. The framework for the interview questions can be found in Appendix 1.

The empirical material gathered from the interviews was divided into distinct themes and analyzed in those themes. The academic literature and theoretical framework was used as a basis for the analysis, and the empirical material of this study was analyzed by reflecting and evaluating the interviewees' opinions and the findings from other studies presented in the theoretical literature review. Based on the findings from the analysis, results of this study were written as well as the conclusions and main implications.

1.5. Structure & limitations

This research will not focus on researching e-learning and orientation as separate entities, but rather as a combined set. The aim of this research is to create new knowledge on e-orientation by combining the existing knowledge on two separate fields of research. This study will contribute into developing e-learning and orientation research further by guiding the path into researching e-orientation, a new field of research. The limitation of this study is that it does not focus on developing new e-learning or e-orientation tools, but rather gives a general outlook on e-orientation's current state. The focus of this study is to examine e-orientation from

the viewpoint of general staff induction, and this research will not concentrate on specific job guidance practices but will rather analyze the general orientation and staff induction that is given to all employees of the same organization.

This study will not shed light on various e-orientation practices, as the interviews were conducted in only one organization, so e-orientation is examined only from the basis of one company. This research will not provide a detailed list of things to do when implementing orientation, but rather presents a set of general steps to be followed and taken into consideration when implementing e-orientation in organizations. This study does not attempt to create a model for implementing e-orientation in all situations, as e-orientation implementation heavily depends on the context and job-related factors that need to be considered in addition to the more general issues presented in this study, but rather gives broad guidelines on what to consider in e-orientation implementation.

The structure of this study is as follows: first, in the introduction section the aim of this study, research problem and research questions, theoretical framework, research method, limitations and structure of this study are presented. Then the theoretical literature is reviewed in distinct sections of orientation and e-learning. The theoretical literature on orientation and e-learning are gone through by presenting the terms and definitions, examining the factors related to implementation, development, and evaluation, and presenting some frameworks and tools for orientation and e-learning. In addition, the advantages and disadvantages of e-learning are summarized. After the theoretical literature review, the research process is clarified by presenting the research methodology, the reliability and validity of this study and a description of the case organization, its e-orientation program and the interviewees. Then the results of this study based on analyzing interviews and theoretical literature are undergone. Finally, in the discussion section, the conclusions and summary of this study are reviewed, and managerial implications and future research suggests are presented.

2. ORIENTATION

Staff orientation is one of the most important training processes of organizations (Lepistö 2000, 56). Staff orientation and socialization enable the reproduction of an organization, as they allow newcomers to become functional members of the organization, which is needed in order to maintain organizational growth and sustainability (Anderson-Gough et al. 2000, 1153; Ards et al. 2001, 160; Antonacopoulou & Güttel 2010, 5). The goals of staff orientation are commitment of new employees to the organization, increase of organizational renewal capability, socializing the employee to the working environment, and enabling newcomers to master work tasks and learn to work in the organizational environment (Moisalo 2011, 319).

2.1. Terms & definitions

There are many terms that are used to describe process of integrating newcomers to become functional members of the organizations, such as orientation, familiarization, induction, or onboarding, which are often used and understood as synonyms in practice, and also in this research. Orientation means basically the all-round means of welcoming a newcomer into an organization, job, rules, colleagues, and the working environment (Harris 2004, 2019-237; Ketola 2010, 108-110). Staff orientation is a learning process that consists of many diverse phases, where the goal is to make the new employees understand the objectives, responsibilities, and tasks of their work as well as the organization's functioning and aspirations, so that the employee is able to successfully perform in the work tasks (Lepistö 2000, 63).

Orientation means the facilitation of a flexible and motivating transition into new working tasks for new employees, which aims to make new employees productive as soon as possible (Davis & Kleiner 2001, 44). Familiarization is a process of helping the new employees settle in and become committed to the new organization (Boudreau & Ramstad 2008, 202), and it makes the newcomers as part of the organization and enables them to learn and assimilate their tasks and roles in the organization (Robbins 2002, 8). Familiarization provides employees with vision and goals to strive for in order to realize the organization's strategy (Kjelin & Kuusisto

2003, 14). Staff orientation is based on interaction between the new employee and the environment, and it requires the employee to adapt to the environment and to learn the needed skills and knowledge to be able to cope with the demands of the work tasks (Vaherva 1998, 160). Familiarization consists of giving information to the newcomers about 1) newcomers' role and work tasks, 2) work community, 3) employment relationship, and 4) the organization, its working environment and procedures (Honkaniemi et al. 2007, 158).

Staff orientation is usually being organized by the supervisor of the newcomer, or the human resource department. Familiarization starts at the latest when the work starts, and in most of the cases it is conducted alongside working in one phase or multiple phases. (Ketola 2010, 52-71). Orientation programs are a form of employee training, which are designed to introduce new employees to their job, their colleagues and network of contacts, and the organization. The goals of orientation programs are e.g. to help new employees feel more part of the organization; to make newcomers learn about the organizational language, history, traditions, mission, vision, and structure; and to help the new employees understand the basic principles of the functioning of the workplace and organization. Orientation programs can be formal, informal, or a combination of both. (Klein & Weaver 2000, 48). Formal orientation training is used by most organizations and it is one of the most common types of training programs in organizations (Saks & Ashforth 1997, 235; Bassi & Van Buren 1998, 34).

Orientation consists of two distinct themes: general staff induction, and specific and individual job guidance (Ketola 2010, 108-110; Moisalo 2011, 320). General staff induction practices are core mechanisms that are utilized when firms introduce newcomers to the organization and its rules, the department in which the newcomer is employed, and the general conditions of employment (Skeats 1991, 16; Birnholtz et al. 2007, 323). General familiarization is usually followed by professional job guidance, in which the newcomers learn how to execute their own work tasks, in opposition to learning about the organization in general (Moisalo 2011, 334-335). Job guidance focuses on clarifying the task-related roles, responsibilities, job content and working environment that the new employees need to know to be able

to handle their job (Wanous 1992, 43; Sims 2002, 10-18; Honkaniemi et al. 2007, 158; Ketola 2010, 71).

The biggest difference between job guidance and staff induction is that job guidance varies according to specific job and is always needed when tasks of an employee change, but staff induction can be the same to all employees of the same organization and it needs to be conducted only once per employee (Ketola 2010, 70-73). General staff induction can be further divided into three categories: 1) norms, values, and culture of the organization, 2) organization knowledge, and 3) network knowledge (Ketola 2010, 70). Newcomers need to learn about the organizational culture and values (Sims 2002, 285-290; Prezion & Huizenga 2002, 297-300); to know how the organization functions on a general level to be able to understand how their own work contributes to the big picture of the organization (Ketola 2010, 70); and to learn about the network of contacts they are working with, both inside and outside the organization (Guerin & DelPo 2005, 49).

Organizational socialization refers to the process in which organizations help newcomers to settle in to new work environments by teaching them the needed knowledge, but also help newcomers to become *socially embedded* to the organization by building a positive relationship with the newcomer (Robbins 2002, 8). Staff orientation and familiarization are similar to socialization, but the major difference is that organizational socialization focuses on how to make the new employee familiar with the social norms of the organization, so that the new employee can behave in a way that is socially acceptable to the group of organizational members (Antonacopoulou & Güttel 2010, 7). The focus in new employee orientation is to introduce the new employee to company policies and procedures and the working environment, but socialization in contrast refers to the development of a collective organizational identity and committing to the people, politics, values and history of the organization (Van Maanen & Schein 1979, 213-215; Dai et al. 2011, 166).

Similarly to familiarization, socialization means the entire process of actions taken by the organization and the newcomers in order to ensure effective adjustment

(Tuttle 2002, 72); in which newcomers learn about and adapt to work tasks, roles, organizational culture, organization's structure, official and social rules, goals, traditions, history and politics (Cooper-Thomas & Anderson 2006, 432-433; Antonacopoulou & Güttel 2010, 7); but it also results in the development of attitudes and behaviors that are needed in order to function as organizational members (Fischer 1986, 123; Van Maanen & Schein 1979, 222; Ardts et al. 2007, 159). Organizational socialization is a key process in making sure newcomers are efficiently integrated within the organization (Antonacopoulou & Güttel 2010, 6). Socialization can be divided into six dimensions: 1) politics: knowledge of formal and informal power structures and relationships, 2) history: knowledge of the organization's traditions, stories, rituals and customs, 3) people: establishment of successful and satisfying work relationships with organizational members, 4) performance proficiency: mastery of the tasks necessary to perform in the job, 5) language: understanding organization-specific language, acronyms and jargon, and 6) goals or values: understanding and identifying with the written and unwritten goals and values of the organization (Chao et al. 1994, 734-737).

Socialization is a constantly ongoing process, but the socialization of new hires is the most intense and problematic adjustment process when new employees are most susceptible to the company's influence (Van Maanen & Schein 1979, 212; Jones 1983, 453). Socialization tactics mean the human resource management methods that organizations use to integrate new employees to the organization in a smooth manner by reducing uncertainty and anxiety of joining a new organization, and transferring the needed social and technical knowledge to the new employees (Bauer et al. 2007, 710; Cable & Parson 2001, 5; Allen 2006, 249). Socialization practices mean the process where employees learn the organizations' values, norms and the required behavioral patterns, and as a result the employees know their own roles and task in the organization and become more motivated to be a part of the organization (Van Maanen 1976, 67-70). There are three phases in socialization: 1) pre-socialization, which means all the things an individual learns about the organization before the first day at work, 2) adaptation, which means the familiarization of the work task, adaptation to the group, role defining and evaluation of the adaptation and performance of the employee, and 3) role control, in which the

employee faces conflicts between various groups of the organization, the work and personal roles (Feldman 1976, 434-436).

2.2. What to consider in orientation?

Companies spend a lot of time and resources on recruiting new talents, but if orientation process is neglected, the productivity of the new employee is lower, and the new employee may even leave the company sooner than intended which leads to a need for a new recruiting process (Davis & Kleiner 2001, 43). Bad orientation brings many challenges to organizations, such as the increase of costs and dissatisfaction of employees and the decrease of productivity (Davis & Kleiner 2001, 45; Sanders & Kleiner 2002, 88). On the other hand, successful orientation of new employees leads to successful business, meaning higher productivity and larger profits (Davis & Kleiner 2001, 47). Successful familiarization lessens the turnover rate of employees and teaches the new employees to recognize and realize potential improvements (Moisalo 2011, 323). Familiarization crucially affects also the quality of work, the motivation of employees, the well-being of personnel, as well as the safety of workplaces (Lepistö 2000, 56).

Invigorating, appreciative and safe working atmosphere is crucial for successful familiarization (Kupias & Peltola 2009, 135). New employees need to become familiar with the working environment in order to work in a safe manner, be able to recognize and prevent safety hazards, and to know how to act in emergency situations (Moisalo 2011, 322–323). This builds the new employees' feeling of being safe in the working environment (Moisalo 2011, 322–323). For example in Finland, Finnish work safety regulation obliges organizations to conduct job guidance and familiarization, and the focus is especially on minimizing different safety hazards by giving the new employee sufficient training regarding the job and the working environment and giving them information on how to stay healthy and safe in the workplace, the possible safety hazards of the place of employment, and how to act in situations of disruption (Työturvallisuuslaki 728/2002, 4 §). From a juridical point of view, all pivotal issues related to working must to be gone through at the beginning of the employment, especially regarding work safety and risk assessment, and the conditions and content of the contract of employment (Stein 2013, 27). If needed,

the employer is required to present satisfactory documents that prove the familiarization has taken place (Moisalo 2011, 320).

Staff induction programs aim to regulate the socialization process in a way that newcomer becomes a fully functional member of the organization quickly (Antonacopoulou & Güttel 2010, 7). Both the newcomer and the employer benefit from orientation support and training, as they are needed for the new employee to learn the needed things and succeed in the working tasks in a highly productive manner (McNeill 2012, 689). Organizations can pursue corporate goals by identifying their corporate strategy, identifying what types of employee behaviors are needed, and developing an orientation program which results in the needed behavior types (Baker & Feldman, 1991, 197).

However, some authors have questioned whether orientation training fosters newcomer adjustment at all (e.g. Louis et al. 1983; Anderson et al. 1996; Ostroff & Kozlowski 1992), and other studies have shown that orientation programs are only seen as moderately helpful by new employees (e.g. Louis et al. 1983; Chatman 1991; Nelson & Quick 1991; Saks 1996). Simply attending an orientation training program will not itself increase organizational commitment, but orientation training is likely to increase socialization, which will lead to higher organizational commitment (Klein & Weaver 2000, 52). Socialization has been found to increase affective organizational commitment, psychological attachment, and involvement in the organization by many researchers, such as Buchanan (1974), Jones (1986), Allen & Meyer (1990), Meyer & Allen (1991), Baker (1992), Ashforth & Saks (1996), Saks & Ashforth (1997). Klein & Weaver (2000) researched the impact of attending formal organizational-level training programs to organizational socialization, and found out that employees that attended orientation training were significantly more socialized regarding the dimensions of organizational values, history, and people.

There are some things that have been shown to hinder the familiarization process. First issue is *false or unrealistic expectations*, which are caused by misleading information in the recruiting process, changes in work content, assuming that newcomers are able to work independently right from the start, or undermining the

need for training. (Ketola 2010, 146-153). Newcomers should not be left on their own, and e.g. it should not be the newcomers responsibility to fill out a familiarization form, as independence will not work if the new employee is not aware of the organizational structure or key people (Moisalo 2011, 323).

The second issue is *lack of familiarization training or neglecting it completely*. It is usually caused by misunderstandings or the false belief that the newcomer is doing well even though they might be insecure and feel incompetent to do their work independently. The third issue that can cause problems in familiarization is *indifferent or neglectful attitudes towards familiarization*. They can be caused by rude attitudes, the lack of familiarization given to the trainers when they started working in the organization, or exhaustion of supervisors or colleagues. (Ketola 2010, 146-153). If the perceived supervisor support is small in the familiarization phase, newcomer's job satisfaction and role clarity remains smaller up to almost two years after the organizational entry. Supervisor support is important during the first months of employment in order to master work-related skills, and thereafter coworkers' feedback plays an important role in the development of work skills over time (Jokisaari & Nurmi 2009, 533).

Fourth issue is in general the *lack of time or resources*, which can be caused by multiple reasons, such as organizational culture or attitudes. Fifth issue is *lack of support regarding the establishment of social relationships*, that should be given to the newcomer to enable socialization and networking. Sixth issue is "*search it from the web*"-mentality, which means giving too much responsibility to newcomers to figure out things for themselves, which can make the new employees feel like they have been left alone. And the seventh issue is *lack of independent initiative of newcomers* in their own familiarization training. (Ketola 2010, 146-153).

The first prerequisite for successful familiarization is that both the new employee and the organization know what kind of position and task the newcomer is entering, so that misunderstandings or unrealistic expectations can be avoided. Organizations need to be flexible and be aware of the fact, that the newcomer can't know that much on how the organization functions yet. Organizations must prepare

for teaching the newly recruited person the skills and knowledge they lack and that are needed to handle the work tasks. Second prerequisite is understanding that teaching will occur alongside everyday working life. Conforming to this fact will lead to a successful familiarization and it will help to reach the set goals, as it keeps the expectations for the learning situations realistic. Learning while doing is most efficient way to familiarize new people, as then they get to learn subjects and things in their authentic context. (Ketola 2010, 116).

Third prerequisite is understanding that the company needs to make money, and the economical aspect must be considered in all actions. Organizations are operating in highly competitive market situations, and all employees should be productive and bring value to the company. Newcomers need to understand the strategy and business goals in order to strive for them. Familiarization process needs to focus on explaining the business model and earning logic to the new employees, so that they can work towards the commonly set goals. And finally, the fourth prerequisite for successful familiarization is investing on familiarization and utilizing resources to make the familiarization the best it can be, both from a temporal and content-oriented focus. Gathering feedback and information from employees is beneficial, as new employees can shed light on how familiarization is being executed in their previous organizations, so that best practices can be applied to make the organization's own familiarization processes better. (Ketola 2010, 117).

2.3. Orientation design

The goal of orientation is to make the newcomer understand what the organization believes in and what factors steer the everyday functioning of the organization, as well as giving a positive outlook on the organization and reinforcing the impression of being a good employer and organization to work for. A successful familiarization is goal-directed, well planned, articulate, and explicit regarding the roles and responsibilities, based on interactions, enables networking, gives support to the newcomer, and is followed up both during and after the familiarization process takes place. (Ketola 2010, 119). The design of orientation programs heavily affects the outcomes and success of familiarization and socialization, and successful familiarization requires careful planning and preparation (Levine & Moreland 1999,

25; Arthur 2006, 24-26). When companies are designing their orientation processes, they should focus on the new employees' individual skills and traits, professional needs and learning styles (Davis & Kleiner 2001, 48; Kjelin & Kuusisto 2003, 178). Regardless of previous work experience and existing knowledge, the general familiarization process should be similar to all new employees in the same organization; just the pervasiveness and quantity of the familiarization training may vary as according to individual needs (Ketola 2010, 79). The work-related characteristics, the newcomers' previous work experience and professional skills affect how in depth the familiarization training has to be (Österberg 2005, 91–92).

Successful familiarization requires 1) making explicit agreements on roles & responsibilities well in advance, 2) having a motivated instructor (preferably a volunteer) that can utilize a learning style that suits best the individual's needs, 3) building the familiarization process on interaction, discussions and constant feedback and 4) having enough repetition, as especially in the start of the process the absorptive capacity of the newcomer may be limited because of being nervous or overwhelmed (Moisalo 2011, 330–334). The people responsible for the familiarization need to be aware of who, why, what, and how they are training, how the familiarization is being followed up, what kind of tools or material can be used to assist in familiarization, and what kind of training is needed for the individual newcomer. The supervisor or HR department is usually responsible for the familiarization, but also the newcomer has to take responsibility of their own learning, and ask questions or repeat training sessions if they feel uncertain they have learned the needed things to a satisfactory level. The basic knowledge can be taught, but a deeper development of knowledge and skills requires the newcomer's own initiative. (Ketola 2010, 52-73).

Orientation starts as soon as the recruiting process ends and a new employee has been chosen to be employed to the organization. The line between recruiting and orientating is flickering, as usually some kind of information about the organization is given already in the recruiting process, and the new employee will have some kind of perception about the content of the work tasks and the functioning of the organization. The interest towards the new organization and thirst for knowledge

about its functioning is actually at the highest level before the employee starts working in the organization (Irwin 2011, 15). Contacting employees before the work starts (by e.g. sending a welcome letter) will increase the positive attitudes of employees, lessen the nervousness related to starting the work, act as a catalyst for building a strong relationship between the new employees and the people responsible for the familiarization process, and make the employee feel valued (Sanders & Kleiner 2002, 86; McNeill 2012, 687).

Orientation process should be begun by creating a familiarization plan, possibly in cooperation with the new employee (Ketola 2010, 139). Successful orientation requires the establishment of a time schedule, a clear plan and a checklist. The time schedule should be designed in a way that the newcomer does not become bored with too slowly moving processes, but newcomers should not be overwhelmed either with too much information too soon. (Stein 2013, 27). Orientation can be conducted in multiple ways, e.g. one can use verbal, literal or audiovisual material, and usually organizations utilize more than one way of delivering the information to the new employee. The choice of delivery method and learning style crucially shapes the learning outcome as it affects whether the learning occurs on a deeper level with true understanding of the subject, or whether learning remains superficial and consists of only memorizing details. (Ruohotie 2000, 86-87).

Socialization is a key part in familiarization that should be acknowledged when designing orientation processes (Schein & van Maanen 1979, 230), as the aim of familiarization is to get the new employee acquainted with the supervisor, the person responsible for the familiarization, the colleagues, and the contact people as well as the management system and style and organizational culture (Moisalo 2011, 322–323). In most jobs, working consists mostly of social work in cooperation with various actors, so it is important for the newcomers to become members of the organization also on a social level (Kjelin & Kuusisto 2003, 178; Valleala & Collin 2004, 145). Familiarization process should paint a positive picture of the organization and make the new employee have a feeling of togetherness with the organization and the colleagues (Moisalo 2011, 322–323).

Organizations can conduct socialization as consciously (e.g. a systematic familiarization program) or unconsciously (e.g. practices that have developed over time). There are six choices organizations make regarding the socialization of newcomers: 1) collective or individual socialization: are newcomers socialized in groups or individually, 2) formal or informal socialization: are newcomers being segregated from existing organizational members during socialization, 3) sequential or random socialization: are newcomers being socialized in sequentially or randomly occurring social events, 4) socialization with a fixed or varying timetable: is there a fixed timetable for completing various socialization stages, 5) serial or disjunctive socialization: are existing organizational members being utilized as mentors to the newcomers, and 6) investiture or divestiture socialization: will the existing organizational members give newcomers support with their orientation. (Van Maanen & Schein 1979, 230).

Orientation programs facilitate the socialization process of new employees, and their popularity has been growing over the past few years (Dai & De Meuse 2007, 3). A successful orientation program needs to meet two goals: first, the new employee needs to become committed and feel welcomed to become a part of the organization, and secondly, the new employee should become productive as soon as possible after they start working (Irwin 2011, 14). Orientation programs need to be developed to suit the needs and goals of the organizations, and also the strategic influence of familiarization programs on staff needs to be considered. Orientation needs to be more than just a one-way process of moving information from the organization to the new employee, as knowledge has to move freely between the organization and the employees to sustain employee commitment and renewal of the organization. (Kjelin & Kuusisto 2003, 14-17).

In a sense, the whole organization and its members are responsible for successful familiarization, and it is also beneficial for all members to get acquainted with the newcomer and do their part in familiarization (Kupias & Peltola 2009, 81). Communitary and socialization can be best supported by having joint working or learning events with all organizational members, as well as informing existing organizational members about the newcomer in advance (Kjelin & Kuusisto 2003,

178). Newcomers get socialized to the organizational culture when they get to work with their colleagues in a social environment, and they develop understanding on how they should act and how everyone else is acting according to the social manners (Valleala & Collin 2004, 145).

2.4. Orientation evaluation

The familiarization process needs to be constantly monitored and newcomer feedback must be collected at all times of the process, in order to reach goals and execute familiarization successfully (Sanders & Kleiner 2002, 85; Ketola 2010, 119). After the familiarization process has ended and the person is independently handling their own work tasks, it is important to actively follow up on how the person is doing in their work (Honkaniemi et al. 2007, 162-163). This is important because it gives the employer and supervisor valuable information that can be utilized also in the next recruitment and familiarization process, it has a major effect on the commitment level of the newcomer, and it ensures that everything is on the right track (Honkaniemi et al. 2007, 162-163). Conducting thorough analysis on the current situation and the baseline of an organization's familiarization program is needed in order to make it better, as it provides information on what needs to be further developed, and especially gathering information about the participants' own experiences is beneficial (Kangas & Hämäläinen 2007, 25–26).

A familiarization process can be evaluated using three categories: 1) planning, 2) execution, and 3) following up (Ketola 2010, 118-119). The success of familiarization programs needs to be measured from multiple perspectives, such as newcomer vs. supervisor perspective, as people may have different opinions and experiences (Kangas & Hämäläinen 2007, 25–26). For example Brett et al. (1990), Morrison (1993a, 1993b), Bauer & Green (1994), Wanberg & Kammeyer-Mueller (2000) and Cable & Parsons (2001) have researched the indicators for successful socialization process and employee integration, and have suggested that potential indicators are e.g. the mastery of tasks, satisfaction with the job, role clarity, commitment, social integration, value congruence and the perceived fit. In Ketola's (2010, 116) study, the interviewed organizations felt that the familiarization process had been successful when the roles, responsibilities and plans had been realized

as anticipated, and the newcomers had transitioned to the organization pleasantly, but also in a high-performance and efficient manner.

In some cases, the individual newcomer is not satisfied with the training they have received and they feel that they are not able to handle their tasks in a satisfactory level, but they feel insecure about expressing this to others and letting colleagues know about their incompetence. Even though this incompetence results from poor familiarization training and this issue could be fixed by having more training and more support, the newcomers may lack the daring to ask questions and to express that the familiarization training has not been sufficient. These people may continue to do their work inefficiently, or they may believe that they are doing the work well even though they are doing the wrong things, if someone else does not notice this confusion and fix the situation. (Ketola 2010, 148). This highlights the importance of collecting feedback from the new employees to follow up on a constant basis on the successfulness of the orientation program.

The successfulness of familiarization can be measured on a variety of different methods, such as feedback or assessment discussions (Ketola 2010, 78). Following up can be conducted by the supervisor by discussions, or by the HR department via a survey or a questionnaire. A questionnaire can also be filled out by the supervisors to get more in-depth analysis about the actual successfulness of the familiarization process. A survey should measure the successfulness of the familiarization process and participants satisfaction levels. The reasons that cause dissatisfaction should be analyzed and fixed as soon as possible, and the survey results should be used to make also future familiarization events better. (Honkaniemi et al. 2007, 162-163).

It is important to gather individual feedback from the newcomers, as they can be a source of finding innovative new ways of making the work and organization better. If the newcomer has plenty of work experience from a similar field of work, they can juxtapose the current ways of working to their previous experiences and observe similarities and differences in depth to improve the organization's present way of working. If however the newcomer does not have similar work experience, they are more likely question the current ways of working and propose alternative and new

ways of executing tasks. (Österberg 2005, 91–92). Establishing a development plan based on analysis results is crucial in order to actually improve the successfulness of familiarization programs. A development plan needs to contain information about the goals, needed actions, time schedule and people in charge. The development plan should focus only on one or two major things at a time, and following up on the realization of the development plan provides valuable information that can be utilized in the development of familiarization programs also later on. (Kangas & Hämäläinen 2007, 25–26).

2.5. Frameworks & tools for orientation

There does not exist many general frameworks or guidelines on familiarization, but rather organizations have developed their own internal guidelines to utilize when designing their familiarization processes (Ketola 2010, 72). Ketola (2010) has created a framework for effective familiarization, where the main categories of effective familiarization are planning, execution and following up. Effective familiarization requires creating a familiarization plan well in advance, creating familiarization material with the help of various parties, having good support from the environment and colleagues, appointing a person responsible for the familiarization (e.g. a mentor, tutor or a godparent), establishing a clear time schedule for familiarization, following up the success of familiarization by gathering feedback during and after it, and having practical and well-planned procedures and actions in the everyday functioning of the organization. (Ketola 2010, 118-119).

Finnish Centre for Occupational Safety (Työturvallisuuskeskus 2000) has created a framework for employee familiarization, recommending that familiarization should cover at least the following aspects: 1) general knowledge of the organization: organizational functioning, history, strategy, products and networks, 2) place of employment: organizational structure, work tools, workspaces and practices, 3) job contract information: usually has been agreed upon when the contract has been signed, but some details can be further clarified, e.g. overtime working practices or holiday practices, 4) salary: salary level and the factors affecting it, 5) communication practices: reporting policies, information networks, information distribution and e.g. company bulletins, 6) training & education: educational and

training practices and possibilities and how to apply for them, 7) HR: information on available services and contact information, 8) health care: what to do in cases of illness or injury and contact information for health care, 9) work safety: safety rules and practices and how to report hazards or disruptions, 10) job guidance: a person responsible for the familiarization introduces the newcomer to the work, colleagues, contact people, general practices (e.g. lunch & coffee breaks) and the usage of tools and machines, and 11) work content: goals, methods, how to act in divergent situations, and some further general practices (e.g. requirements for clothing).

A familiarization plan can also act as a beneficial framework in supporting the orientation process, as it enables following up on progress and ensuring all the needed aspects have been covered. A general familiarization plan can be divided into eight categories: 1) organizational introduction: strategy, goals, owners, customers, organization and its employees, 2) job contract information: task, location, reporting, working time, holidays, salary, benefits, probationary period, physical check, 3) ways of acting: expectations for personnel, human resources policy, behavior rules, appearance rules, overtime or travelling policy, professional confidentiality, 4) workplace: code of conduct and the location of cafeteria, break rooms, changing rooms, smoking areas and parking spaces, 5) how to act in emergency situations: first aid, fire alarm, fire escapes, 6) work health care: contact details, procedures, sick notes, accidents, 7) occupational safety: workplace steward, contact details, procedures, and 8) other services: recreational activities, phone or computer usage. Familiarization plan regarding specific work content can be divided into ten categories: 1) becoming acquainted with colleagues and the working environment, 2) learning about the “traffic rules” and passageways of the workplace, 3) waste management & recycling rules, 4) work tasks and goals, 5) work tools, 6) personal protective devices, 7) ergonomic working, 8) locations for resting, 9) safety rules and 10) special requirements (e.g. courses or certificates). (Ketola 2010, 139).

In addition to the presented frameworks, there also exists some tools that can be used to support orientation. Ketola (2010), Johnson & Senges (2010) and Stein (2013) have suggested that e-learning tools can be used in orientation. The benefit

of technical tools is that the learners can use them regardless of time and place, but the utilization of web-based familiarization also requires active participation from the new employees (Ketola 2010, 108-110). Stein (2013, 27) points out that e-learning tools increase the variance of learning in orientation and create a familiarization process that is interesting and varies enough to keep the newcomers motivated to learn. In Ketola's (2010) study, virtual tools were regarded as highly important in the researched companies, and some of the researched companies had created familiarization games or stories to keep up the interest and motivation of the learners. It is good to note though, that e-orientation tools are often used as information databases for distributing general information about the organization, and more in-depth information is distributed otherwise, such as by utilizing traditional classroom training (Ketola 2010, 108-110).

Johnson & Senges (2010) researched orientation practices in Google, where various e-orientation tools are being utilized. Google uses online training for their new programmers' orientation by distributing learning materials in an online environment. The online environment contains e.g. a wiki to help the newcomers understand company lingo, a list of special introductory CVs all the employees have created for themselves to enable newcomers to learn about their colleagues, a handbook for programming practices, and a learning system that allows new employees to independently learn by solving given tasks by following step-by-step instructions. (Johnson & Senges 2010, 183-187). In Ketola's (2010, 108-110) study, some companies had created a gallery page on their Intranet page, where the pictures and contact details of all employees were available, so that newcomers could more easily learn to remember the names and faces of their new colleagues.

Information databases are beneficial, but at best e-learning platforms do not only serve as information containers, but the pedagogical aspect has also been taken into consideration in the design of these tools, as they e.g. allow independent learning, and conducting guided learning sessions despite geographical diversity between participators. Virtual tools serve primarily as the means of archiving and distributing information and contact details, but secondarily they can also act as interactive communication tools that enable dialogue in a variety of situations in

different ways. (Ketola 2010, 108-110). Google has also created a collective mailing list, which acts as an active communication channel where new employees can collectively solve problems and find answers to their questions with their peers (Johnson & Senges 2010, 183-187). However, it is good to note that e.g. e-mail is not often seen as a suitable tool to use in familiarization, as it is regarded as too laborious (Ketola 2010, 108-110).

Familiarization through virtual tools can be quite independent and it can consist of only going through the virtual material independently, so it is important to check up with supervisors later on that there is nothing unclear (Ketola 2010, 108-110). In addition to online training, also face-to-face training sessions, on-the-job training, specially trained mentors, and meetings are used in Google to support the orientation process. For example, new employees have lunch with a veteran engineer to debrief and deliberate on the orientation process, identify potential points of improvement, and ask questions to clarify possible misunderstandings. (Johnson & Senges 2010, 183-187). It is important to get to know the people one is working with, and this is not possible solely on virtual platforms, but also face-to-face interaction is needed. In addition to virtual tools, there exists many other methods or tools that can be used to aid in orientation, such as familiarization training sessions, familiarization forms, technical tools, networks, collaborators, mentoring, contact letters, time schedules or feedback analyses. (Ketola 2010, 108-110).

3. E-LEARNING

Learning has become a critical success factor for organizations, because complex and quickly changing situations constantly require the development of new thinking models, and learning has become a central part of everyday work (Ruohotie 1996, 7; Lepistö 2000, 6). Traditionally learning occurs through three means: textbooks, teachers and real cases, but virtual tools may be used to take over at least part of these learning functions (Tavangarian et al. 2004, 273). In e-learning, teachers are replaced by online help systems or performance support systems that provide information either on learner's request or automatically (Jochems et al. 2004, 18).

E-learning can be utilized to achieve similar kind of learning as in real-life simulations (e.g. projects or internships) without the constrictions of time and place (Jochems et al. 2004, 17). Technological development has removed temporal and spatial barriers, which allows obtaining and delivering knowledge anytime and anywhere (Horton 2000, 6). The limitations of e-learning have in the past been based on technological inability to create authentic and realistic input-output models (Jochems et al. 2004, 17), but in recent years technological development has enabled the development of better tools and e.g. the utilization of virtual reality to create authentic simulations. For example the possibilities of m-learning or mobile learning increase as wireless training is becoming more and more accessible (Welsh et al. 2003, 248).

E-learning fundamentally changes how training and learning is conducted, and Horton (2000, 6) suggests that it is the biggest change in learning since the invention of the alphabet. There is a consensus between practitioners (Berry 2000; Coné & Robinson 2001; Rosset 2002) and researchers (Steele-Johnson & Hyde 1997; Brown & Ford 2002; Salas et al. 2002) that technological advances are dramatically affecting how training is conducted. Many big companies, such as Accenture, American Airlines, Dow Chemical, GE, IBM, Nokia, and Unilever to name a few, have decided to utilize e-learning already in the beginning of the 21st century (Welsh et al. 2003, 248). The utilization of e-learning in training is increasing in organizations (Galagan 2000, 25; Rossett 2002, 15; Welsh et al., 2003, 245), as the borders between learning and working are slowly fading away (Jochems et al. 2004,

4). As technology is quickly improving, also the general guidelines and frameworks of e-learning need to be developed further in order to fully utilize the new options technological development is offering for e-learning (Welsh et al. 2003, 248).

3.1. Terms & definitions

There exist many definitions on e-learning, as it has been defined as e.g. “the use of computer network technology, primarily over an intranet or through the Internet, to deliver information and instruction to individuals” (Welsh et al. 2003, 246); or learning that occurs from electronically-delivered information (Honey 2001, 200-201). However, defining e-learning as just the adoption of electronic media in a learning scenario defines the term too broadly, as it would mean that just the utilization of a microphone during a lecture would count as e-learning (Tavangarian et al. 2004, 273). Electronic media needs to give support to the learning process itself in a way that could not be achieved by utilizing other media (Tavangarian et al. 2004, 273).

“Throwing books does not count as a literary contest” (Tavangarian et al. 2004, 273).

Rosenberg (2001, 11) defines e-learning as a networked form of learning that is based on migrating learning and teaching processes into the digital environment. Tavangarian et al. (2004, 274) similarly define e-learning as all forms of electronically supported teaching and learning processes, which aim to construct knowledge by utilizing learner’s experience, knowledge and practice by using specific information and communication systems to implement the learning process. Tavangarian et al.’s (2004) definition is based on the constructivist learning model, which means that knowledge must be constructed by the learners themselves, i.e. knowledge can’t be transplanted to individuals. Tavangarian et al.’s (2004) definition is used in this study to define e-learning, as it best describes the nature of the e-learning process also regarding e-orientation.

Some organizations include knowledge management in their definition of e-learning, and define e-learning as the digital generation and dissemination of information that is designed to improve performance (Rosenberg 2001, 11). E-learning is an

instructional strategy, which aims to impart and distribute needed knowledge, skills and attitudes in organizations (Derouin et al., 2005, 920). In most cases, e-learning in organizations is asynchronous, which means that the learning material is accessible to employees from any place or time. An example of asynchronous e-learning is e.g. freely accessible Microsoft PowerPoint slides in the organization's intranet. More sophisticated asynchronous applications require learner involvement, such as online learning simulations with animations, and video and audio components (Hall 1997, 37). Less common is synchronous e-learning, that requires all learners to participate to the e-learning lectures at the same time. The basic example for synchronous e-learning is e.g. real-time chat sessions where employees discuss learning subjects at the same time. A more complex example of synchronous e-learning is e.g. having a learning session where an instructor facilitates the discussion while showing slides or material, and the participants can ask questions or collaborate to create discussions with other learners or the instructor. (Welsh et al. 2003, 246-247).

There are some important terms that are often discussed with e-learning, such as flexible learning, complex learning, experiential learning, blended learning, rapid e-learning and e-mentoring. Flexible learning means the flexibility in learning regarding the time and place of learning, and the possibility of tailoring to individual learners' needs. The focus of complex learning is to learn mental models through collaborative and cooperative discussions and explorations to facilitate learning through observations, demonstrations, and experiments. Complex learning stresses the importance of using realistic learning tasks to practice the coordination and integration of skills, knowledge and attitudes. Close to complex learning is experiential learning, which means learning that occurs from personally experimenting new things or subjects from rich learning tasks, which support problem solving performance. (Jochems et al. 2004, 3-4).

Flexible learning and complex learning meet in the field of blended learning, also known as dual learning or integrated learning, which has been defined as the utilization of a combination of both technology- and classroom-based learning and a mix of delivery methods for the learning material (Brodsky 2003; Welsh et al. 2003,

246-247; Kovaleski 2004, 35). Blended learning has integrated various forms and mixes of asynchronous, synchronous and classroom learning (Welsh et al. 2003, 246-247). Blended learning is one of the most popular terms in e-learning both in academic and nonacademic settings, and it focuses on realistic learning tasks and transferring the acquired knowledge into practice (Jochems et al. 2004, 4). With blended learning, it is possible to combine the benefits of e-learning with personalized face-to-face classroom-training (Goodridge 2001; Masie 2002). A survey suggests that as many as 77% of US companies utilize some form of blended learning in their learning actions (Sparrow 2004, 53).

Rapid e-learning means e-learning that can be created, administered, developed and delivered quickly (Derouin et al. 2005, 925). As changes occur frequently, also training material needs to be updated quickly and training programs need to be developed in a short amount of time. Rapid e-learning programs typically take less than a month to create, and as for the moment, they mostly consist of Microsoft PowerPoint presentations that are placed on intranet for employees to access. Some organizations are utilizing more novel approaches to rapid e-learning, and e.g. utilize video-based instructions in rapid changes. (Bersin 2004).

E-mentoring means the utilization of primarily technological communication tools for the communication between the mentor and the trainee. E-mentoring increases flexibility for relationship creation and enables overcoming some mentoring barriers, such as interpersonal skills, organizational structure, and the expression of the mentor's expertise. (Hamilton & Sanura 2003, 389). E-mentoring allows transferring tacit knowledge into explicit knowledge, which can in turn be distributed and diffused to the newcomers or trainees (Falconer, 2006, 148).

3.2. Advantages & disadvantages of e-learning

There exists a lot of studies that compare learning outcomes between traditional face-to-face classroom learning and e-learning programs in both schools and workplaces, but the results range from poorer learning outcomes in e-learning in comparison to classroom training (e.g. Wang & Newlin 2000; Waschull 2001; Mottarella et al. 2004); no difference in learning outcomes between e-learning and

classroom training (e.g. Stocks & Freddolino 1998; Russell 1999; Wisher & Curnow 1999; Machtmes & Asher 2000; Smith et al. 2000; Alexander et al. 2003); to better learning outcomes with e-learning than traditional classroom training (e.g. Kulik & Kulik 1991; Whetzel et al. 1996; Brown 2001; Allen et al. 2004). Based on the existing research, it is difficult to make any kinds of conclusions that e-learning would be more, less or equally effective than traditional classroom training (Derouin et al. 2005, 929). But it seems that studies that were conducted in organizational settings tended to have more positive results towards e-learning in comparison to those that were conducted in educational settings, which may indicate that e-learning is more suitable to be utilized in organizations (Derouin et al. 2005, 929).

In this chapter, the advantages and disadvantages of e-learning are presented. The advantages of e-learning can be summarized as the effectiveness and efficiency of it, user satisfaction, possibility of offering consistent training on a global level, it allows rapid updates to training content, increase of flexibility and learner convenience, networking, cost savings and business advantages. The disadvantages of e-learning are that it might not suit for all situations and learners, there are some difficulties in diffusing tacit knowledge through e-learning systems, it is hard or impossible to train soft skills in e-learning environments, e-learning requires effort and resources in its development, e-learning does not enable face-to-face interaction, and e-learning implementation needs well-thought design and planning. Also, e-learning may affect attrition rates, user satisfaction and learning outcomes negatively.

3.2.1. Advantages of e-learning

There is a lot of research that backs up the fact that people do learn from technology-based learning materials and courses, such as those conducted by Baker (1992), Gopher et al. (1996), Bramble & Martin (1995), North et al. (2000) and Brown (2001). There also exist many studies that support the statement that e-learning can even be more effective than classroom training, e.g. Keene & Cary (1990), Kulik & Kulik (1991), Janniro (1993), Orey et al. (1998), Wisher & Priest (1998), Machtmes & Asher (2000), and Welsh et al. (2003). Utilization of e-learning simplifies some parts of learning (Jochems et al. 2004, 5), and it may even shorten the time that is needed

for participants to learn in comparison to traditional classroom learning, but more research is needed to confirm this statement (Welsh et al. 2003, 249-253). Research by e.g. Johnson et al (2000), Gold (2001) and Welsh et al. (2003) indicate that if there is not too much technical difficulties, participants will have positive attitudes towards computer-based classes and the learning experiences after the e-learning courses.

E-learning is beneficial for employee development (Derouin et al. 2005, 926), as it improves the transfer of skills, knowledge and attitudes learned in schools to working and professional practice (Jochems et al. 2004, 1). E-learning techniques can also be used to transfer tacit knowledge between individuals, or to transform tacit knowledge into explicit knowledge (Falconer 2006, 148). E-learning can be utilized to support complex learning, development of professional competencies, collaborative construction of knowledge, active learning (i.e. social constructivism), development of problem solving skills and personalized learning for individual students (Jochems et al. 2004, 1). Especially game-based learning is fun, motivating and engaging to learners, and it is useful for skill building as it provides practice opportunities (Prensky 2001, 28).

The distribution of learning material is more flexible in e-learning, as material can be delivered through Internet to anyone at any time (Jochems et al. 2004, 5). With e-learning, companies are able to deliver consistent training across multiple countries and locations, and make sure that all employees are taught the same things in a similar manner (Welsh et al. 2003, 248). Classroom instructors have great variance in how they are able to keep learners focused and motivated, demonstrate key points, offer practice opportunities and provide clear feedback; whereas in e-learning programs the quality of teaching remains the same throughout the entire course for all participants (Welsh et al. 2003, 252). It is good to notice though, that good e-learning course is good for everyone, but poorly designed e-learning courses lead to poor results for all participants.

E-learning allows organizations to constantly train their employees regardless of the time or place and it allows updating training content instantly when ever needed

(Burgess & Russell 2003, 293). E-learning can be used in situations where many people need to be trained quickly, just as during an organizational change or e.g. regarding the delivery of new product information (Welsh et al. 2003, 248). E-learning allows more flexible learning and e.g. utilizing just-in-time training, which would not be possible in classroom training (Welsh et al. 2003, 253; Derouin et al. 2005, 926). Through e-learning systems, employees are able to access various online databases and tools, which can be used to find solutions for current work-related problems (Wang et al. 2007, 1793).

E-learning gives more control to learners over their own learning. In an e-learning program it is e.g. possible to begin and stop learning tasks as the learners see fit, which enables trainees to learn in a pace that suits them the best (Derouin et al. 2005, 922). Besides the sequencing of the material, learners can also control which topics to focus on, and how much instruction or help is given during training (Sims & Hedberg 1995, 471). E-learning programs can also be adapted to different learning styles, such as verbal learning or visual learning (Falconer 2006, 145). The freedom of learners to tailor an e-learning program to suit their own needs has been shown to positively impact learning outcomes (Derouin et al. 2005, 922). E-learning techniques encourage independence and participants' reflection (Falconer & Williams 2002; Salmon 2000, 66), and they facilitate communication, allow sharing experiences among participants, enhance collaboration, and reduce the sense of isolation that is experienced by some people if they have to work remotely or in specialized teams (Falconer, 2006, 147).

E-learning makes it possible to learn things in their real-life content. A very important factor to facilitate learning is the authenticity of learning situations and tasks, as it allows anchoring the learned knowledge and skills into real-life activities (Brown et al. 1989, 37). When content is taken away from its context, different subject areas are separated from each other and from their realistic existence and environment, which makes it more difficult for learners to develop coherent mental models. E-learning tools can be utilized to provide a realistic, authentic, and complex model of a real-life situation to facilitate meaningful learning and continuous problem solving in a social experience. E-learning tools in business are dynamic and interactive and

provide a way to authentically represent the causal nature of business organization environment. (Lainema & Nurmi 2006, 94-96). E-learning allows participants to test their skills in an authentic context, where participants can fail safely without any repercussions and learn from their failures (Schank 2001, 55).

E-learning is cost-effective and it has a lot of potential in returning tangible benefits to organizations once it is taken into use (Derouin et al. 2005, 921). Even though the initial start-up costs of e-learning programs are high, research conducted by e.g. Phelps et al. (1991), Wisher & Priest (1998), Whalen & Wright (2000) and Welsh et al. (2003) has shown that in the long run e-learning can be less costly once the program has been designed, developed and implemented, especially if there are a lot of geographically distributed learners and the e-learning course is repeated multiple times. There are some incurring costs associated with e-learning such as technical support, but it eliminates several variable costs that come from classroom training, such as the costs related to travel, lodging, materials, off-site training and the instructor's salary (Burgess & Russell 2003, 299; Welsh et al. 2003, 253). E.g. Dow Chemical reported saving up to 20 million per year due to an e-learning system, because it reduced training time, administrative time, the costs of classroom facilities, the costs of teachers or facilitators, and the costs of training material. Also, as e-learning allows companies to execute things they would not be able to carry out in traditional classroom training, some substantial business advantages may result from the utilization of e-learning, such as an increase in competitiveness. (Welsh et al. 2003, 249-253).

3.2.2. Disadvantages of e-learning

The available literature tends to be pro-e-learning, and it leads the readers to the conclusion that technology-delivered instruction is better than classroom training, but this is not always the case, as some studies have not found any difference in learning between web-based and face-to-face training (e.g. Phelps et al. 1991; Whetzel et al. 1996; Wisher & Curnow 1999; Russell 1999). There are some methodological difficulties in comparing the levels of learning between web-based and face-to-face training, as comparisons are difficult to interpret and the differences might result from other reasons than the means of delivering the learning material

(Welsh et al. 2003, 251). According to Jochems et al. (2004, 9-11) there are four major areas where e-learning systems have to be improved: 1) the overall development of the learning units, 2) facilitation of component sharing and reusing within and between organizations, 3) differentiation and personalization in the delivery of education material, and 4) performance assessment. These issues have to be considered on a pedagogical, technological and organizational level.

There are two major issues related with e-learning implementation in organizations: first of all, there are a number of drawbacks associated with the utilization of e-learning, and secondly, successful implementation requires a vast amount of effort, planning and investments in IT and personnel. This means that especially in the beginning, e-learning may lead to significant costs, and the potential savings will only realize at a later stage. Development costs to design and build e-learning courses and material, as well as the acquisition of the needed software and hardware might be costly. For these reasons, e-learning implementation needs to be carefully designed, planned and executed. (Welsh et al. 2003, 249). It can be difficult to create an effective, tailored, motivating, interesting and useful e-learning program to suit the needs of an individual organization.

Traditionally e-learning has consisted of just transforming learning material into a digital representation form, which does not take into account the differences in individual learners. Current e-learning systems serve mostly as data containers, where teachers input material that can be freely accessed by the learners, which does not support the constructivist learning aspect or personalization of the learning process. Many projects and programs focus on just using virtual tools to distribute content and to communicate, without giving focus to the actual learning process. (Tavangarian et al. 2004, 273-275). Realistic and collaborative learning tasks are harder to realize with ICT and virtual tools, in comparison to conducting learning in a traditional face-to-face setting (Jochems et al. 2004, 5).

The utilization of e-learning in a too superficial level may lead to a development of a wrong mindset, where employees feel that reading equals training. Non-interactive e-learning may be too static, and ignore the fact that training is not just about

information distribution, it is also about practice, feedback, and guidance. Face-to-face training can never be fully replaced by just reading and memorizing electronically-encoded information from an e-learning archive. This issue increases the importance of well-thought design and implementation of e-learning programs even further. There might be a lack of communication and interaction between participants in e-learning courses, which will negatively affect the possibility of collaboration and peer-to-peer networking. Collaboration is an important factor in learning (Falconer 2006, 143), and lack of interaction and networking may make e-learning less attractive for participants, which will in turn diminish the usefulness of the e-learning courses. Peer-to-peer interaction is possible to conduct in web-based systems as well, but it requires more effort and resources to establish a deep level of interaction among learners from various locations. (Welsh et al. 2003, 249).

E-learning courses have to be designed to encourage learning. Tavangarian et al. (2004) propose criticism towards e-learning, as in e-learning the learner might become a deindividualized and homogenous user, as e-learning systems are not yet flexible enough to meet individual learning needs. Increasing flexibility might not however encourage learning, because research conducted by e.g. Gray (1987, 55), Freitag & Sullivan (1995, 10) and Derouin et al. (2005, 922-923) has shown that if learners have too much control over the training program, then they must constantly make decisions on what content to view next and in which form to view it, which can lessen the learners' ability to concentrate on the learning material and in turn reduce the overall learning. Organizations need to ensure that the level of given control suits the goals of the e-learning program and the abilities of the learners, so that they don't get overwhelmed with too much choices (Derouin et al. 2005, 922-923).

E-learning is not a panacea that works in all situations and fixes all problems (Honey 2001, 200-201). E-learning might not be equally effective learning tool for everyone, as studies have shown that people with lower level computer skills or people that are not familiar with using a computer, will gain lower learning outcomes as well (Gist et al. 1989, 889; Martocchio 1994, 817; Welsh et al. 2003, 250). In industries where computer use is regular, employees are generally more capable of learning through computer-based learning, as they feel more comfortable in using computers

to learn (Welsh et al. 2003, 250). Also, younger employees might be more suited for e-learning as they are usually more experienced with computers (Welsh et al. 2003, 250). If there are problems with the utilized technology, participants will likely develop strong negative feelings towards the course and e-learning in general (Rossett 2002, 15; Welsh et al. 2003, 252).

E-learning might be most useful for courses that emphasize cognitive learning outcomes, less complex and more conceptual knowledge, and basic or intermediate level intellectual skill development. More advanced training might not suit that well for e-learning, as it is more difficult to create authentic simulations or interactions with e-learning tools. E-learning does not work that well for teaching a psychomotor component (e.g. performing a surgery), but it suits for theoretical or declarative learning (e.g. what are the steps in performing the surgery). However, it is good to notice though that the development of virtual reality tools might enable the utilization of e-learning in also practical skill learning (e.g. throwing a ball) sometime in the near future. (Welsh et al. 2003, 250).

Successful working requires the mastering of soft skills, such as communication skills, management, leadership, customer service and other skills typically related to working with other people. There has been debate on whether soft skills can be taught on e-learning platforms or not, as these skills consist mostly of verbal and nonverbal skills, which are usually trained in face-to-face settings. Computer-based learning does not provide the similar possibilities for face-to-face training and interaction, in comparison to traditional classroom-training. (Derouin et al. 2005, 922). Many researchers (e.g. Antonelli 1997; Haldin-Herrgard 2000; and Johannessen et al. 2001) have argued that it is difficult or impossible to diffuse tacit knowledge by utilizing IT systems. But research and practice have shown that e-learning can be used to distribute also tacit information, as e.g. Falconer (2006) created a synthesized learning model, in which IT and e-learning techniques were used to encourage tacit knowledge transformation and flow.

Attrition can be a problem resulting from e-learning, meaning the level of drop-outs in e-learning training. Completion rates of technology-delivered training are lower

than completion rates for courses that are conducted in classrooms (Phelps et al. 1991, 19; Welsh et al. 2003, 251). If participation to e-learning courses is not required, participation rates can be significantly lower in e-learning courses. But when there is a clear rationale for participants to complete the course, the completion rates do not differ from classroom training completion rates. Companies should use some form of accountability or incentives for e-learning courses to ensure employees take part in e-learning courses and complete them, such as advancement towards a development target, eventual participation, tracking system of participants or payment of overtime, but the most important incentive seems to be useful and job-relevant content. If e-learning courses are perceived as optional and having only little impact on the learners or their jobs, then it is likely that lower completion rates will occur. (Welsh et al. 2003, 254).

3.3. What to consider in e-learning implementation?

Learning at the workplace should promote the integration of skills, knowledge, and attitudes to strengthen professional, academic, social and career competencies (Jochems et al. 2004, 4). E-learning can positively impact both the quality and quantity of learning in workplaces and organizations. Through e-learning it is possible to access a vast depository of information and an unimaginably large database, which is constantly growing. E-learning is accessible in all locations and anytime it is needed. But many e-learning programs don't take the learner perspective into account: learners may not be motivated to go through this vast amount of material and to find space and time for e-learning. Giving learners the freedom to learn as they please, may lead to "any time" -learning developing into "not now, maybe later" -learning. (Honey 2001, 201-202).

There are major differences between traditional classroom training and e-learning that need to be taken into consideration, as e.g. in classroom training the instructor controls the pace of learning, the given feedback, and the sequence of events; but in e-learning much more freedom and control is given to the individual learner (Brown & Ford 2002, 199). E-learning can facilitate learning, but only when certain critical conditions are met and the technology is used in educational improvement and innovation. First, e-learning has to consider the pedagogical, technical and

organizational aspects to be successful. Secondly, e-learning cannot entirely replace other types of learning but should be used as an integral part of education and training. And finally, e-learning has to focus on the individual student and be somewhat tailorable, as there is a diverse and widely distributed set of learners who need to learn complex skills and use them in a variety of different settings after the training. (Jochems et al. 2004, 2).

In order to deal with the complexities related to e-learning, an integrated view of e-learning is necessary, that combines a balanced mix of methods from face-to-face teaching, distance education and training on the job to provide optimal learning arrangements that suit pedagogical, organizational and technical needs. Organizations are increasingly utilizing blended learning, as it meets the needs of a variety of learners (Derouin et al., 2005, 932). Blended learning seems to have some benefits over just having stand-alone e-learning programs, as participants in blended learning complete real-world tasks with better accuracy, with fewer errors, and faster than in comparison to just utilizing e-learning methods in training (Thomson NETg 2003). Blended learning seems to offer better learning outcomes than e-learning alone, but as the existing research is limited, more research is needed to validate this statement (Derouin et al., 2005, 932). Systematic design procedure should be used to create a specific combination of learning methods for each situation. All perspectives must be taken into consideration in balance: if e.g. learning focuses too much on the technology, the end result is an e-learning program that is pedagogically poor and organizationally unmanageable or too expensive. (Jochems et al. 2004, 5).

Even though the monetary aspect always has to be taken into consideration in organizations, e-learning projects should not focus too much on profits or efficiency alone, as the starting point of any e-learning program should be to enhance the actual learning process of individuals (Tavangarian et al. 2004, 273). Honey (2001, 201-202) suggests having more understanding and sympathy towards the learners and their situations, encouraging and supporting learners to be motivated to learn, using e-learning to complement other ways of learning (blended learning), showing

more interest in the learning process itself, and tailoring the e-learning programs to suit various needs of diverse learners.

Successful implementation of e-learning in organizations requires a vast amount of effort, planning and resources. Usually lack of financial and temporal resources in the development of e-learning projects has led to a lack of value e-learning has had to offer in comparison to traditional learning material (Tavangarian et al. 2004, 275). If companies do not focus enough on the planning and implementation phase, then e-learning will not be successful or efficient. There are three major areas that need to be taken into consideration during e-learning implementation: the design of the program and the learning materials, information technology (IT) infrastructure, and organizational culture. (Welsh et al. 2003, 248-249). The design aspect is further reviewed in the following chapter. Regarding IT, it needs to be ensured that employees are able to successfully use the technology and the system, and have access to the required technology. This considers all IT-related resources, such as hardware, software as well as technical support for both the implementation and maintenance of the e-learning system. More research is however needed on whether any particular technology is better than others in e-learning. (Welsh et al. 2003, 249-252).

Organizational climate has a major effect on learning, as attitudes or past experiences of learners or their colleagues can have a great impact on learner motivation (Honey 2001, 201-202; Derouin et al. 2005, 936). In the implementation phase of various e-learning programs, the organizational culture and change management aspects need to be taken into consideration. It is important to plan how learners and the existing personnel are prepared for the upcoming change. Senior management needs to be committed to the e-learning program, so that they can provide the needed support in the implementation phase. Utilizing the same learning program globally might lead to problems if location-specific needs are not being met. This problem can however be mitigated by planning to use local classroom training alongside web-based training. (Welsh et al. 2003, 248-254).

3.4. Designing e-learning programs

Companies need to implement efficient training methods, as it needs to be ensured that employees are always equipped with the latest information and the most advanced skills (Zhang & Nunamaker 2003, 208). E-learning programs need to be designed in a way that encourages employees to learn. E-learning can be used to develop more user-friendly learning especially regarding the problem of information overload. With traditional face-to-face classroom training, if learners are presented with too much new information in too short time, learners can't retain all the information. With e-learning or blended learning, it is possible to deliver the needed information over a longer period of time using various teaching forms and methods. (Welsh et al. 2003, 248-249).

E-learning's effectiveness depends on the design, delivery, and evaluation of the utilized e-learning methods. There are many important decisions that have to be made regarding the design of e-learning programs, for example deciding which technology and methods to utilize in displaying information (e.g. live stream audio & video, textual materials, discussions in virtual chat rooms or message boards etc.) (Derouin et al. 2005, 921). Many factors affect what methods should be used in learning, such as the constraints (e.g. resources, personnel, time, money, equipment), requirements on whether the learning needs to occur independently of time and/or place, task requirements (e.g. needed media attributes to perform the learning tasks) and the group of learners and their individual needs (Jochems et al. 2004, 17). A significant part of the learning process is the handling and communication of the e-learning content towards its learners, as only the creation of excellent e-learning content is not enough (Tavangarian et al. 2004, 277).

E-learning programs should be flexible and customizable to please various learning styles (Honey 2001, 201-202). Customization refers to the adaptation of learning elements to suit the needs of the individual learner, and it increases learning outcomes, learner engagement and user satisfaction (Derouin et al. 2005, 924). If the learners' ability to customize is limited, then the e-learning system serves only as a platform for distributing electronic documents, which does not support learning. E-learning systems must enable learners to create their own personalized learning

path from the provided learning materials to truly contribute towards learning. The e-learning system can be developed in a way that it automatically determines an appropriate and personalized learning path for a given individual profile and learning objective, which will save time from the learners, as they do not have to spend time learning what they already know or do not need to know regarding their learning objective. (Tavangarian et al. 2004, 277). In especially international organizations, there exists a high need for regional customization, as employee preferences differ across various regions and a single type of e-learning program may not suit the needs of all employees (O'Leonard 2004, 3; Derouin et al. 2005, 926).

Flexible e-learning systems should e.g. allow the participants to stop and save what they have done, so that they can complete the program in a pace that best suits them, and learners should also have the possibility of doing a final test at any time during the e-learning module, so that they can skip the sections that are already self-evident to them (Welsh et al. 2003, 246-247). Integration of study and work in order to meet job requirements, to improve career perspectives and to realize personal growth leads to a need to learn in a way that does not interfere with one's job, i.e. learning needs to occur also outside of office hours and not at a fixed place. Employees want to improve their job performance by consulting learning material just when it is needed (just-in-time information), which means learning material needs to be accessible in a flexible manner when employees face certain situations. (Jochems et al. 2004, 4).

Attrition level, i.e. the level of drop-outs, can be a major problem that results from poorly designed e-learning programs. One of the primary reasons learners drop out from e-learning courses is the lack of engagement (Skipper 2000, 2). One way to increase learner engagement is to increase the interactivity of training by having e.g. hyperlinks, buttons, tests, multiple choice tasks, drag and drop tasks, questions or arcade or puzzle games, which are used to present or practice topics. The utilization of games in learning can increase learner performance in e-learning, encourage learners to constantly practice, help learners to discover patterns and relationships in the training material, and reduce the fear or anxiety resulted from traditional exams or tests during training (Horton 2002, 143). Organizations usually begin with

less sophisticated e-learning programs, but increase the interactivity of the learning material due to employees' requests or needs. As technology develops further, also the limitations decrease and more complex and interactive training can be offered to the employees. There is however a useful role for both simple and more complex training, as in some cases it is better to have basic information provision than complex simulations and vice versa. (Welsh et al. 2003, 246-247).

Computer supported collaborative learning or CSCL means the holistic consideration and design of conditions that facilitate collaboration and cooperation between learners in a technological, social and educational way (Jochems et al. 2004, 9-15). E-learning makes it easier to network and learn from others from all around the world (Honey 2001, 201-202). Communication can be enabled by asynchronous communication tools (e.g. message boards, where communication does not happen in real time, but communication is accessed in different times) or synchronous communication tools (e.g. chat rooms, where discussion happens real time) (Derouin et al., 2005, 924). Organizations should choose the collaborative tool depending on the learner population: if the population is rather small, asynchronous tools are likely to be more effective, and with bigger populations both asynchronous and synchronous communication tools are effective and useful (Clark & Mayer 2003, 25).

By offering learners more opportunities to communicate with other learners, collaboration of trainees in e-learning programs increase (Derouin et al., 2005, 924). Virtual communication tools which enable rich multimedia communication, expressions of emotions, and real-time communication to create social bonding, can encourage fellowship and emotional nurturing in organizations (Hamilton & Sanura 2003, 389). To enhance the learning that takes place in virtual environments, it is important for the participants to discuss what they did and why to enable the transformation of tacit knowledge into explicit knowledge. In order to construct usable knowledge, after the training session participants need to have a de-briefing session, in which the learned skills and knowledge are discussed verbally and visually to help the participants to develop what they have learned. (Lainema & Nurmi 2006, 114).

Performance assessment is often neglected in e-learning environments, despite the fact that performance assessment is one of the driving forces for complex learning (Jochems et al. 2004, 9-15). E-learners need to understand their progress on the course and the achieved learning level, so that they can make right decisions on whether they need to keep studying or not (Brown & Ford 2002, 200). Giving instant feedback on the tests and tasks allows learners to immediately know whether they answered correctly or not. Corrective feedback is important as it helps the learner to focus on efficient learning by giving indication of possible errors, explaining why there is an error, and by giving hints on how to solve the problem (Jochems et al. 2004, 17).

E-learning systems enable developing tracking systems to ensure that needed employees have participated in required classes. Many organizations do not track such data in real life as it requires so much effort, but e-learning systems can be developed in a way that tracking and storing of such data is automated. E-learning systems are also able to track the learners' activities and how well they have learned to master the needed skills and knowledge by for example using quizzes or tests. Tracking systems should manage course enrolments instead of completions, as employees might use e-learning material for the combination of training and performance support, as in some situations completion of the entire course is not necessary if employees can learn what they need from only a part of a course. It is good to note though, that a tracking system is not able to fully guarantee that a proper person conducted the training, as someone else may have conducted the course for that specific person in the e-learning environment. (Welsh et al. 2003, 248-254).

3.4.1. Designing e-learning material

E-learning material can be almost anything: pictures, texts, graphics, animations, videos or tests to name a few (Tavangarian et al. 2004, 277). The constructivist learning model emphasizes that knowledge is gained in context. To build a successful e-learning model, the information the model teaches must be correct, authentic and relevant. Teaching the needed tacit knowledge and skills through the

e-learning platform to newcomers requires extracting tacit knowledge from the current workforce and inputting it in the e-learning system. In order to extract tacit knowledge from the workforce, it must be done by offering scenarios that encourage participants to utilize their skills and experience, which leads to the revelation of the utilized tacit knowledge that can be shared further. (Falconer 2006, 147).

It needs to be ensured that employees are able to learn the needed topics by designing the learning material to suit the needs of the learners (Welsh et al. 2003, 248-249). In accordance to the constructivist learning theory, learning material should be customized to suit the needs of individual learners by having different levels of difficulty based on individuals' knowledge and interests and the ability to concentrate (Tavangarian et al. 2004, 275), by taking into consideration the competencies that the students have already learned and what they need to learn, and by allowing learners to choose from different levels of guidance (Jochems et al. 2004, 4). The learning material itself needs to suit individual needs and be flexible to support personalized learning (Jochems et al. 2004, 4). As changes occur frequently, training materials and programs need to be developed in a manner that they can be updated flexibly in a short amount of time (Bersin 2004).

Clark & Mayer (2003) have proposed the following e-learning principles that should be considered in the design of e-learning material: 1) multimedia principle, 2) contiguity principle, 3) modality principle, and 4) personalization principle. These principles cover many different aspects of e-learning design, and they are based on cognitive learning theory and empirical research, which makes these principles widely applicable and well-grounded in theory and research (Derouin et al., 2005, 932). Multimedia principle means that e-learning should utilize graphical learning material alongside textual material, as graphics engage learners in a deeper processing of learning material when they independently construct the relationship between the text and the graphics. Graphics should provide further explanation of an issue, not just increase the aesthetic value of the material. (Clark & Mayer 2003, 22-34). Also Honey (2001, 201-202) suggests it is beneficial to utilize various multimedia methods to encourage learning. It has been confirmed by Mayer &

Gallini (1990) and Mayer & Anderson (1992) that using a combination of text and graphics results in significantly better learning outcomes.

The contiguity principle refers to the design of material placement. Explanatory text should be placed next to a related graphic, as then learners can focus on learning from the material instead of trying to match miscellaneous texts and graphics to each other (Clark & Mayer 2003, 52). Even though this principle may seem obvious, many e-learning programs fail to take this into consideration, as sometimes learners have to click links to see pictures or related texts (Derouin et al. 2005, 933). Text should be placed next to the related graphic, rather than placing the text underneath the graphic, as this kind of placement has been shown to increase learning outcomes (Mayer et al. 1995, 33; Moreno & Mayer 1999, 358).

The modality principle means that e-learning programs should prefer the utilization of audio technology over having textual material, as too much visual information (text, graphs, figures and illustrations) can overwhelm learners (Clark & Mayer 2003, 88). Learners are more likely to manage greater amounts of information, when the material is both auditory and textual (Derouin et al., 2005, 933). Audio recordings should replace textual material whenever possible, but auditory material should not just be included alongside the text by e.g. having an audio recording of the same text the learners read, as this can increase the cognitive workload of learners (Clark & Mayer 2003, 92). Many studies (e.g. Mayer & Moreno 1998; Moreno & Mayer 1999; Moreno et al. 2001) have proven that learning outcomes will increase when audio material is used to replace textual material where suitable.

The personalization principle means that textual material should be written conversationally in first or second person, learners should have access to virtual learning coaches, and the program should be structured in a way that makes the learners feel like they are having a conversation with the program, as these strategies increase learner engagement (Clark & Mayer 2003, 101; Derouin et al. 2005, 924). Learner engagement in turn increases the likelihood of learners to exert more effort towards the e-learning material (Beck et al. 1996, 390), which leads to better learning outcomes (Moreno & Mayer 2000, 730; Moreno et al. 2001, 189).

The use of stories or narratives to present learning material is also beneficial for learner engagement, as stories can bring to life abstract concepts, such as visualize the organization's brand image to the employees (Hakkaladaddi 2005, 13; Derouin et al. 2005, 924).

In addition to the e-learning principles proposed by Clark & Mayer (2003), Jochems et al. (2004, 9-15) have proposed four components that should be considered in the design of e-learning material: learning tasks, supportive information, just-in-time information, and practice. Learning tasks need to be authentic and meaningful for learners. Supportive information means having information that supports learning and problem-solving by connecting what learners already know and what they should know in order to work on the learning tasks. Just-in-time information means presenting important information just as they are needed in the learning tasks in an organized and compact way. Practice, or in other words giving additional exercises for tasks after instruction, promote the development of automaticity in problem solving. (Jochems et al. 2004, 9-15).

Creating simulations or games of authentic situations allows demonstrating and practicing real-life functioning, which is needed for learners to master difficult procedural steps or rules (Jochems et al. 2004, 16). Effective individual learning requires learning from experiences, modifying behaviors, and applying newly learned behaviors in new situations and contexts (Kolb 1984, 24), which is possible to conduct with simulations. Having simulations or games and configuring them to resemble authentic business environments has its advantages, as it increases participants' motivation, facilitates the creation of knowledge and skills that can be used in real life, and creates meaningful experiences; but on the other hand, inaccurate configuration can also cause misunderstandings and make the participants focus on irrelevant and non-realistic issues. A computer model can never accurately represent everything in the real world, as tailoring and configuring the learning model to represent the complex and dynamic business environment is difficult and demanding. The most important thing in simulations is however to enable participants to experience meaningful decision-making problems that are

relevant to the real-life environment, not to create an exact representation of the real-world business environment. (Lainema & Nurmi 2006, 113).

3.5. Evaluating e-learning programs in organizations

The purpose of e-learning is ultimately to create results on an organizational level and improve the way the entire organization functions (Bersin 2002, 26). E-learning systems are a valuable knowledge sharing and transfer tool, but the success of e-learning systems has been difficult to measure as there is a lack of dependable ways to measure the effectiveness of e-learning systems and the impact to the organization (Wang et al. 2007, 1793). E-learning's impact on organizational level is often overlooked both in practice and in academia, as it is extremely challenging to measure return-on-investment and business outcomes resulting from e-learning or other training activities (Derouin et al. 2005, 931). Only a little research has been conducted that would have focused on the conceptualization and measurement of e-learning's success within organizations (Wang et al. 2007, 1793-1794).

Measurements are needed in practice, as practitioners need to be able to assess whether the anticipated outcomes and goals are realized successfully or not. The success of e-learning programs cannot be evaluated only using a single measure, such as user satisfaction or overall success, because a useful diagnostic instrument needs to incorporate many different aspects to truly know the success of the e-learning system. Measuring the success of e-learning systems can be difficult, as there are many combinations of individual, managerial and organizational measures that can be adopted, and there exists different opinions on what is seen as a benefit between various organizational members and stakeholders. (Wang et al. 2007, 1794).

Training can for example be evaluated on four levels: 1) employee reactions, 2) learning, 3) employee behaviors, and 4) organizational results (Kirkpatrick 1976, 155). Most organizations tend to evaluate e-learning and training solely based on employee reactions towards the e-learning program (Derouin et al. 2005, 927). Surveys have indicated that employees do tend to have positive attitudes towards e-learning in the workplace (Skillsoft 2004), but it is also important to examine

employee learning and behaviors to figure out the effectiveness of e-learning programs. Employee behavior refers to the transferring of learned skills into working (Strother 2002), and it indicates whether employees have actually gained knowledge of the core topics from the e-learning course. Even though employees have learned something from e-learning courses, it does not necessarily mean that employees will also change their behaviors according to the newly learned knowledge and skills. (Derouin et al. 2005, 928-929). There isn't a lot of research on whether e-learning has managed to have effects on the employee behavior or not, but few studies (e.g. Gopher et al. 1996; Whetzel et al. 1996; Skillsoft 2004) have indicated that e-learning does improve employee behavior.

Strother (2002) has suggested that e-learning's impact on organizational level can be assessed by evaluating variables such as employee turnover, absenteeism, quality measures or production levels. Some companies have been able to measure e-learning outcomes on an organizational level, as e.g. Unilever estimated that an e-learning course on sales training increased sales by several million dollars (Hoekstra 2001); and Overton (2004) found out that e-learning enables accomplishing goals related to core business strategies, which are more influential than just cost savings associated with e-learning. Based on current, though scarce, academic research, e-learning would seem to have a positive effect towards organizational outcomes, but more research on this subject is needed to identify what specific outcomes e-learning affects and how (Derouin et al., 2005, 931).

Wang et al. (2007) developed a multi-dimensional model (Figure 2) for assessing the success and performance of an e-learning program from the employee perspective. The instrument can be used by researchers in the development of e-learning systems theories, and by organizations in the evaluation phase of e-learning implementation. E-learning systems can be evaluated by utilizing six dimensions: 1) information quality, 2) system quality, 3) service quality, 4) system use, 5) user satisfaction, and 6) net benefit (Wang et al. 2007, 1793-1798). There are a set of questions for each category for assessing e-learning systems' success through providing answers for these questions.

Figure 2. Questions for assessing e-learning systems based on six dimensions (Adapted from Wang et al. 2007)

<p>Information quality</p> <ul style="list-style-type: none"> • Does the e-learning system provide information that is a) exactly what is needed, b) provided on the right time, c) relevant to the job, d) sufficient, e) easy to understand, and f) up-to-date?
<p>System quality</p> <ul style="list-style-type: none"> • Is the e-learning system a) highly available, b) easy to use, c) user-friendly, d) interactive between users and the system, e) presenting information in a personalized form, f) providing users attractive and appealing features, and g) providing a high-speed information access?
<p>Service quality</p> <ul style="list-style-type: none"> • Does the e-learning system provide a proper level of online assistance and explanation? • Are developers interacting with users during the development phase of the system? • Are developers providing high availability for consultation? • Are developers responding cooperatively towards enhancement suggestions? • Is the IT department providing satisfactory support to users?
<p>System use</p> <ul style="list-style-type: none"> • Is the frequency of use high (when the usage is voluntary)? • Is the user dependent on the e-learning system?
<p>User satisfaction</p> <ul style="list-style-type: none"> • Do most of the users evaluate the e-learning system positively? • Do users think that the perceived utility of the e-learning system is high? • Are users satisfied with the e-learning system?
<p>Net benefit</p> <ul style="list-style-type: none"> • Does the e-learning system a) help users to improve job performance, b) help users to find solutions to problems, c) help the organization to enhance competitiveness or create strategic advantages, d) enable organizations to respond more quickly to changes, e) help the organization to provide better products or services to customers, f) help the organization to provide new products or services to customers, g) bring savings in costs, h) help the organization to speed up transactions or shorten product cycles, i) help the organization to increase return on investment, or j) help the organization to reach its goals?

3.6. Frameworks & tools for e-learning

E-learning is still in its infancy, as current e-learning systems are limited to technical gadgets that do not support learning as well as they should (Tavangarian et al. 2004, 273). Some frameworks and tools have still been created to manage or conduct e-learning programs. E.g. Brown & Ford (2002), Derouin et al. (2004) and Kraiger & Jerden (2007) have created guidelines on how to efficiently implement learner control in e-learning programs. E.g. Kraiger & Jerden (2007) suggest that objective learner control should be designed keeping in mind the organizational culture, technological capabilities of the e-learning system, and the utilized pedagogical models. As e-learning implementation is heavily affected by the context, there does not exist many frameworks that would be widely applicable to all organizations. Instead, organizations are urged to implement e-learning in a manner that suits their individual needs. Because of this, frameworks can only be used on a very general level in some organizations and thus e-learning frameworks are not further presented in detail in this study.

Regarding e-learning tools, there exists some technical tools for e-learning, such as 4C/ID and <ML>3. 4C/ID is a design model for virtual e-learning (Jochems et al. 2004, 18). <ML>3 is an XML based description language, that is developed for e-learning content which provides methods for document mark-ups and supports the creation of learner specific documents. The goal of the utilization of this language is to offer multiple learning modules (e.g. introductory, motivation-building, knowledge-building, summarizing and applicatory lectures) that support concrete educational objectives. <ML>3 is used by e.g. some German universities to support e-teaching and e-learning on a more individualized level. (Tavangarian et al. 2004, 276).

The use of simulation tools to support e-learning is increasing, as technological development has allowed the development of tailored simulations to support context-based learning. Simulation games create a realistic and collaborative learning environment, where virtual tools are used to facilitate the learning of content in its authentic context in a challenging way (Lainema & Nurmi 2006, 96). Simulations are effective and suit well to enhance learning, because they give procedural support, they compress simulated time so that it is possible to execute

more exercises, they give instant feedback and knowledge on results, they make it possible to utilize multiple representations (sound effects, game elements etc.) and students can analyze real problems in their context without time constraints and make mistakes without any dangerous consequences (Jochems et al. 2004, 18).

There are some downsides related to simulations as well. They often fail to present the explicit formation of causal relationships, as they can act just as a black box where information is entered and some calculated output comes out, which hinders the learners' ability to understand causal relationships in the real world. Simulation games need to be interactive and the learner should receive direct and explicit feedback of the in-game decisions continuously to facilitate the learning process. The simulation game should explain why the choices of learners in the game were wrong or right, so that the participants can learn from their mistakes and successes. Simulation games are traditionally batch-processed and proceed in cycles, which does not represent the real world well, as decision-making should be performed when the situation is going on and not afterwards. Simulation games may thus give a too simplified view of the organizational functioning and causal relationships. Simulation games need to 1) be rich in detail and authentic, 2) facilitate meaningful learning and continuous problem-solving by engaging learners in complex thinking to enable development of useful skills and better comprehension of the subject, 3) enable social learning, dialogues and reflectivity by creating a collaborative working environment, and 4) allow customizing to support learning (e.g. the game should be easier and more simplistic in the start to avoid overwhelming the learners). (Lainema & Nurmi 2006, 97-98).

Lainema & Nurmi (2006) developed and researched Realgame, which is a computer-based simulation game that can be used in learning and training especially in business studies. Participants regard playing rewarding and interesting, and research shows that Realgame helped the participants to understand how different business processes are linked together. It is good to notice though that creating a tailored simulation is very difficult and participants felt the configured model did not represent their company that accurately. Overall participants felt that playing the game was clearly useful, but it was difficult for them

to express the concrete benefit of playing the simulation game. Participants did though state that the game helped them to construct a holistic view of the interdependencies and functions of different business operations, and enabled participants to understand their company from a process view. (Lainema & Nurmi 2006, 98-113).

Also Al-Jibouri & Mawdesley (2001) developed an e-learning platform for construction project planning, where participants could test their skills by playing a computer game with realistic circumstances and complex problems, and test their ideas in a safe space before making them openly available to others. The gameplay required the utilization of both explicit and tacit knowledge and skills, and as the participants played the game, their tacit knowledge was made explicit as the game exposed this knowledge by the reactions of the game (Al-Jibouri & Mawdesley, 2001, 422). It is good to bear in mind that simulations are hard to develop and they might not suit all organizations, but the choice of developing an individual simulation game should always be approached cautiously and evaluated from multiple perspectives.

4. RESEARCH PROCESS

The research process started in March 2017, when the topic was chosen and the company where the interviews were conducted was contacted. The research process began with finding applicable theoretical literature, such as scientific articles, empirical studies, books and journals. It quickly became clear that the utilization of e-learning tools in orientation had not received enough attention in research, and the theoretical literature on the subject was rather scarce, despite the few studies that had focused on this issue. There was some difficulty in finding enough theoretical literature on e-orientation that is suitable for this study. There however exists more research on e-learning and orientation, so these sources were utilized in combination to create a literature review and theoretical framework on the practices of e-orientation. Based on the theoretical literature review, the research questions, research problem, interview framework and the structure of the study became more apparent.

The theoretical framework was composed before the interviews were conducted in order to loosely base the interview framework on current research and identified research gaps. The interviews were conducted between May and June of 2017. After all of the interviews were made, the material was transcribed and divided into themes. Then the material was analyzed separately on each theme, keeping in mind the research questions, research problem and the researched phenomenon. As a result of the analysis, the empirical research section and the research process and reliability sections were written. The summary, conclusions and future research suggests were written along with finalizing the entire work.

4.1. Methodology

Qualitative research generally aims to increase understanding of an issue or to describe a phenomenon (Eskola & Suoranta 2008, 65; Collis & Hussey 2009, 49). This study was chosen to be conducted as a qualitative case study, as a qualitative research approach allows the researcher to gain a comprehensive and in-depth understanding of a subject from evaluating small samples (Collis & Hussey 2009, 50). This research is founded on empirically analyzing qualitative material gathered from interviews with employees from an organization that utilizes e-orientation in

new employee familiarization. The objective of this research is ultimately to gain more understanding on e-orientation, which means qualitative research methods suit well to the aim of this study.

The research process started by conducting a theoretical literature review on orientation and e-learning to develop a deep understanding on what is known of the subject at this moment. After the theoretical literature review section was written, the framework for the interviews (Appendix 1) was founded by using the findings of the literature review as a basis to form the interview questions and the interview framework. The interview framework is loosely based on Wang et al.'s (2007) framework, in which they suggest that e-learning systems can be assessed by utilizing six dimensions: 1) information quality, 2) system quality, 3) service quality, 4) system use, 5) user satisfaction, and 6) net benefit.

Interviews were individual and semi-structured, which means the same themes were discussed in the interviews, but there are some minor differences in the formulation and arrangement of the questions (Ruusuvuori & Tiittula 2005, 11). In semi-structured interviews, the interviewees can answer the questions with their own words, which allows the interviewees to bring up new ideas outside of the interviewer's expectations and makes the interviews more discursive (Koskinen et al. 2005, 104–109). Since this study requires deep understanding of the issue, which can only be achieved through conversation-like interviews, the research methods fit the study well.

The interviews were conducted using two different methods. Some interviews were carried out through e-mail, since the geographical location of the interviewees was very versatile. The interviews of the employees, who were located more close-by, were conducted as face-to-face interviews. The preference was always to conduct face-to-face interviews, but this was unfortunately not always possible due to time and travel limitations. In order to assure comparability of the opinions presented in the interviews, the focus in the e-mail interviews was to make the interviews as discursive as possible, and to encourage the interviewees to express opinions in their own words and also to ask questions, if there was something unclear. The face-

to-face interviews were recorded and transcribed, and the transcribed material along with the material derived from e-mail interviews was translated from Finnish into English to make it possible to reference the material in this study. This research was written in English to make the utilization of these research findings possible to people who do not speak Finnish, even though the interviews were conducted in Finnish. As the interview material had to be translated into English, the researcher acknowledges that some verbal expressions may not be possible to translate to reflect the exact words of the interviewee's, but this aspect is further considered in the reliability and validity of this study.

The material gathered from the interviews was divided into distinct themes and analyzed separately in those themes. The interviewees' opinions were reflected, evaluated and compared with each other and the findings from previous studies on this subject to construct comprehensive answers for the research questions. The findings of the theoretical framework were used in categorizing and analyzing empirical material gathered from interviews. The analysis was conducted keeping in mind the research questions, the researched phenomenon, and accurate interpretation of the research results. Earlier research was utilized in combination with empirical data to theoretically validate the research findings. The answers to the research questions as well as the findings of this study are based on analyzing the interview results and utilizing the information attained from theoretical studies.

4.2. Reliability and validity

Reliability refers to the possibility of receiving equivalent results if the study is replicated in similar settings, i.e. it refers to the trustworthiness of the study (Hirsjärvi et al. 2009, 231). Validity refers to choosing the research methods correctly, and measuring and analyzing the researched phenomenon and getting accurate results (Hirsjärvi et al. 2009, 231). The concepts of reliability and validity should be taken into account in assessing the reliability of also qualitative research, even though these concepts adapt better to quantitative research (Koskinen et al. 2005, 255-259).

As this research is conducted as qualitative research, the researchers own skills and ability to analyze and interpret things in a detailed and thorough level heavily affects the effectiveness of the chosen research method. In qualitative research, the analysis and results heavily depend on the researcher, which proposes some challenges (Uusitalo 1991, 82). The researcher should try to remain as objective as possible and not let own attitudes or beliefs to influence the analysis or interpretation, but rather focus on trying to understand the researched phenomenon. Describing the research methods, having the empirical research section in dialogue with earlier research, and reflecting the researcher's own basis and background increase the reliability of the study (Eskola & Suoranta 2008, 208-212).

There is a risk that the research outcomes are not accurately depicting all aspects of e-orientation, as the main findings of this study stem from the opinions of a rather narrow sample group from only one organization. However, researching the case organization provided an interesting research setting which enabled researching the subject both from the perspectives of the new employee and the organization, and to uncover differing opinions and experiences towards the same e-orientation program. As the interviews were executed in Finnish and the material was translated into English, there might be some nuances or literal expressions the translation failed to accurately capture, but this was kept in mind during the translation and the analysis of the results. Effort was used to ensure the English translation remained as close as possible to the original Finnish version to make sure the quality of analysis would not suffer.

Conducting the interviews both face-to-face and via e-mail could have led to a possible incomparability between the interviewees' answers, but effort was made to make the interviews as comparable as possible. The interviewees were geographically dispersed, and researcher simply did not have the time or means to personally visit all the interviewees to conduct face-to-face interviews. As some of the interviews are conducted via e-mail and not face-to-face, the depth of the analysis may have suffered as a result, as it is harder to establish a trusting relationship for information exchange between the interviewer and the interviewees if they are not able to meet face-to-face. Constructing a thorough interview

framework and questions (Appendix 1), and making all of the interviews as discursive as possible, however counteract the effect of these possible problems that are related to the depth of the empirical data.

4.3. Description of the case organization and e-orientation program

The organization the interviews were conducted in is a large industrial organization with five different business functions, which operate in several countries. The e-orientation program consists of multiple courses: the entry familiarization -course is directed to all employees regardless of business function, and then the rest of the courses are more business function specific and directed towards the employees of that specific function. This means all employees will go through the same entry familiarization -course, but the rest of the courses are slightly different as according to the newcomer's own business function. The entry familiarization -course is directed to all employees from all business functions, and serves as a general introduction to the organization in a group level.

The e-orientation program consists of nine separate courses, in which the entry familiarization -course is the most recent and has been developed in 2016. The rest of the courses are older, but they have been included in the e-orientation program as they present the company's code of conduct and various policies regarding e.g. safety, cyber safety, and environmental aspects. The courses consist of material presented in various forms, such as texts, graphics, videos, and audio material as well as quizzes and tests. Interviewee 6 explains that the e-orientation program was composed from various fragments: the newly created entry familiarization module and the previously existing code of conduct- and policy-related courses, which were all gathered to the e-learning environment. The multiple courses created together an e-orientation ensemble in which all the e-orientation material can easily be found by the new employee. Interviewee 6 further clarifies the e-orientation entity: *"The entry familiarization -course was planned to be conducted as an interactive e-learning module, which would be available in the case company's e-learning environment as one course. To the existing e-learning environment, we built a familiarization page, where we gathered both the entry familiarization -course as well as the previously existing codes of conduct- and policy-related courses. That*

way we were able to create a coherent e-orientation ensemble, in which the new employee can find all the e-orientation content from a single place”.

4.4. Description of the interviewees

The interviewees were divided into two categories: five interviewees (Interviewees 1-5) have been familiarized with the e-orientation program, and two interviewees (Interviewees 6-7) have participated in the development project for the e-orientation program. All interviewees are between the ages of 20-40, represent both sexes, work in white-collar jobs, and almost all of the interviewees were located in different business functions and locations, which gives a comprehensive view on the e-orientation processes throughout the entire organization. Further details of the interviewees are not revealed to protect their anonymity.

All employees that have completed the e-orientation courses had started working in the organization in 2017, and all had completed the e-orientation within the first few weeks of their employment, which means that the experience of e-orientation was still fresh in their minds at the time of the interviews. The two interviewees responsible for the e-orientation development project also had quite fresh memories of the project development and e-orientation implementation, as the project was conducted in 2016-2017. In order to study e-orientation from multiple perspectives, interview framework was divided into two distinct sections: interview A was conducted for employees that were familiarized to their work through an e-orientation program; and interview B was conducted among employees who participated in the e-orientation development project.

5. RESULTS

In the following chapter, the empirical research section is presented along with the findings of this study. As the aim of this study is to present the concept of e-orientation based on theoretical and empirical findings, first of all the term e-orientation must be clarified. E-orientation can be defined by using the combination of theoretical definitions for orientation and e-learning: e-orientation is an electronically supported learning process for the familiarization of new employees to the job, working environment and/or the organization, that aims to construct job related knowledge and support the newcomer induction process through computer-based training.

The empirical research section is categorized as follows: firstly, the pros and cons of e-orientation are presented according to the empirical and theoretical analysis. Secondly, the factors that should be considered in e-orientation implementation are examined regarding the planning of it, time-related choices, and technical decisions. Thirdly, the factors that should be considered in the design of e-orientation programs are presented: the importance of reserving adequate resources, how to develop learning material, and how to decide the technical realization of e-orientation programs. And finally, the factors concerning the evaluation of e-orientation programs are presented from two perspectives: individual and organizational level.

5.1. Advantages of e-orientation

In this section, the advantages of e-orientation are discussed. When the interviewees were asked what they think are the biggest advantages of e-orientation, the answers were rather mixed and all interviewees seemed to have different kind of opinions. The most frequently mentioned pro is that e-orientation **creates more flexibility in the realization of the familiarization process**, as mentioned by Interviewees 1, 5, 6 and 7. Staff orientation should be a flexible and motivating transition into new working tasks (Davis & Kleiner 2001, 43), and the utilization of e-learning does e.g. make the distribution of learning material more flexible (Welsh et al. 2003, 253; Jochems et al. 2004, 5; Derouin et al., 2005, 926). Interviewee 1 points out that the best thing about e-orientation is that a learner can go through the e-orientation courses when they have the time for it, and Interviewee

5 continues that the pro of e-orientation is that: *“you are able to flexibly learn things in your own time when it suits you”*.

As e-orientation brings more flexibility to the orientation process, it also **allows the participants to learn independently when they have the time and motivation for it, instead of having a fixed time of when to learn the assigned material**. E-learning increases learner convenience (Wang et al. 2007, 1793), and it makes learning more independent as it gives the learners control over their own learning (Salmon 2000, 89; Falconer & Williams 2002; Welsh et al. 2003, 249-253), as learners can self-pace the learning and conduct learning tasks when they want to (Sims & Hedberg 1995, 472; Welsh et al. 2003, 249-253). In comparison to earlier orientation experiences, Interviewee 1 finds e-orientation more interesting as the learning process is more independent. Learner independence in e-learning has been shown to increase learning outcomes (Derouin et al., 2005, 922), as e.g. the possibility of self-pacing learning reduces the amount of information overload to learners (Wang et al. 2007, 1793).

“It (e-orientation) was more interesting. I like that you can complete the things independently, and when it best suits you and when you have the time for it. It was probably the best thing here. I did not have to go through some material then when I was busy, but I could go through it when I really could and had the time to focus”. (Interviewee 1).

As e-orientation is more flexible and allows the participants to learn independently, **it saves time from the newcomer, supervisors and the organization** and it **makes the familiarization process more efficient regarding time usage**, as mentioned by Interviewees 5, 6 and 7. E-learning has been shown to reduce the time it takes to deliver learning material (Wang et al. 2007, 1793), and some companies have reported a decrease in learning times and administrative times with e-learning implementation (Welsh et al. 2003, 253). There is however not enough existing research to validate the statement that e-learning would significantly shorten the learning times (Welsh et al. 2003, 249-253), but it is clear that e-learning does save time from the people responsible for the teaching. Interviewee 5 mentions that *“no one else needs to spend time to teach these things to me as I can learn*

them independently as well", which according to Interviewee 7, "frees up time from the supervisors to do other things". Interviewee 6 also states that e-orientation "improves the organization's efficiency regarding the usage of time, as new employees can go through some of the familiarization things independently - - E-orientation makes it possible for the supervisor to focus on those things in the familiarization process, that are specific to the business unit, function or job task. Because of this, e-orientation improves efficiency". Interviewee 7 is pleased that with e-orientation it is possible to conduct familiarization quickly right from the start of the work relationship without taking too much time from the new employees or their supervisors

“(The best thing about the e-orientation is) *the speed of it, as it gives a good starting point for the familiarization right from the beginning without taking too much time from the employee, and it also it frees more time for the supervisor as well*”. (Interviewee 7).

Interviewee 6 points out that one benefit of e-orientation is the **accessibility of it, meaning that the e-orientation material is “available right away, anywhere and anytime”**, which in turn increases the flexibility of the orientation process. One major benefit of e-learning is in fact that it has removed temporal and spatial barriers, which allows learning anytime and anywhere despite of geographical differences (Horton 2000, 6; Burgess & Russell 2003, 293; Welsh et al. 2003, 246-247; Ketola 2010, 108-110). Interviewee 6 also points out that with e-orientation, **it can be made sure that the quality of orientation remains the same, as every participant receives the same, up-to-date content**. E-learning provides the possibility of having consistent training on a global level by making sure all the employees are taught in the same manner (Welsh et al. 2003, 248; Wang et al. 2007, 1793), and it is possible to instantly update training content whenever needed for all the employees at the same time (Burgess & Russell 2003, 295).

The goals of orientation programs are to help the new employees understand the basic principles of the functioning of the organization, and to make newcomers learn about the organizational language, history, traditions, mission, vision and structure (Klein & Weaver 2000, 48). The most mentioned advantage by the interviewed new

employees was that e-orientation **created a knowledge base of the organization and its functions which helped to understand the big picture of the organization and one's work tasks**, as mentioned by Interviewees 3, 4 and 5. For example Interviewee 3 states: *"e-orientation created for me a basis of knowledge regarding the functioning of the organizations and its business functions, it gave answers to some of my basic questions, and it helped me to understand the big picture of the case organization"*, and Interviewee 4 continues: *"I began to understand the big picture of the case organization in a wider level, and I received a lot of information and knowledge about things I would not have known to ask about. I also found some answers to some of my questions"*.

Through e-orientation, organizations can compose and deliver a well-thought information package that contains all the needed information newcomers should possess. Johnson & Senges (2010, 183) also suggest that e-orientation makes it possible to gather all the needed information to create an easily distributable information packet. E-orientation gave enough general information on relevant things that need to be known, according to all of the Interviewees 1-5. Interviewees 1-5 were expecting to receive only general-level information from the e-orientation, which they did. As e-orientation is usually used for the general part of familiarization, it is not expected that e-orientation will directly help the learners to function better in their individual work tasks, but it rather gives a knowledge basis that is required to understand one's work in the organization, as Interviewee 1 expresses: *"It did not per se help me function better with my everyday work tasks, but it gave a good basic knowledge foundation so that I can better understand the details of my own work"*. Employees can access the learning material of e-orientation also after the training has occurred to find information or solutions to work-related problems (Wang et al. 2007, 1793).

"I don't think that an e-orientation course could ever give all the possibly needed information, but by doing it, you get well acquainted with e.g. the policies and you overall become aware of how many policies guide the actions of the organization. You can never memorize all policies but being aware of them, and knowing where you can find them, is crucial especially in the beginning of the working relationship". (Interviewee 2).

E-orientation can be used to **make the employees feel prouder of their organization and increase their satisfaction and commitment towards the organization**. E-orientation may even strengthen the employees feeling of wanting to belong to the organization, as Interviewee 5 expressed that the learning material made her feel like she wanted to be a part of the organization. Interviewee 7 also points out that one benefit of e-orientation is that it *“serves as a channel for our organization to market our own culture of working and thus it can be used to make the employees more committed and motivated”*. A goal of orientation is to make the new employees have a feeling of belonging to the organization and to become committed to it (Klein & Weaver 2000, 48; Moisalo 2011, 319; Irwin 2011, 14).

“I believe, that with a well implemented e-orientation we can significantly make it easier for the employees to become committed to the organization and paint a better picture of the employer”. (Interviewee 7).

Some interviewees felt that **in e-orientation the information is presented in a more interesting and pleasing form**, as for example Interviewee 1 remarks that *“I think that the material was more interesting when it was presented in a form like this, in comparison to reading all information from a piece of paper”*. In e-orientation **it is possible to utilize a mix of methods in presenting the learning material, which increases the variety of it**. It has been confirmed by e.g. Mayer & Gallini (1990), Mayer & Anderson (1991), Mayer & Moreno (1998), Moreno & Mayer (1999), Moreno et al. (2001) and Clark & Mayer (2003) that using a combination of textual, graphical and audiovisual methods to present information result in significantly better learning outcomes. Learners are also more likely to manage greater amounts of information, when the material is both auditory and textual (Derouin et al., 2005, 933). In e-orientation it is also possible to utilize interactive components, which increase learner engagement and performance and result in more user satisfaction (Horton 2002; Welsh et al. 2003, 246-247).

Companies should utilize some form of accountability to make sure that employees have completed required e-learning classes, such as having a tracking system (Welsh et al. 2003, 254). Interviewees 6 and 7 value **the possibility of extracting**

various reports from the e-orientation system. Interviewee 7 states that the e-orientation system “*enables reporting that certain people have completed the required classes*”, **which makes it possible to follow up on which employees have completed the e-orientation** and which have yet not. Interviewee 6 also points out that because the e-orientation system has tests and quizzes, it is possible for them to check how well learners have internalized and learned the subjects based on their test results. With e-learning, it is possible to improve the tracking of learning by establishing an automated tracking system, which can track the learners’ activities and how well they have learned to master the needed skills and knowledge by using quizzes or tests (Welsh et al. 2003, 254; Wang et al. 2007, 1793).

“With a variety of tests we can ensure, that the new employee has internalized the subjects. It also enables following up and reporting completions. - - Thanks to e-orientation, we also get information when a person has completed the e-courses”. (Interviewee 6).

Interviewee 7 mentions that e-orientation “*supports and makes it easier to fulfill some of the basic requirements of this company, such as the implementation of code of conduct and safety rules, so it supports the overall functioning of the organization*”, and further continues that e-orientation **supports in the reaching of both personal and organizational goals**. Interviewee 6 also states that e-orientation supports in reaching organizational goals, as it is easier to implement e.g. policies or codes of conduct within the entire organization through e-orientation courses. Orientation gives employees information about organizational goals, so that they can realize the organization’s strategy in their actions (Kjelin & Kuusisto 2003, 14). Organizations can pursue their goals by developing an orientation program which results in the needed behavior of employees (Baker & Feldman 1991, 197). E-learning allows companies to execute training in a more efficient manner that is not possible in traditional face-to-face training, which may lead to substantial business advantages such as an increase in competitiveness (Welsh et al. 2003, 253).

Interviewee 2 points out that with e-orientation **the costs related to familiarization training are likely smaller**, as she states that “*the costs might be smaller for the*

organization - - and it does save resources". E-learning has been shown to have lower expenses in comparison to classroom training (Wang et al. 2007, 1793). E-learning is likely to result in cost savings when it has been implemented despite the high initial start-up costs (Phelps et al. 1991, 20; Wisher & Priest 1998; Whalen & Wright 2000, 45; Welsh et al. 2003, 253; Derouin et al., 2005, 921), as it eliminates several variable costs related to traditional classroom training (Burgess & Russell 2003, 299; Welsh et al. 2003, 253).

All in all, **interviewees seemed to regard e-orientation as a positive experience in comparison to their previous experiences**. Interviewee 2 stated that this was her first e-orientation experience and she feels positive about it, and continues to mention that e-orientation *"is a hundred times better than no orientation training at all, and it is pretty much equally good in comparison to my face-to-face training experiences"*. Interviewee 4 points out that e-orientation was versatile and unlike any previous familiarization processes, and Interviewee 5 says that e-orientation works just as well as regular face-to-face training. Interviewee 3 mentions that one key benefit of e-orientation is that the orientation process is better with e-orientation and that it is easier to learn new things with the help of e-orientation and the background knowledge it presented. When Interviewees 6 and 7 were asked do they feel e-orientation implementation has been worth the time and investments, Interviewee 6 states it is still hard to say as the e-orientation program has been in use for only a short amount of time, but all in all they regard e-orientation **"as a good way to conduct orientation in our organization"**. Interviewee 7 says that e-orientation has been **worth the investments** and they will put effort in renewing and developing it even further in the following years.

"I have never before participated in e-orientation, and I feel that this was now a positive experience. Earlier the familiarization process has started from zero, but because of e-orientation it was not needed, and the new knowledge and information was easier to memorize as the subjects had been already somewhat covered in the e-orientation. I was also able to ask better, more focused and more specific questions after the e-orientation." (Interviewee 3).

5.2. Disadvantages of e-orientation

One major disadvantage of e-orientation is that **the creation of a good and interactive e-orientation program takes time, effort and resources**. Developing e-learning units is difficult and creating e-learning programs requires a vast amount of effort, planning, monetary investments and resources (Jochems et al. 2004, 5), which accumulates to a lot of costs especially in the beginning of e-learning implementation as potential savings will only realize at a later stage (Welsh et al. 2003, 249). Also successful orientation requires careful planning and preparation where the needs and goals of the organization and the employees are considered in balance (Levine & Moreland 1999, 25; Arthur 2006, 24-26).

Regarding this case company, Interviewee 7 mentions that developing the e-orientation program was a thorough project which included members from inside and outside the organization, and from various business functions and units. As an e-orientation program needs to be tailored specifically for every organization, **an organization must spend a considerable amount of resources to create an effective and efficient e-orientation program to improve their current familiarization process**. It seems that mostly big organizations benefit from e-orientation programs, as they have to repeat the familiarization process more often for every newcomer, in comparison to smaller organizations that might hire new employees less regularly. The cost savings from e-learning implementation result from repeating the courses multiple times (Welsh et al. 2003, 253), so **smaller organizations must consider is the creation of an e-orientation program truly worth the trouble** and will it bring enough benefits in comparison to the needed resources in the development of an e-orientation program.

One advantage of e-orientation is that it increases the flexibility of training and gives more freedom of choice to the learners, but there are **downsides in giving too much freedom** as well. If newcomers are given freedom to make choices regarding their orientation, it means they are also given responsibility of their own familiarization at the same time. Giving newcomers too much independence especially in the beginning of the working relationship has been shown to hinder the familiarization process, and it might make the newcomers feel like they have been

left alone (Ketola 2010, 146). If learners are given too much control, then they must constantly also make decisions, which can reduce learning as it lessens the learners' ability to concentrate according to Gray (1987), Freitag & Sullivan (1995) and Derouin et al. (2005). Interviewee 6 mentions that e-orientation gives more responsibility to the learners, and Interviewee 5 points out that too much responsibility should not be given to the employees in their own familiarization process, as **too much responsibility might result in feeling of being left alone without adequate support, or that the learning outcomes might suffer as a result**. Also Moisalo (2011, 323) confirms that too much independence is not beneficial in familiarization. Learners should not be burdened with too much freedom and choices, but the level of given control should be in balance to the abilities of the participants and the goals of the e-orientation programs (Derouin et al., 2005, 922-923).

A disadvantage of e-orientation is that **learners that are not motivated might just take advantage of the given freedom and not pay attention to the learning contents at all for deeper contextual knowledge to develop**, as stated by Interviewees 1, 2 and 5. Neglectful attitudes will cause major issues for the orientation process (Ketola 2010, 147), as the newcomer needs to be motivated to learn (Moisalo 2011, 320). Interviewee 6 expresses that for example "*finding new information about some topics depends on the newcomer's own activity*". If newcomers lack independent initiative, then the familiarization training will suffer as a result as a deeper development of knowledge and skills requires the learner's own initiative (Ketola 2010, 55). Interviewees 1, 2 and 5 all state that the biggest problem in e-orientation is that people might click through the material and not focus enough on it, as Interviewee 1 expresses that people might "*click from question to question, and not focus on the subjects themselves*" (Interviewee 1). Most of the current e-learning systems act only as data containers that do not support the learning process (Tavangarian et al. 2004, 273), and utilizing e-learning too superficially for only information distribution may make the employees feel that reading equals training (Welsh et al. 2003, 249). Giving learners the freedom to learn as they please, may lead to "not now, maybe later" -learning (Honey 2001, 201-202).

“As you can go through the courses independently in your own pace, which is on the other hand very nice, but then no one can know if you are just scrolling through the pages as quickly as possible without even reading them, or are you truly trying to learn things“. (Interviewee 2).

The need to follow up on learning outcomes increase in order to ensure that new employees do in fact internalize the needed things especially regarding the most crucial things, such as code of conduct or the most critical organizational policies, according to Interviewees 2, 5 and 6. Many e-learning programs fail to take into account the learning perspective and utilize e-learning platforms as only data containers to distribute information, but e-learning courses should be designed to encourage learning (Tavangarian et al. 2004, 273). Learning outcomes are not always apparent if learning is conducted in an e-environment, and **other metrics than just completion rates must be utilized to know if learning has indeed occurred**. Successful orientation requires following up and constant monitoring to ensure the anticipated goals are being reached (Sanders & Kleiner 2002, 85; Ketola 2010, 119), but e-learning systems should be improved regarding performance assessment on a pedagogical, technological and organizational level (Jochems et al. 2004, 9-11). Interviewee 6 mentions, that *“it is harder to make sure that the newcomer has learned and internalized the needed subjects, because there is not that kind of interaction in comparison to going through things on a personal level with one’s supervisor”*. It might be hard to follow up the learning outcomes of orientation, as Interviewee 2 points out this is difficult even in traditional face-to-face orientation. E.g. tests or conversations provide valuable insights on whether the person is familiarized to a satisfactory level, but the best evaluation methods always depend on the context.

“If learning is not followed up at all and it is not known if the person actually knows the needed things, then it might not be good for learning - - Although it is not always possible in traditional training either to ensure that things are being learned to a satisfactory level, so this might be a general problem that is related to orientation...“ (Interviewee 2).

“You can never really be sure that have the people really learned the things or are they able to remember them for longer than a month. The

orientation should be followed up and too much responsibility should not be given to the new employees regarding their own familiarization.” (Interviewee 5).

Another disadvantage of e-orientation is overall the **lack of human interaction** according to Interviewees 2, 5, 6 and 7. Successful orientation requires building the familiarization process on interaction, discussions and constant feedback (Moisalo 2011, 330), as social interaction and social support increase learning outcomes (Ruohotie 1996, 10; Tavangarian et al. 2004, 277). E-orientation does not provide similar possibilities for face-to-face interaction in comparison to traditional classroom-training (Derouin et al., 2005, 922). Interviewee 6 states that “*e-orientation lacks in personal interaction with the person responsible for the familiarization*”, and Interviewee 5 further mentions, that “*in e-orientation you are not in contact with others. In previous companies I have worked for, orientation training sessions have been a group event, where I could meet new people and network with them and share experiences - - it is sad that it does not give any opportunities to network or be in contact with other new employees, as is possible in face-to-face group training events*”. In comparison to e-orientation, a group orientation training session allows the newcomers to meet each other and exchange information or even offer each other peer-to-peer support in the orientation process. Decreased opportunities for networking may make the entire e-orientation less attractive and satisfying to participants (Welsh et al. 2003, 249).

The utilization of e-orientation **may result in more difficulties in establishing relationships**, which is unfortunate as newcomers need to become socialized to the organization, which requires social interaction with others. There will be problems in orientation if enough support is not given to the newcomer to establish social relationships (Ketola 2010, 146). Socialization is an important part of orientation, as it is a key process in making sure newcomers are efficiently integrated within the organization (Antonacopoulou & Güttel 2010, 6), and socialization leads organizational commitment and psychological attachment (Buchanan 1974; Jones 1986; Allen & Meyer 1990; Meyer & Allen 1991; Baker 1992; Ashforth & Saks 1996, Saks & Ashforth 1997; Klein & Weaver 2000, 52).

Conducting orientation training partly in an e-environment will lessen the amount of face-to-face interaction, which in turn increases the need to have discussions with the new employee to cover the lack of interaction in training (Ketola 2010, 78). Discussions can also take place in virtual chat rooms or message boards (Derouin et al., 2005, 921), but it requires more effort to establish interaction between participants in those (Welsh et al. 2003, 249).

Interviewee 2 also points out that the **lack of human interaction may affect the learning outcomes negatively**: *“It might not be that efficient regarding learning, as it leaves out human interaction”*. Lack of communication and interaction between participants in e-learning will negatively affect interaction and collaboration (Welsh et al. 2003, 249), which are important factors in learning (Falconer 2006, 143). There is a risk that a supervisor will leave the familiarization process to be handled entirely by the e-orientation program, which it is not meant for. The supervisor should realize that face-to-face orientation training is needed alongside e-orientation. In the implementation phase, it should be taken into consideration that the supervisors and existing employees need to be trained so that they are able to offer adequate support to the newcomers when e-orientation is used alongside traditional training. Also organizational culture needs to be suitable regarding the implementation of an e-orientation program (Welsh et al. 2003, 248-249).

“It is not meant that the supervisor can outsource the familiarization to these e-orientation courses, but the human contacts and social learning should still be the cornerstones of familiarization”. (Interviewee 7).

The information was presented in a form that was easy to understand according to almost all of the Interviewees, but Interviewee 4 stated that it was not easy to understand the information in the e-orientation course, as he stated that *“lack of time lead to a hurry in which it was harder to internalize and memorize the presented information”*, which Interviewee 4’s supervisor should have taken into account. Lack of time or resources causes major issues in the orientation process (Ketola 2010, 146-153). Even though Interviewee 4 was overall pleased with the e-orientation, **the learning outcomes might be significantly lower in those cases in which the**

participants have to hurry and they don't have adequate time reserved for learning.

E-learning programs often don't take into account that participants may not find the time or motivation to go through a vast amount of material (Honey 2001, 201). Successful familiarization requires utilizing resources to improve the familiarization process both regarding temporal and content-oriented perspectives (Ketola 2010, 117). Interviewee 4 thought that the e-orientation course was not that user friendly as it had been designed to be too time consuming, but on the other hand he did not have that much time to do the courses, where as other participants had more time to complete the courses as there had been reserved time for them to focus on the e-orientation courses. This highlights the importance of not only designing and implementing a great e-orientation program, but also making sure that the supervisors give users enough time and support to focus on the courses and to complete them in a manner that allows them to genuinely learn and internalize the needed topics.

Interviewee 7 also stresses the importance of reserving adequate time for learning and having a peaceful schedule in which to go through the e-orientation courses. In traditional classroom training the teacher usually controls the pace of learning and there usually is a set time reserved for learning that has been designed to suit the needs of teachers and learners, but in e-learning this is not the case. In e-learning much more freedom is given to the learner regarding the pace of learning and the sequence of events (Brown & Ford 2002, 199). If learners themselves have to find the time to learn from the e-orientation program, and they simultaneously have to take care of their job tasks, there might not be enough time to learn in a meaningful way in which the learned content is not just read through and memorized, but a deeper understanding is developed.

“Another risk is that a person is not given enough time to process all the information that they are learning in the web-based courses. In an ideal situation, a person can complete these trainings on a peaceful schedule and discuss the contents with e.g. supervisors and colleagues, in order to develop a deeper and more practical understanding of these issues

and make real-life connections with the learned subjects and reality.”
(Interviewee 7).

E-orientation might not work for all learners as efficiently, as different people have different learning styles and needs. Interviewee 2 points out that *“for independent students who learn by reading it (e-orientation) might even work better, but it depends on the learning style”*. A disadvantage of e-orientation is that the learning outcomes might be significantly different for different people. E-learning does not work for all people as effectively, as e.g. participants with lower level computer skills will have lower learning outcomes (Gist et al. 1989, 889; Martocchio 1994, 817; Welsh et al. 2003, 250). Even though e-orientation makes it possible to deliver the exact same learning material in the same way to all newcomers despite e.g. geographical differences, the reception might not be the same because of individual learning differences, differing motivation levels, different amount of time reserved for the courses, or differing levels of local support. Interviewee 2 points out that e-orientation does not work that well for all learners and in all situations, but the context defines whether it is suitable to use e-orientation or not: *“for learning about organizational policies web-based learning is good, so it depends on the situation”*.

In almost all cases it is better to use the combination of face-to-face teaching and e-orientation, as Interviewee 2 expresses that *“the combination of both methods seems to be the best”*. Interviewee 3 states that e-orientation should never be the only form of orientation, but it should be used alongside traditional face-to-face orientation: *“If the entire familiarization process is replaced with e-orientation, then there are a lot of risks associated with that. An e-orientation program does not cover the entire familiarization, and e-orientation should be seen as an addition to the familiarization process, rather than being the entire familiarization itself”*. E-learning can't entirely replace other types of learning but should be used as in combination with other kinds of training (Jochems et al. 2004, 2). Face-to-face training can never be fully replaced by just reading and memorizing electronically-encoded information from an e-learning archive (Welsh et al. 2003, 249), as e.g. realistic and collaborative learning tasks are harder to realize in e-platforms (Jochems et al. 2004, 5). E.g. enabling new employees to follow their senior peers

and participate in their project activities has been found beneficial in orientation in addition to having online training (Bjørnson & Dingsøyr 2005, 248).

It is not possible to conduct the entire familiarization process online, as a big part of familiarization consists of doing the actual work in real-life context and getting to know colleagues on a personal level in face-to-face interactions, but as said, e-orientation can be used to deliver basic level information about the company or the work. E-orientation compliments the familiarization process, but having it as the only method in familiarization will probably cause issues in the orientation of new employees. Interviewee 2 states that both traditional orientation training and e-orientation are needed, but e-orientation can't be the sole method in delivering familiarization training material. It is important to give the newcomers learning experiences in which implicit knowledge can be distributed, in order to develop their own skills and knowledge (Ketola 2010, 108-110).

“There is absolutely a need for face-to-face orientation training as well, you can't familiarize someone only based on a computer. But for learning about organizational policies web-based learning is good, so it depends on the situation. The combination of both methods seems to be the best. And if the firm has some things that are absolutely crucial and it is extremely important to know about them, regarding e.g. something about the policies, then some kind of other orientation training is also needed in addition to web-based training.” (Interviewee 2).

Interviewee 2 has **problems in seeing e-orientation's advantages in comparison to traditional familiarization regarding the learning advantages and its effectivity**. But as e-orientation makes it easier to conduct some parts of orientation, the advantages result likely from technical reasons and easiness and not from significantly better learning outcomes. Current empirical research has not been able to consistently determine whether e-learning leads to better, similar, or poorer learning results, but it can be questioned whether the most important benefits of e-orientation actually come from learning outcomes, but rather from making the process easier, faster and cheaper. These benefits are not apparent to the users,

so this would be in line with the assumption that the reasons to utilize e-orientation stem from inside the process and its supporting functions, and not the end results to the participants or the learning outcomes.

“I can’t come up with any major pros in comparison to traditional face-to-face familiarization - - I feel that I would be equally good in my work with e-orientation or traditional orientation, so I can’t see that there e.g. would be a major learning advantage in comparison to traditional training. I feel that e-orientation may in many areas be as effective as traditional training, but as said, it can’t be the only form of orientation.” (Interviewee 2).

5.3. What to take into consideration in e-orientation

In addition to the potential advantages and disadvantages of e-orientation implementation, the following factors need to be considered when organizations are pondering whether to engage in e-orientation. Organizations must analyze whether e-orientation would suit for their organization, make detailed plans to see what kind of resources and effort would be needed to implement e-orientation, and be prepared to modify the existing orientation practices to be more suited towards e-orientation. Organizations must also make decisions regarding the time aspect and decide what kind of time can be reserved for newcomers for e-orientation completion, and when newcomers should optimally begin the training in relation to when they start working in the organization. Technical aspects should also be evaluated before the development of an e-orientation program is begun, so that the organization can prepare for the possibly upcoming changes and establish needed technological infrastructure to support the implementation of e-orientation.

5.3.1. Planning & preparing for implementation

First of all, **it needs to be ensured that the anticipated benefits of an e-orientation program outweigh the cons and costs related to creating one.** Creating an e-orientation program to be used in the familiarization process takes resources, time and money, and the benefits of it need to be clear before the development is begun. Ketola (2010, 117) states that organizations must consider the economical aspect in all their actions, and new employees should be trained to be productive as efficiently as possible. But Tavangarian et al. (2004, 273) point out

that e-learning projects should not be too focused on profits or efficiency alone, as the point of e-learning programs should firstly be to enhance the learning process. In the case organization, Interviewee 7 states e-orientation has been worth the investments, but this might not be the case for all organizations. The case organization is a large corporation that constantly employs new employees, which means they are repeating similar familiarization processes many times on a yearly basis, but smaller organizations that do not employ new people that often might not receive the same benefits, as in them it takes longer for e.g. monetary savings to realize as the e-orientation process is repeated more infrequently.

The following questions need to be considered before the choice to develop an e-orientation program is made: **is it worth it, will it be used frequently enough, does it improve the familiarization process, and do we have enough resources that can be invested to develop an effective and efficient e-orientation program?** Interviewees 6 and 7 point out that organizations should be prepared for e-orientation implementation **by reserving adequate resources for planning, developing, implementing and maintaining the e-orientation system.** Also Ketola (2010, 117) states that successful familiarization requires investing on it and utilizing resources to make it as effective as possible.

Interviewee 2 expresses that if it does not create too much problems to go through the e-orientation why not do it, but then again she does not say that e-orientation would have resulted in any major benefits in her case: *“It was ok to go through, and as there was not too much hassle to it and it was not a big work to go through it, then why not do it. I am satisfied”*. No project should be started on the basis of “why not”, as the concrete benefits must be realized and become apparent so that it is worth it to use resources in establishing an e-orientation program. Even though all the other interviewees, despite Interviewee 2, found e-orientation useful, **effort and resources must be used especially in the design and implementation phases of e-orientation, so that all participants find the program to be useful to go through and at least some benefits are realized because of e-orientation.** It is good to note though that studies conducted by Louis et al. (1983), Chatman (1991), Nelson & Quick (1991) and Saks (1996) have shown that new employees tend to

see orientation programs only as moderately helpful. Most of the benefits that e-orientation brings might not be visible to new employees, as some advantages of e-orientation are only visible on an organizational level; and newcomers can't compare their experience of e-orientation on how the organization used to conduct orientation in the past, to see how orientation practices have improved in the organization because of e-orientation implementation.

Organizations have to be prepared to utilize resources in the implementation phase and plan how the new familiarization practices will be taken into use in the organization. E-orientation will not work and bring the anticipated benefits, if the implementation is not carried out throughout the entire organization from top to bottom. Interviewee 7 states that *"you should carefully plan the implementation and also plan the communications side of it, as in how to market these new practices"*, and continues to state that they are planning to further implement the practice that the supervisors and the new employees are able to independently find their way to the e-orientation program to complete the courses regardless of the business unit or work task.

Training is needed for the supervisors and existing employees, so that they can all implement new orientation practices as planned, and know how to offer adequate support to the newcomers in the e-orientation process. Interviewee 4 praises the expertise of his colleagues: *"the person responsible for my familiarization was actively involved, and guided me during the first weeks and participated in all of my work tasks - - the people in charge knew what they were doing and they were adept and professional"*. The person responsible for the familiarization needs to possess both professional and familiarization skills (Ketola 2010, 73; Moisalo 2011, 320), and these skills can be enhanced by having training sessions for mentors (Johnson & Senges 2010, 183-187). Low supervisor support in familiarization will decrease the new employee's job satisfaction and ability to learn work-related skills (Jokisaari & Nurmi 2009, 533; Ketola 2010, 148).

Interviewee 6 mentions that as the creation and maintaining of e-orientation content takes resources, **it is most efficient to have as unified as possible orientation**

process within the entire organization to start with, and not have too much tailoring for each business unit or job task. Interviewee 6 warns, that *“if you want to make e-orientation in a very tailored level, for example allocating different e-orientation on different functions, then you should be prepared for it with adequate resources regarding the production and maintaining of content”*. Orientation should be similar for all new employees, just the pervasiveness and quantity of the training may vary between individuals and different departments (Ketola 2010, 79). Some tailoring might always be needed, but the general content of the e-orientation should remain about the same. E-orientation implementation may require organizational changes or unifying the orientation process, as in the case organization according to Interviewee 6: *“In our corporation, the utilization of e-orientation did not require vast changes, though we did need to unify the orientation process between various business functions before we started to build the entry familiarization -course”*.

There however exists some differences in the case company in different business functions regarding e.g. the utilization of a familiarization plan, which means that the familiarization process is not that unified at least not when compared to the practices of different supervisors. Interviewee 5 had a familiarization plan, but it was left for her to independently fill out. Interviewees 1 and 2 state that a familiarization plan either was not made, or made only on a general level and it was not followed up in detail. Interviewees 3 and 4 did use a detailed familiarization plan to keep track of their orientation progress. These differences in implementing a familiarization plan may be caused due to job-related differences, or differing preferences of supervisors or employees. **Familiarization practices should be unified in the organization to have similar familiarization processes for all employees.**

E-orientation is rather a supportive method to be used alongside traditional face-to-face training, so organizations need to be prepared to utilize also other methods than just e-orientation in their new employee familiarization. Interviewee 3 suggests that *“E-orientation can’t be used to substitute the entire familiarization, but it is a good start for the actual familiarization and it helps the newcomer to get better acquainted with how the company actually works.”* Jochems et al. (2004) state that e-learning can’t be used to entirely replace other types of

learning, but it should be used in combination with face-to-face training to enhance the learning process pedagogically, organizationally and technically. Also Johnson & Senges (2010) suggest in their study that it is beneficial to utilize other orientation training methods alongside online training to support the familiarization process.

5.3.2. Time aspect

Organizations should plan how much time should be reserved for each newcomer to complete the e-orientation courses. Interviewees 1-3 felt that they had plenty of time to learn, which increased their satisfaction towards e-orientation. Interviewee 1 stated that there was *“plenty of time to focus and to learn new things, and also the person who was responsible for my familiarization and teaching, had plenty of time to teach me”*. Interviewee 2 also points out that *“there was plenty of time reserved for me to complete the courses - - it felt good knowing that I don't have to hurry with anything”*. Lack of time for orientation causes issues for the orientation, and it can be caused by multiple reasons, such as organizational culture or negative attitudes (Ketola 2010, 146-153). Learners' individual skills and learning needs should be taken into account, as different people will need different time to complete the courses (Davis & Kleiner 2001, 46; Kjelin & Kuusisto 2003, 178; Österberg 2005, 91–92).

Regarding the interviewees, most of them had enough time to complete the e-orientation, but Interviewee 4 faced some challenges. Interviewee 4 states that: *“there was a lack of time to do the e-orientation courses. I usually ended up doing the courses in the evening when I had managed to finish my work tasks for the day”*. Interviewee 4 might have had a more positive e-orientation experience if better arrangements would have been made and there would have been a more clearly designated time to do the e-orientation courses. Organizations needs to make sure that employees are given enough time in the beginning of the working relationship to complete the required e-orientation courses. **Every supervisor should be aware of the average time it takes to complete the e-orientation, so that adequate time can be reserved for the e-orientation for every newcomer.**

E-orientation should be completed in the right time in regard to when the work starts in the organization, so that the new employee is able to work in the organization and act according to the policies and codes of conduct right from the start, but also possesses enough information and experience from their work to be able to internalize the learned information in practice and make connections to their work. Interviewee 6 states that e-orientation “*should be completed within the first few weeks of employment*”, but continues to state that a strict deadline for this has not been set. Interviewee 7 states that e-orientation should be completed “*within a few months of when the employment started or during the probationary period*”, and further mentions that ideally orientation should be finished as soon as possible especially in those cases that the employee works for the organization for only a short amount of time, e.g. in the case of summer workers.

Interviewees 1-3 state that they feel they completed the e-orientation at the right time, which is in the beginning of their employment. Interviewee 1 points out, that “*one should complete orientation right from the start, as I did*”. It took the interviewees approximately in total of a few hours to complete the e-orientation. Interviewee 3 completed the e-orientation in one sitting, but others did it in multiple sections spanning over the course of a few days to a couple of weeks. Interviewees 4 and 5 however have different experiences, as they feel that they completed the e-orientation too early or too late. Interviewee 5 thought that e-orientation should be completed as soon as possible, and preferably on the first day, but she admits that she would not have had the time to complete the courses on the first day, and ended up doing them in the first couple of weeks when she had the time. Interviewee 4 on the other hand thought he completed the e-orientation too early, as it was difficult for him to internalize all the information as he was not familiar enough with his work tasks at the time.

“I completed the course too early, as I did not yet then understand every things in how the organization and my own business unit functions, which I learned from the actual familiarization later on.” (Interviewee 4)

Pre-work onboarding, or in other words orientation that begins before the work actually starts, is made possible with the utilization of e-learning tools, as it is

possible to deliver training material online before the newcomer has started to work in the organization. Newcomers have the biggest thirst for knowledge about the organization and its functioning before the working actually starts (Irwin 2011, 15), and e.g. Interviewee 1 did search for information about the organization before the work started due to her own interest. **Organizations must choose whether they want to start the familiarization process already before the first work day or not.**

None of the Interviewees 1-5 had experience of actual pre-work onboarding, just Interviewee 5 had completed web-based safety courses for some organizations prior to the first work days: *“I don’t have experience on it, other than that I have worked for factories where the employees need to complete a web-based safety course before they can come to the production facility on the first day, as was required for this job also. But I would not count that as onboarding as the familiarization really starts only after the work starts”*. Interviewee 4 would like to have the possibility of pre-work onboarding: *“The e-orientation courses should be possible to do before the work officially starts, so that you could go through them before you start working”*. Interviewee 2 feels that pre-work onboarding might help to make the newcomer a more committed employee and aid in the creation of individual’s organizational identity, and it might make the transition into working smoother as the firm is more familiar from the start, but she does acknowledge that onboarding might not suit for all individuals.

“I could see that if you want to get a committed employee to the organization, who develops own organizational identity for the specific firm, then I feel that onboarding might maximize the possibilities in reaching this goal. When the work starts then the firm is already more familiar it might be a smoother transition into working and having a better understanding of where one is working. And also the employee might get a sense of feeling, that “hey these people want to put effort in to me even before I start working”. Of course it needs a successful realization that onboarding produced the wanted results, and not all individuals react the same so it’s hard to foresee the consequences.” (Interviewee 2).

Most of the interviewees seem to feel that mandatory pre-work onboarding would not work, because not all people have the time, energy or motivation to go through orientation material in their free time before the work has even started. When the interviewees were asked how they regard pre-work onboarding, the response was rather negative. For example Interviewee 1 states: *“I don’t see that there would be a need or support for that (pre-work onboarding). I myself usually find information beforehand from the internet about the company I am going to work for. The rest of the orientation I feel can be taken care of when the work has started.”*, and Interviewee 5 says: *“I am not sure would everyone be interested in learning about the company in their free time without compensations. I did use a couple of hours to complete this e-orientation, so I’d rather do it during working time.”*

It might not be beneficial to start e-orientation before the work starts, as employees might not have the motivation to use their free time to focus on the learning material on a satisfactory level. There does not exist any other research to corroborate or contradict this statement whether or not pre-work onboarding should be used or not, as the existing research on pre-work orientation is still limited. But it has been found beneficial to at least thoughtfully contact the new employees prior the first work days to make them feel welcome (Sanders & Kleiner 2002, 86; McNeill 2012, 687).

“I do not regard that it would function at all to begin familiarization that early, as for example regarding my case, I started working in the case organization right from my old job, and I did not have any holiday between these jobs. I would not have had the time or energy to start the familiarization process before the work actually started”. (Interviewee 3).

5.3.3. Technical infrastructure

Supervisor support is important in the first few months of employment (Jokisaari & Nurmi 2009, 533), but organizations should consider that there might be a need to also establish a technical support system with e-orientation utilization. It is good to note that people with inadequate computer skills will likely need more technical assistance with e-learning, or else they might develop strong negative feelings towards it (Rossett 2002, 15; Welsh et al. 2003, 252). Regarding the Interviewees,

they were all between the ages of 20-40, and were already familiar with computers, and possibly because of this all of them felt that they did not need further support or guidance in how to use the e-orientation system. Interviewees 2-5 stated that they know they would have received more help and support in using the system if they would have needed it or asked for it. Interviewee 4 even expressed, that *“I felt that I received enough support and guidance to use the system, the help was almost pushed to me”*.

Interviewees 6 and 7 state that they offer support to the users by providing them with needed contact details in case of problems. Users can also be offered support through the utilization of virtual guides, but Interviewees 6 and 7 state they have not planned to use those in their system. **Organizations need to consider establishing some sort of technical support system, as some participants may need more technical support, but as it seems that most of the users don't need it, heavy investments are not needed for it.** Technical support in using the system is important especially in those cases, that the participants are not that familiar with the utilized technology or methods.

It needs to be ensured that all the needed employees are able to use the e-orientation system and have access to suitable computers or tools. Interviewee 6 explains that the e-orientation program was directed only for those employees that have regular access to computers and a corporate e-mail address, and e.g. production workers do not have to complete the e-orientation courses as they do not have corporate e-mails or personal computers. **Organizations can choose whether e-orientation is implemented in the entire organization, or for only a specific set of new employees.** Interviewee 6 also expresses that they have made sure that the most commonly used computers and browsers are able to access the e-learning environment's content. Interviewee 7 mentions that the material can also be printed from the intranet, but then the interactivity of the material is lost. Interviewee 7 states that *“some parts or materials of the familiarization are mandatory for all, such as the code of conduct and policies, but it is not required to complete these things online or in the form of e-learning courses, as the option is not available to all anyways”*.

The utilization of e-learning in orientation allows more flexibility and increases the availability and distribution of the learning material. E-orientation programs usually work on computers, but **it is also possible to create e-orientation programs for mobile devices or mobile phones as well, also known as m-orientation.** Interviewees 1, 4 and 5 felt that there is no need to have the e-orientation program available also on mobile devices, but Interviewees 2 and 3 thought there might be some benefits in making the e-orientation program accessible for mobile phones as well. Interviewee 2 does not see a personal need for mobile e-orientation, but she feels that employees in production facilities and plants may benefit from it, as they do not have regular access to computers. Interviewee 3 thought that mobile orientation might be useful in some situations: *“Yes, this would be handy especially in those situations, where you have to move around a lot during the familiarization days and there is no sense in opening your computer for just a moment”.*

Interviewees 6 and 7 mention that there are some development plans for the e-orientation program in the future, such as translating the e-orientation into multiple languages. Interviewee 6 further mentions that in addition to updating the existing courses when needed, *“e-orientation might be utilized in a larger scale, and also in a more tailored level regarding different business functions or even different job tasks, but for this we do not have any defined plans yet”.* In addition to that, Interviewee 7 expresses that they will certainly further develop the e-orientation program, and even possibly **enable the entire ensemble of human resource processes to function in the same integrated system, which provides more opportunities to develop familiarization in addition to other closely related HR processes.** Interviewee 7 also mentions that **new technological developments might provide possibilities in the future which should be explored in the time to come.**

“In the years to come, there certainly will be plans to further develop the other e-learning contents of this organization and create more of them to be available for all. As new technologies are developed, I’m certain that in the future we will technically combine recruiting, familiarization, career development and other HR processes under the same system,

and linked to each other, which will provide us another possibilities regarding the development of familiarization as well.” (Interviewee 7).

5.4. Designing e-orientation programs

In the following section, the factors that need to be considered regarding the design and development of e-orientation programs are presented. In the interviewed organization, the aim was to create user-friendly content and the entire e-orientation program was planned keeping in mind the user’s perspective. Interviewee 7 explains that they wanted to create something that is possible to conduct in terms of technical limitations, but also while making the learning and internalization of the content as easy as possible to the learners. **It is important to test user satisfaction** during and after the e-orientation is implemented, as they did in the case company, as then it can be made sure that the program serves its purpose and provides clear, understandable, correct and adequate information to newcomers, and the right choices regarding e.g. technical realization have been made. In the design of e-orientation programs, an organization should reserve enough resources and utilize the expertise of multiple people, use effort in designing the learning material, and carefully decide what kind of technical realization would suit the organization’s needs the best.

5.4.1. Preparing for development

Interviewees 6 and 7 point out that **organizations should reserve adequate resources for the design and development phase of an e-orientation program.** The development of a familiarization program heavily affects the outcomes and how successful the program will end up being (Levine & Moreland 1999, 25; Arthur 2006, 24-26). Lack of resources in the development of e-learning programs has led to poor e-learning programs that do not offer value or support the learning process (Tavangarian et al. 2004, 275), and conducting orientation inefficiently leads to lower productivity and higher turnover rate of employees (Davis & Kleiner 2001, 48).

It is crucial to utilize the expertise of multiple people from inside and outside the organization in the development of an e-orientation program, as valuable feedback can be used to improve the quality of the program and the learning

material. Regarding the case company, the design of the e-orientation program was a thorough project, in which opinions from various people were utilized. Interviewee 7 mentions that in the case company the project group consisted of members of the HR, representatives from the organization's communication function, and an outside partner to help in the development of the entry familiarization module. Interviewees 6 and 7 explain that they also gathered a reference group of various old and new employees to comment the entry familiarization -course in multiple phases of its development, and their outside partner and many employees were included also in the piloting phase, in which they received feedback regarding the content and technical realization of the e-orientation program.

“In the production of the web-courses, one should get familiarized with a number of different options and the various contents that outside partners have already created. Internally, one should utilize the resources of multiple experts of different fields, so that an interesting and meaningful entity can be created, that serves all needs”. (Interviewee 7).

Orientation should be developed to meet the needs of the organization and its members, and for this feedback must be gathered from the employees (Kjelin & Kuusisto 2003, 14-17), as they can provide valuable information on how to make the organization's familiarization processes better (Ketola 2010, 117). Having more people to participate in the development of the e-orientation, and receiving feedback from diverse people from various backgrounds, increases the odds of developing an e-orientation system that considers the individual differences of learners and business units. Falconer (2006, 147) also points out that tacit knowledge must be extracted from the existing workforce to develop accurate e-learning material.

“Multiple employees from various business functions were included in the development phase of the learning material, so that we were able to consider things from many different perspectives as thoroughly as possible”. (Interviewee 6).

5.4.2. Developing learning material

E-orientation might work better for some cases than others, and the learning outcomes are vastly affected by the choice of what is taught via the e-learning system. Interviewee 6 explains that the contents of the e-orientation courses were chosen as according to the scope of their e-orientation project, which was to “*create familiarization content for those subjects, that every employee – regardless of business unit, function and job task – needed to go through in their familiarization*”. **Organizations that decide to utilize e-orientation need to decide which information is delivered through it, and which information is delivered via face-to-face training events or individual training.** Tavangarian et al. (2004) point out that a balanced mix of methods in delivering information should be used, taking in consideration the learning situation at hand.

Almost all of the Interviewees felt that there was the right amount of material in the e-orientation course. Interviewee 1 said: “*I feel that the contents were adequate, and there was enough material*”, and Interviewee 4 continues: “*there was more information in the e-orientation course than I could have thought of*”. Interviewee 3 likes that with e-orientation it is possible to create “*a comprehensive familiarization packet for anyone that starts in the new organization*”. As it took the Interviewees approximately a couple of hours to finish the course, it could be implied that a general e-orientation course should not take the participants more than a few hours to finish, but it also should present enough information on the company so that the learners develop a deeper understanding. Interviewee 3 says that “*I feel that the content was good, and the courses started by presenting the functioning of the company from a basic or low level enough, so that it was understandable*”. **E-orientation courses should be designed in a way, that enough material is available so that the needed topics can be covered, but there should not be too much material either or the participants could get overwhelmed or not have enough time to learn all the subjects.** The amount of material should be balanced in the design of e-learning programs, and information should be presented in an organized and compact way (Jochems et al. 2004, 14).

It is important that the information of the e-orientation program is up to date and regularly followed up. Also Wang et al. (2007, 1798) states that maintaining the learning material up to date is one factor directly affecting to the quality of an e-learning system. The information presented in the case company's e-orientation course is checked and updated when it is needed, but Interviewee 6 explains that from the start the aim was to **include only such material, that would need to be updated as rarely as possible**, and for that reason e.g. the exact numbers of current turnover or number of personnel are avoided. Interviewee 6 mentions that the corporation's policies and code of conducts are updated when the management of the corporation realigns them, and Interviewee 7 continues that "*The codes of conduct and policies are the responsibility of the holders of those policies, and they regularly check the contents. Any possible updates have to be approved by the management*".

In the case organization, Interviewee 6 states that all "*business unit related information, as well as information that is not relevant to all employees, was strictly limited out of the entry familiarization -course's learning material*", and Interviewee 7 continues to state that "*because the firm has many different business functions, we had to leave out all the detailed practical instructions out, so that we could create an entity that could be implemented throughout the entire organization (on a group level)*". Instead Interviewees 6 and 7 state that they wanted to focus on the corporation's generally mandatory information, such as codes of conduct and various policies in the entry familiarization -course.

In addition to the general entry familiarization -course, each of the case organization's business functions have their own e-orientation courses, but they are also on a rather general level to suit all employees of those business functions. For e-orientation programs **it might be wise to create only one program for the entire organization, and not creating distinct learning materials for all departments or jobs, as the creation and development of multiple e-learning materials takes time, effort and resources.** According to Ketola's study (2010, 108-110), in most organizations e-orientation seems to focus on giving the newcomer only general

information about the organization and its divisions, and to guide the learner on how to find more advanced information on their own field of work (Ketola 2010, 108-110).

“We wanted to include all the corporation’s required courses, such as code of conduct and various policies, in the orientation pages. The attempt was to make all these available to the newcomers right from the start of their employment, and in a form that could be reported. In addition we wanted to give a comprehensive outlook about the organization in the entry familiarization -course, but also not including too many things to be internalized by the participators. We also wanted to familiarize people to what it is like working in here and what we are expecting from the employees in regard to working and attitudes.” (Interviewee 7).

However, Interviewees 3 and 5 would have wanted to receive more in-depth information. In the case organization, the entry familiarization -course is on a rather general level, but **some learners would like to have more detailed and specific information delivered through e-orientation**. Interviewee 3 states that “*e-orientation results in giving a good basic knowledge about the case organization in general*”, but continues to express that she would like to see more detailed and focused e-orientation: “*in the future, the orientation could be more focused directly on the business and functioning of the newcomer’s own business unit, and give more specific information about that*”. Interviewee 5 explains, that she would have wanted to have more information about the customers and end uses of her business unit’s products: “*Concrete examples are always nice, so that you can go around in a store and pick up products and be like ‘hey this is made from our product!’*”.

Employees seem to want to know more of the subjects that are directly related to them and their work but it is not always possible to include this kind of detailed information in e-orientation. In designing e-orientation material, one should consider that not all information is interesting to all readers, but people are eager to learn in detail about things that do affect them. E-orientation material should possibly be personalized as according to a learner’s job and department, so that as much learning material as possible is directly related to one’s own work. **It might be**

harder to create multiple versions of e-orientation courses for different employees, and it would definitely take more resources, but the learning outcomes might increase and the learners might remain more focused if the material would be more directed towards them and their work. Organizations have to carefully consider whether they will create multiple learning materials for different kind of employees or not.

According to the constructivist learning theory, learning material should be somewhat customizable to suit the needs of individual learners and their existing knowledge (Tavangarian et al. 2004, 275). Jochems et al. (2004) suggest that e-learning programs should be at least somewhat tailorable to suit the individual needs of diverse learners. For example, Interviewee 4 would have liked to have a possibility to skip some parts of the e-orientation that he felt he already knew, but he did have a lack of time to go through the courses, which could have affected this opinion. Interviewee 5 understands that some people might want to have the possibility to tailor the learning material according to their existing knowledge: *“for some people it might be frustrating to click through some materials if they all seem to be self-evident”*, but continues to state that *“I did not have the need to bypass anything, because almost everything was new to me”*.

Tailoring might not be needed with e-orientation though, as **most of the interviewees (1, 2, 3 and 5) do not see a personal need for having a possibility to modify the e-orientation program to suit their needs better, or e.g. having the possibility to skip the things they already know.** They all felt that as e-orientation is completed in the beginning of the employment, there is no need to skip anything as most of the things are new anyway, and even if some information would not be new, recap is found beneficial.

“I did not have a need for this (skipping/modifying). Almost all things were new to me, and even if I would have known something about the contents, a little recap would definitely not have been harmful”.
(Interviewee 2).

“I started my familiarization process by going through the e-orientation courses, so I had no need to bypass things I would have already known.

And I don't know is there any need at all to be able to skip anything, as recap is beneficial especially in the start". (Interviewee 3).

Interviewees 1, 3, 4 and 5 feel that **it might be beneficial to recap some of the learned things after some time has passed** from the e-orientation, so that the most important things would not be forgotten. Interviewee 2 does not see the need to recap: *"I don't see the need for this if it is not directly beneficial and concretely needed to the person's work tasks to recap"*. Interviewees 1 and 3 point out that there is no sense in going through everything again, as Interviewee 3 states, that *"it is good to actively bear in mind the information security and privacy issues, even though you would have been working in the organization for a longer period of time. However I do not see the need to recap all the basic things"*. Interviewee 5 suggests that **there could be a voluntary recap e-course for the most important things, so that one does not have to go through all of the material again**, but can focus on the most important things. Interviewee 5 also states that *"easily you can forget some things, especially if you do the orientation in the start when you are already busy and a little overwhelmed with all the new things"*. Only Interviewee 4 has returned to the actual e-orientation material to check some things, but Interviewees 2, 3 and 5 mention that if they need to check something, they will rather check it from the intranet or their colleagues and supervisor.

5.4.3. Technical realization

E-learning can facilitate learning if technology is used in educational improvement (Jochems et al. 2004, 2). Derouin et al. (2005, 922-923) state that e-learning's effectiveness is dependent on the used e-learning methods. Orientation material can be e.g. verbal, literal, or audiovisual, and it is beneficial to use multiple methods in delivering information (Ruohotie 2000, 86-87; Honey 2001, 201-202; Clark & Mayer 2003, 25), such as document databases, live stream videos or even virtual chat rooms (Derouin et al. 2005, 921). The choice of delivery method crucially shapes the learning outcomes, and the decision should not be made lightly (Ruohotie 2000, 86-87). The choice of delivery method depends on constraints, learning requirements, task requirements, and the needs of the learners (Jochems et al. 2004, 17).

The utilization of multiple methods for displaying information, e.g. videos, pictures, audio, text or graphics, were considered in the development of the case company's e-orientation courses, as it **makes the courses more varying and motivating and enables participants to maintain their focus throughout the entire course**. Auditory and visual material helps learners to manage greater amounts of information and learn more in a shorter time (Clark & Mayer 2003, 27; Derouin et al. 2005, 933). As the interviewed organization's e-orientation program consisted of a newly created entry familiarization module and older existing courses, the new module is designed to be more interactive and has been planned to be as varying as possible, but the older previously existing policy-courses "*consist of only texts and pictures, with a quiz added to the end*" as according to Interviewee 7.

"We wanted to make the entry familiarization -course as varying as possible and make an entity that would have different kinds of materials, so we included videos and tests in addition to texts and pictures."
(Interviewee 6).

Visual outlook plays a big role in e-orientation, as it represents the company, and it can affect what kind of image new employees receive about their new employer. Interviewees 6 and 7 state that the visual outlook was carefully considered in the execution of the e-orientation program, and they utilized the expertise of multiple people to ensure the program is created following the organization's visual outlook standards and guidelines. Interviewee 6 states that "*in the project we really focused on the visual aspect and we wanted to make it as visually pleasing - - in the planning of the visual outlook, the experts from our public relations and communication functions were really heavily involved to make sure that the course would follow the visual guidelines of all material related to this company*". Interviewee 2 states: "*Especially the first module (entry familiarization - course) was really nice and compelling as it moved forward in a trail-like manner - - It was overall very visually pleasing and it had a kind of a good vibe to it*". Visually pleasing and innovative form of presenting information is seen positive by the participants, and it might even affect the learning outcomes if the course visually enhances the learners' ability to concentrate and internalize the required information

(Mayer & Gallini 1990; Mayer & Anderson 1991; Mayer & Moreno 1998; Moreno & Mayer 1999; Moreno et al. 2001; Clark & Mayer 2003).

In addition to focusing on the visual design of e-orientation courses, one should take into consideration the verbal side as well, meaning how to express things in a manner that encourages learners, and gives a positive image of the company. Also Clark & Mayer (2003) and Derouin et al. (2005) suggest that conversation-like verbal expressions can increase learner engagement and learning outcomes. Interviewee 2 was especially pleased with the verbal expression of the e-orientation course, as she states that it reinforced the feeling of belonging to a great company and the development of a positive company image: *“It was positively written and clearly with a certain feeling of pride. As it gave a positive outlook about the organization, it reinforced my sense that I am working for a great company - - it had a kind of a good vibe to it. For example in the quiz sections, if you answered correctly it said ‘Just the right answer!’ instead of just ‘Correct answer’. It was not as dull as some familiarization somewhere could be”*.

E-learning makes it possible to create games or tests or other forms of interactive content that incorporates learning into doing, and it is even possible to create simulations to support learning, though it seems that at the moment e-orientation simulations have remained rather rare in practice. Giving learners interactive exercises develops problem solving skills and promotes learning (Jochems et al. 2004, 13), and Lainema & Nurmi (2006, 113) point out that simulations or games increase participants’ motivation, create meaningful learning experiences, and result in knowledge and skills that can be used in real-life. The interactivity aspect was kept in mind in the design of the case company’s e-orientation courses according to Interviewees 6 and 7. Interviewees 6 and 7 state that a variety of short tests or quizzes were utilized, and interactive components were used also in navigation in addition to quizzes featured at the end of every course.

Different people have different opinions on whether more or less interactive components should be used. Interviewees 1 and 2 found that the course was interactive enough and had enough games or tests, whereas Interviewees 3, 4 and

5 would have liked to see more interactivity and more videos in the e-orientation courses. Interviewee 2 says, that *“You can always add something exciting but for me I did not need anything else in addition to the exciting quizzes. Videos and pictures were nice and they were adequately used”*. Interviewee 3 mentions, that *“It was nice, that the e-orientation had videos, which are nice to watch along reading texts, in my opinion. But there could be more videos of concrete work situations or from other similar everyday topics”*. Interviewee 5 states that it would be beneficial **to have more videos and quizzes, as it is easier to focus on them than textual material**: *“If the courses are too textual or only PowerPoint-presentations, then it is easy to just click through them without thinking, but videos keep you focused and I enjoy watching them, so there could be more of them”*. Having more video material or quizzes might even lessen the chance of people just skipping through the material as quickly as possible, as it is possible to modify the video-related settings in a way that the video must be watched through before the learner is able to move to the next step.

It might be difficult to create more interactive content, as it requires a lot of creativity and resources to create an intriguing game or video. Lainema & Nurmi (2006, 113) point out that creating a game can be difficult and demanding and a poorly crafted game can even cause misunderstandings or make the learners focus on irrelevant issues. Interviewee 5 would have liked to have a video or game that composes all the processes of the organization to develop a better understanding of the entire manufacturing process: *“I would have liked to see a video or a game about how our company manufactures our products from scratch, like the entire process from start to finish”*. Even though some users might like to see more interactivity, **the benefits of having more interactivity are unclear and it might not be worth the trouble**, as games might even increase the time it takes for learners to complete courses, as Interviewee 5 suspects: *“I would have liked to see more games. But then again it would have increased the time it took to complete the courses”*.

5.5. Evaluating e-orientation

After the e-orientation program has been taken into use, it is crucial to evaluate its effects on an individual and organizational level to see the realized benefits and disadvantages of e-orientation implementation, as well as potential areas of improvement. In order to evaluate e-orientation thoroughly, the progress and success of individual newcomer's orientation must be followed up. Also organizational-level analysis is needed, as all pros and cons of e-orientation will not be visible on an individual level.

5.5.1. Individual level

Evaluating orientation progress on an individual level is important because it increases the newcomers' organizational commitment, ensures that required objectives are being met, and uncovers potential areas for improvement and reasons for possible incompetence (Honkaniemi et al. 2001, 162-163, Kangas & Hämäläinen 2007, 25–26; Johnson & Senge 2010, 183-187; Ketola 2010, 148). **The success of individual e-orientation can be evaluated by having discussions with the employees and mentors, utilizing questionnaires or surveys, using a familiarization plan to follow up on progress, or having automated reports.** Ketola (2010, 78) mentions that orientation's success can be evaluated by e.g. utilizing feedback or assessment discussions, and Honkaniemi et al. (2007, 162-163) further continues that following up can also be conducted via questionnaires or surveys.

Interviewee 6 mentions that the new employee's **supervisor is always in charge of the orientation**, and "*it is the supervisor's responsibility to make sure that the person has completed the orientation*". Interviewees 2, 3 and 5 mention that they had, or could have had in case of request, discussions with their supervisors about the orientation progress. Discussions are also beneficial for learning, as personal reflection will affect familiarization outcomes in a positive manner, and it is necessary for the individual to reflect on their personal perspective on what they have learned to be able to develop their existing knowledge and skills on a deeper level (Tynjälä & Collin 2000, 294-295).

“It was good that my supervisor checked up on me to discuss how the work had started and how I felt about the familiarization. If I would have needed more support, I feel that I would have gotten it if I had just asked.” (Interviewee 5).

According to Ketola (2010) and Stein (2013), the orientation process should be started by creating a familiarization plan so that the newcomer knows what to expect and it is easier to follow up on orientation progress. Trainers, supervisors or mentors need to set realistic goals and objectives, as false or unrealistic expectations regarding the familiarization process, work content, or the new employees' capabilities, will hinder the familiarization process (Ketola 2010, 146-153). Interviewee 3 felt that it was good to utilize a familiarization plan, and mentions that *“my familiarization was well planned, and I had a clear familiarization plan to follow, that I could realize in a flexible manner in accordance to my schedule”*. Interviewee 3 felt that it was good to utilize a familiarization plan, and further continues that *“my supervisor allowed me to realize the given plan in an independent manner”*, which increases the flexibility in orientation. In this manner, the employee knows what they are expected to learn, but they can modify the plan according to their personal schedules. Trainers, supervisors and mentors must realize that teaching has to occur flexibly alongside working and everything might not always go exactly as planned (Ketola 2010, 146-153).

A familiarization plan can act as a valuable tool in keeping track of the individual's familiarization progress, as Interviewee 4 states. In addition to using a familiarization plan to follow up how newcomers are progressing, a clear plan can also increase newcomer satisfaction as they benefit from being aware of how they are advancing. Interviewee 5 expressed negative feedback regarding the planning of her orientation: *“my familiarization was maybe a little bit poorly planned, as when I started, the familiarization process felt a bit unclear to me - - I just watched and followed how my colleagues did their work, which was not always the best way to learn if we did not have the time to discuss why the things were executed the way they were”*. Interviewee 5 was also responsible for filling out the familiarization plan

independently, which according to Moisalo (2011, 323) should not be done as too much independence is not beneficial in familiarization.

A familiarization plan however is not applicable to all situations. Interviewee 1 mentions that they did not per se utilize a familiarization plan, but explains that because of the nature of her work, learning happened as new things came by in a flexible manner: *“I don’t recall that we would have used a familiarization plan, or if there was one, e.g. what kind of things to learn and when, it was planned on a very general level. My work is of course like that, that you can’t that much plan ahead what you are doing and when. You will learn as new things come by.”* If a familiarization plan is not made, it has to be otherwise made sure that the newcomer is aware of the familiarization progress.

E-orientation enables the progress of orientation to be **followed up also via automatic reports that the system produces** of course completions. Interviewee 7 says that the completion information about the courses and qualifications **can be uploaded to the personnel master data** to be able to follow up who has completed the e-orientation courses. E-orientation makes it possible to automate the process of following up on individual’s orientation progress, but as the system produces only technical reports on completion rates and not e.g. information about how the person feels about their orientation or do they think they have learned the needed things to a satisfactory level, also discussions with supervisors are needed alongside automated reporting. Derouin et al. (2005, 928) points out that employee learning and behavior must be examined to truly figure out if employees have gained the needed knowledge through orientation or not.

5.5.2. Organizational level

User satisfaction is an important factor in evaluating the overall successfulness of e-orientation programs. Österberg (2005, 91-92) stresses the importance of gathering newcomer feedback for finding innovative suggestions for improvement. Also Kangas & Hämäläinen (2007, 25-26) state that especially gathering information about user satisfaction and experiences is beneficial, as the information can be used to improve the familiarization processes, but it is important

to gather feedback both from the newcomers and their trainers or supervisors, as different people might express differing views.

Honkaniemi et al. (2007, 162-163) states that satisfaction levels should be measured to reveal the causes for dissatisfaction, so that they can be analyzed and resolved as quickly as possible. When the interviewees were asked whether they regard e-orientation as more positive or negative, the replies had some variance. Interviewees 1, 3 and 5 state that they feel e-orientation has been a positive experience, as they valued e.g. the convenience, flexibility, comprehensiveness, independence, and time savings of the e-orientation program. Interviewees 1, 3, 4 and 5 stated they found e-orientation useful, and Interviewees 1, 2, 3 and 5 stated they were satisfied with it. Interviewees 2 and 4 however had more mixed feelings towards e-orientation, as Interviewee 2 questioned the usefulness of it, and Interviewee 4 expressed some negative feedback because of lack of time to do the e-orientation courses. **Gathering and assessing user satisfaction helps organizations to identify potential areas of improvement**, as e.g. regarding the case organization it can be seen that there is a need to further ensure that all learners are given adequate time to learn.

There is a lack of dependable ways to measure the effectiveness of e-learning systems and the impact to the organization, as it is difficult to measure e-learning's impact on business outcomes as many combinations of different measures can be utilized (Derouin et al. 2005, 931; Wang et al. 2007, 1793-1794). Wang et al. (2007, 1793) suggest that e-learning can be evaluated on the basis of information quality, system quality, service quality, system use, user satisfaction, and net benefit. Kirkpatrick (1976, 155) suggests that training can be evaluated on four categories: employee reactions, learning, employee behavior and organizational results.

According to Ketola (2010, 118-119), orientation can be evaluated by using three categories: planning, execution, and following up. Some indicators that can be used in assessing orientation's successfulness are e.g. employee turnover, absenteeism, quality measures, production levels, mastery of tasks, satisfaction, role clarity,

commitment, socialization, value congruence, perceived fit, accurate realization of plans, and efficient transitioning to the organization and the job (Brett et al. 1990; Morrison 1993a, 1993b; Bauer & Green 1994; Wanberg & Kammeyer-Mueller, 2000; Cable & Parsons, 2001; Strother 2002; Ketola 2010). Other important features in determining if orientation has been successful or not are the establishment of a good plan, having clear roles and responsibilities, interaction-mindedness, supportiveness, and following up individual progress during and after the familiarization process (Sanders & Kleiner 2002, 85; Honkaniemi et al. 2007, 162-163; Ketola 2010, 119).

Interviewees 6 and 7 express that **e-orientation has not been measured or evaluated in the organization based on any specific set of metrics, but rather the focus has been on usability and user satisfaction and learning outcomes.** For example the effects of e-orientation on organizational competitiveness, cost savings, job satisfaction or time efficiency has not been evaluated with specific measurements in this case organization, but the main focus has been on collecting user feedback. Gathering employee feedback is beneficial because employees not only provide valuable insights on how the orientation is functioning, but also give information how familiarization was conducted in their previous places of employment, which enables comparisons and implementing the best orientation practices in the organization (Ketola 2010, 117). It might be hard to evaluate the success of e-orientation based on technical measurements, as for example in order to see how much time or money e-orientation saves, measurements would have had to be carried out prior to implementation and after it. And even then, the results might have been inconclusive, as many different factors may have an effect on e.g. time efficiency and **it might be extremely difficult to determine which effects are caused by the utilization of e-orientation.** There does not yet exist studies that would have focused on creating a usable framework for measuring e-orientation's impact or successfulness.

At this moment, the feedback of the e-orientation program of this case company is gathered via an e-mail address where users can voluntarily send their questions, comments or concerns. Interviewee 6 says that they are not at this moment planning

to open a feedback questionnaire, as the e-orientation program has been in use only for a short amount of time. Interviewee 7 states that they have considered implementing feedback questionnaires, but not specifically for the e-orientation alone, but the entire familiarization process: *“We have tentatively considered this option and it is likely that we will conduct feedback questionnaires, but it can be that we will gather feedback on a larger scale of the entire familiarization process, which this e-orientation content is of course a part of”*.

After the implementation of the e-orientation courses, Interviewee 7 expresses that they have received only positive feedback. Even though in this case company feedback has not lead to any major changes or improvements yet, that might just mean that the learners have been satisfied with the e-orientation program as it is, or that participants have not had the time or motivation to send their negative feedback voluntarily. **But in order to be sure that e-orientation is providing the needed results, feedback must be gathered and analyzed frequently.** All the received feedback from the development phase, and feedback that is being received now from the users as the e-orientation has been taken into use, are gathered for possible later use as according to Interviewee 7. In case of any needed changes in the orientation, a development plan should be established to efficiently implement the actions that are needed for improvement, that contains information about the objectives, actions, time schedule and responsibilities (Kangas & Hämäläinen 2007, 25-26).

“We do gather all the received feedback and even the smallest of comments to our “development basket”, and in the time of a possible content improvement, we will check those as well. - - So far we have not received much feedback, but all the feedback we have received, has been positive.” (Interviewee 7).

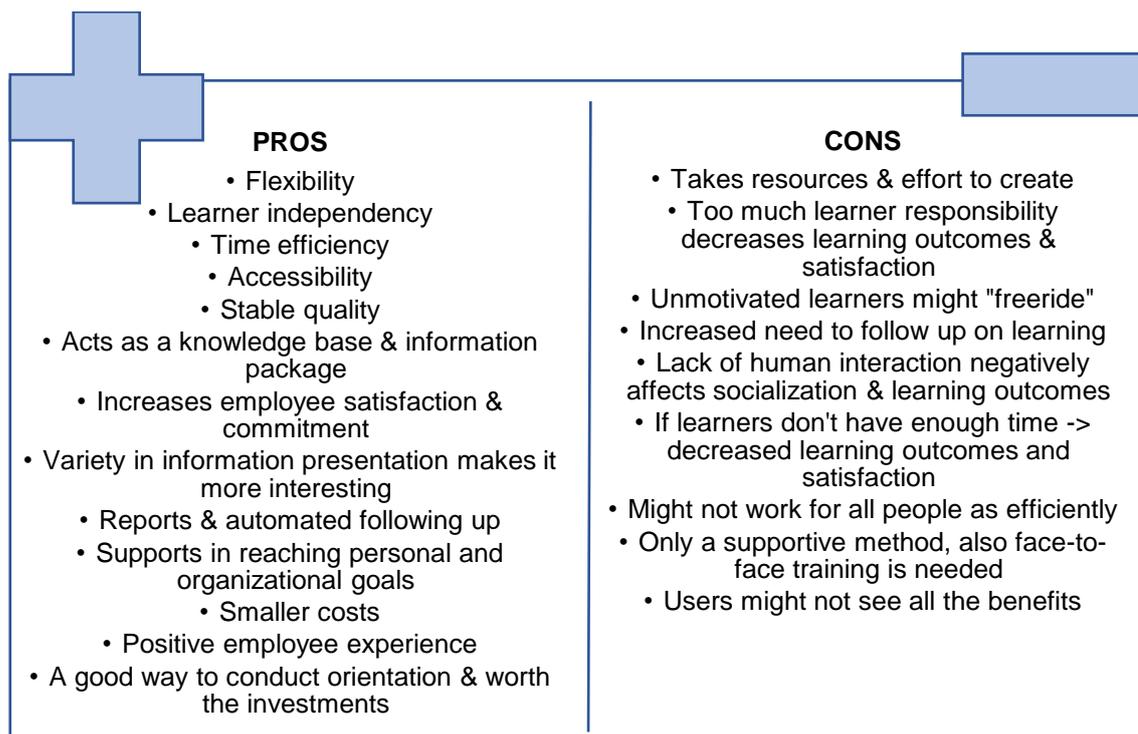
6. DISCUSSION

In the following section, the main findings of this study are discussed. First the answers to the research questions are presented by summarizing the main results of this study and reflecting them through previous academic literature on the subject. The main research question of this study is: **How to implement e-orientation in new employee familiarization?** In order to find a thorough answer to this research question, the issue is examined with the help of four secondary research questions. After that the key conclusions of this study are gone through. Then managerial implications of this study are presented. And finally, future research suggests are examined.

6.1. What are the advantages and disadvantages of e-orientation?

The first secondary research question is: **What are the advantages and disadvantages of e-orientation?** The pros and cons of e-orientation are summarized in Figure 3. It is important to know the potential pros and cons of e-orientation so that organizations can assess whether to implement e-orientation in their organization or not.

Figure 3. Pros and cons of e-orientation



One advantage of e-orientation is that it creates more flexibility. Davis & Kleiner (2001) emphasize that flexibility in orientation is beneficial, and e.g. Welsh et al. (2003), Jochems et al. (2004) and Derouin et al. (2005) confirm that web-based tools make learning more flexible. E-orientation enables independent learning, also confirmed by multiple sources of research, which state e-learning makes learning more independent and thus more convenient (e.g. Sims & Hedberg 1995; Salmon 2000; Falconer & Williams 2002; Welsh et al. 2003; and Wang et al. 2007). Time savings result from the utilization of e-orientation, similarly as Wang et al. (2007) and Welsh et al. (2003) confirm that e-learning results in savings in time. Accessibility of material anywhere and anytime is one benefit of e-orientation, and also e.g. Horton (2000), Burgess & Russell (2003), Welsh et al. (2003) and Ketola (2010) have confirmed in their research that e-learning tools allow learning to occur anytime and anywhere.

In e-orientation, the quality of learning remains the same for all participants. Burgess & Russell (2003), Welsh et al. (2003) and Wang et al. (2007) verify that e-learning ensures all the employees are taught in the same manner. E-orientation acts as a knowledge base of the organization to help the learners understand work and the big picture of the organization, and creates an information package that contains all the needed information newcomers should possess. Also Johnson & Senge (2010) confirm that e-orientation allows organizations to create an information packet to new employees, which can be distributed in a flexible manner. This research shows that e-orientation might increase employee satisfaction and commitment, and Klein & Weaver (2000), Moisalo (2011) and Irwin (2011) suggest that one goal of orientation is to make the newcomers more committed towards their organization, but as there is a lack of e-orientation studies, it has not been confirmed in other research whether it is possible to increase employee commitment via e-orientation, or is it as effective in it as traditional face-to-face orientation training.

E-orientation enables using various forms in presenting information which increases learning outcomes, and plenty of studies have confirmed that the utilization of multiple methods in presenting information result in better learning outcomes (e.g. Mayer & Gallini 1990; Mayer & Anderson 1991; Mayer & Moreno 1998; Moreno &

Mayer 1999; Moreno et al. 2001; Horton 2002; Clark & Mayer 2003; Welsh et al. 2003; Derouin et al. 2005). E-orientation allows organizations to follow up orientation progress with automated reports, and Welsh et al. (2003) and Wang et al. (2007) also mention that e-learning systems allow setting up automated systems for tracking employee learning progress. This study suggests e-orientation supports in reaching personal and organizational goals. As e-orientation has not received that much attention in research, it is hard to back up this finding with other studies. But Baker & Feldman (1991) and Kjelin & Kuusisto (2003) have confirmed that in general orientation programs help organizations to pursue their goals. The costs related to familiarization training are likely smaller in e-orientation. E-learning utilization likely results to cost savings as also according to Phelps et al. (1991), Wisner & Priest (1998), Whalen & Wright (2000), Burgess & Russell (2003), Welsh et al. (2003), Derouin et al. (2005) and Wang et al. (2007).

This research shows newcomers seemed to regard e-orientation as a positive experience, but as there is no prior research that would have focused on comparing the satisfaction levels of new employees in face-to-face training vs. e-orientation, this result has to be considered cautiously. Interviewees seemed to regard e-orientation as a good way to conduct orientation and it was seen as worth the investments, but there exists no research that would have compared traditional orientation and e-orientation and would have gotten the same results. However, it is good to notice that e-orientation will not work in all cases and the context plays a big role in whether e-orientation is applicable or not.

The disadvantages of e-orientation according to the empirical analysis are e.g. that it takes a lot of resources to create a good e-orientation program. Levine & Moreland (1999) and Arthur (2006) state that creating a familiarization program takes a lot of planning and preparation, and Jochems et al. (2004) point out that the creation of e-learning programs require effort, planning and resources. A disadvantage of e-orientation is that giving too much freedom and responsibility to learners negatively affect learning outcomes and user satisfaction, and Gray (1987), Freitag & Sullivan (1995), Derouin et al. (2005) and Ketola (2010) also suggest that learners should not be given too much freedom or else learning outcomes will decrease. Learners

might take advantage of their freedom and skip through the material, and also Honey (2001) warns that giving learners too much freedom might lead to negligence, which according to Ketola (2010) will cause major issues in the orientation process. Because of the given freedom, the need to follow up on learning outcomes increase. According to Sanders & Kleiner (2002) and Ketola (2010) orientation progress should be followed up closely, but Jochems et al. (2004) point out it may be harder to monitor learning progress in e-learning systems.

E-orientation lessens the amount of face-to-face interaction, and lack of human interaction may negatively affect learning and the establishment of relationships. Ruohotie (1996), Tavangarian et al. (2004), Antonacopoulou & Güttel (2010), Ketola (2010) and Moisalo (2011) state that successful orientation requires interaction and communication, and Falconer (2006) points out that interaction is also important for learning, but Welsh et al. (2003) and Derouin et al. (2005) confirm that it is harder to realize face-to-face interactions when using e-learning systems. If adequate time is not reserved for learning then the learning outcomes and satisfaction levels of users will decrease, and also Ketola (2010) points out that lack of time causes major issues in orientation, and Honey (2001) and Brown & Ford (2002) state in e-learning systems it is harder to ensure learners have adequate time to learn.

E-orientation might not work for all learners as efficiently. Gist et al. (1989), Martocchio (1994) and Welsh et al. (2003) also point out that e-learning systems might not work for all learners. E-orientation can't be used as the only method to conduct orientation training, and Ketola (2010) also stresses the importance of giving learners learning experiences in real-life contexts. In e-orientation some users might have problems in seeing the advantages of e-orientation in comparison to traditional orientation, but this statement can't be verified with other research, as there are no studies that would have focused on comparing face-to-face orientation training and e-orientation training. Existing research has though shown that new employees tend to see orientation programs only as moderately helpful (Louis et al. 1983; Chatman 1991; Nelson & Quick 1991; Saks 1996).

6.2. What factors need to be taken into consideration prior to implementing e-orientation?

The second secondary research question is: **What factors need to be taken into consideration prior to implementing e-orientation?** When organizations are deciding whether to utilize e-orientation or not, they must evaluate whether even a successful implementation of e-orientation is worth all the effort that is needed in creating an e-orientation program, along with mapping out the potential advantages and disadvantages that might result from e-orientation implementation. Ketola (2010) also stresses the importance of considering the economical aspect in all orientation-related actions. Prior the development and design process is started, organizations must reserve adequate resources and engage multiple people from various backgrounds in developing e-orientation program and material. It is important to reserve enough resources for orientation programs also according to Ketola (2010), and effort must be used as plenty of research has shown that most of the created orientation programs are only moderately helpful to new employees (e.g. Louis et al. 1983; Chatman 1991; Nelson & Quick 1991; Saks 1996).

It is important to project the implementation and figure out how the new practices can be implemented in the organization from top to bottom. Johnson & Senges (2010) stress the importance of organizing training for all mentors and supervisors that they are able to conduct orientation as planned especially after changes. Regarding organizational culture aspect, organizations should consider whether orientation processes need to be unified so that it is even possible to conduct somewhat similar orientation to all newcomers. Also Ketola (2010) states that orientation should be fairly similar to all employees. Organizations must be prepared to use face-to-face training alongside e-orientation, as all things can't be taught by using only e-learning platforms and virtual communication tools. Also Jochems et al. (2004) and Johnson & Senges (2010) suggest that it is wise to utilize also other forms of training with e-learning.

Regarding the time aspect, organizations should ensure that enough time can be reserved for new employees to complete e-orientation courses, and all the newcomers are able to complete e-orientation in the right time in regard to when

their work starts. Davis & Kleiner (2001), Kjelin & Kuusisto (2003), Österberg (2005) and Ketola (2010) stress that individual learners' needs should be considered and adequate time should be reserved for each newcomer to learn. Organizations must choose when the orientation process should be begun, as with e-orientation it is possible to start the orientation process already before the first day at work as learning material can be distributed anywhere and anytime by using electronic tools. Irwin (2011) states that new employees are most eager to learn about their new employer before the working actually starts, so there might be valid reasons to conduct pre-work orientation, but more research on this subject is needed to clarify the benefits and disadvantages of it.

Technically, organizations should consider having some sort of technical support system, as all learners might not have the needed computer skills and might need more assistance. Rossett (2002) and Welsh et al. (2003) also stress the importance of offering technical support to those who need it, or else learners might experience strong negative feelings. The needed technological infrastructure must be established in a manner that employees are able to access learning content by having access to suitable computers or mobiles. It needs to be decided whether mobile orientation should be developed, which enables accessing the learning content via mobile phones. M-orientation increases the flexibility in conducting e-orientation, but it might not be needed in most organizations. There is no existing research on m-orientation, so more research on this subject is needed to clarify the potential advantages, disadvantages and consequences of using m-orientation. It might be wise to consider having all the human resource processes implemented in the same system, and creating an integrated system for all HR processes, or at least making technical choices in a way that allows the organization to integrate all processes to the same system at some later stage. Technological developments should be monitored so that new possibilities in conducting e-orientation are pursued as they come by.

6.3. What factors need to be considered in the design and development of an e-orientation program?

The third secondary research question is: **What factors need to be considered in the design and development of an e-orientation program?** Regarding the design and development of e-orientation programs, it is very important that the user satisfaction is tested also during the development phase so that the needed changes can be made before implementation. Österberg (2005), Honkaniemi et al. (2007) and Kangas & Hämäläinen (2007) confirm it is important to gather information about user satisfaction. Organizations should reserve enough resources and include multiple people in the development of an e-orientation program to ensure the program will bring the anticipated benefits and work well in the organization. Levine & Moreland (1999) and Arthur (2006) state that orientation programs' success heavily depends on the development phase, and Tavangarian et al. (2004) point out that plenty of resources should be reserved for developing e-learning programs. Kjelin & Kuusisto (2003) and Ketola (2010) stress the importance of gathering feedback and opinions from multiple sources in order to improve familiarization processes, and Falconer (2006) points out that developing accurate learning material requires utilizing the expertise of multiple people.

With learning material, there are many aspects that have to be considered. First of all, organizations must decide which information is included in e-orientation and which information is delivered otherwise. Tavangarian et al. (2004) suggest that some learning situations are more suited for e-learning than others. Secondly, organizations should balance the amount of information to be sufficient but not overwhelming, as also suggested by Jochems et al. (2004). Thirdly, the learning material should be designed in a way that it needs to be updated as rarely as possible, as also e.g. Wang et al. (2007) stress the importance of keeping learning material updated. Fourthly, organizations must choose whether multiple versions of learning materials should be created to better suit the needs of various employees from e.g. different business units, and as a fifth aspect, organizations must also choose whether to create such material that allows individual tailoring or modifying. Jochems et al. (2004) and Tavangarian et al. (2004) state that learning material should be at least somewhat tailored to suit the needs of individual learners. And

finally, it must be decided whether a recap course should be created to ensure the most critical things are learned to a satisfactory degree.

As it is possible in e-orientation to use multiple methods and technologies in delivering information, such as textual or audiovisual means, organizations must choose what methods fit best in delivering the information in their company. Clark & Mayer (2003) and Derouin et al. (2005) state that the utilization of multiple methods increases learning outcomes. Effort must be used in making sure the visual and verbal outlook represent the company well and give a positive image to the new employees to enable the strengthening of organizational commitment. Visual outlook might also positively affect learning outcomes (Mayer & Gallini 1990; Mayer & Anderson 1991; Mayer & Moreno 1998; Moreno & Mayer 1999; Moreno et al. 2001; Clark & Mayer 2003). The amount of interactive components should be balanced so that there is just the right amount of interactive components to keep the learners focused and satisfied, but that not too much effort is used in creating interactive content if it does not result in clear benefits. Jochems et al. (2004) and Lainema & Nurmi (2006) point out that interactive learning components promote learning, but Lainema & Nurmi (2006) also state that the creation of interactive material is demanding and difficult.

6.4. What needs to be taken into consideration after the implementation of an e-orientation program?

The last secondary research question is: **What needs to be taken into consideration after the implementation of an e-orientation program?** After e-orientation has been implemented, it is important to evaluate it both from individual and organizational aspects. Individual orientation success can be followed up and evaluated by having discussions with the new employees and their mentors, supervisors or colleagues, by utilizing questionnaires or surveys, by implementing a familiarization plan, or by enabling the e-orientation system to produce automatic reports that can be uploaded to personnel master data. Honkaniemi et al. (2001), Kangas & Hämäläinen (2007), Johnson & Senges (2010) and Ketola (2010) point out that orientation progress should be followed up and monitored on an individual level; and it can be evaluated by utilizing feedback or assessment discussions

(Tynjälä & Collin 2000; Ketola 2010), questionnaires or surveys (Honkaniemi et al. 2007), with a familiarization plan (Ketola 2010; Stein 2013), or with automated reports (Welsh et al. 2003; Wang et al. 2007).

On an organizational level, e-orientation's success can be evaluated by frequently gathering information on user satisfaction, usability of the system and learning outcomes and behaviors resulting from the learning. Österberg (2005), Honkaniemi et al. (2007) and Kangas & Hämäläinen (2007) state it is important to gather information about user satisfaction. Technical metrics or measurements may not be that applicable in determining whether e-orientation has been successful or not, as the benefits of e-orientation are not always clear on organizational level, and it might be extremely difficult to determine which effects are directly and indirectly caused by e-orientation implementation. Derouin et al. (2005) and Wang et al. (2007) also confirm that there is no single dependable way to measure e-learning's effectiveness and impacts, and combinations of different measures should be utilized in different contexts.

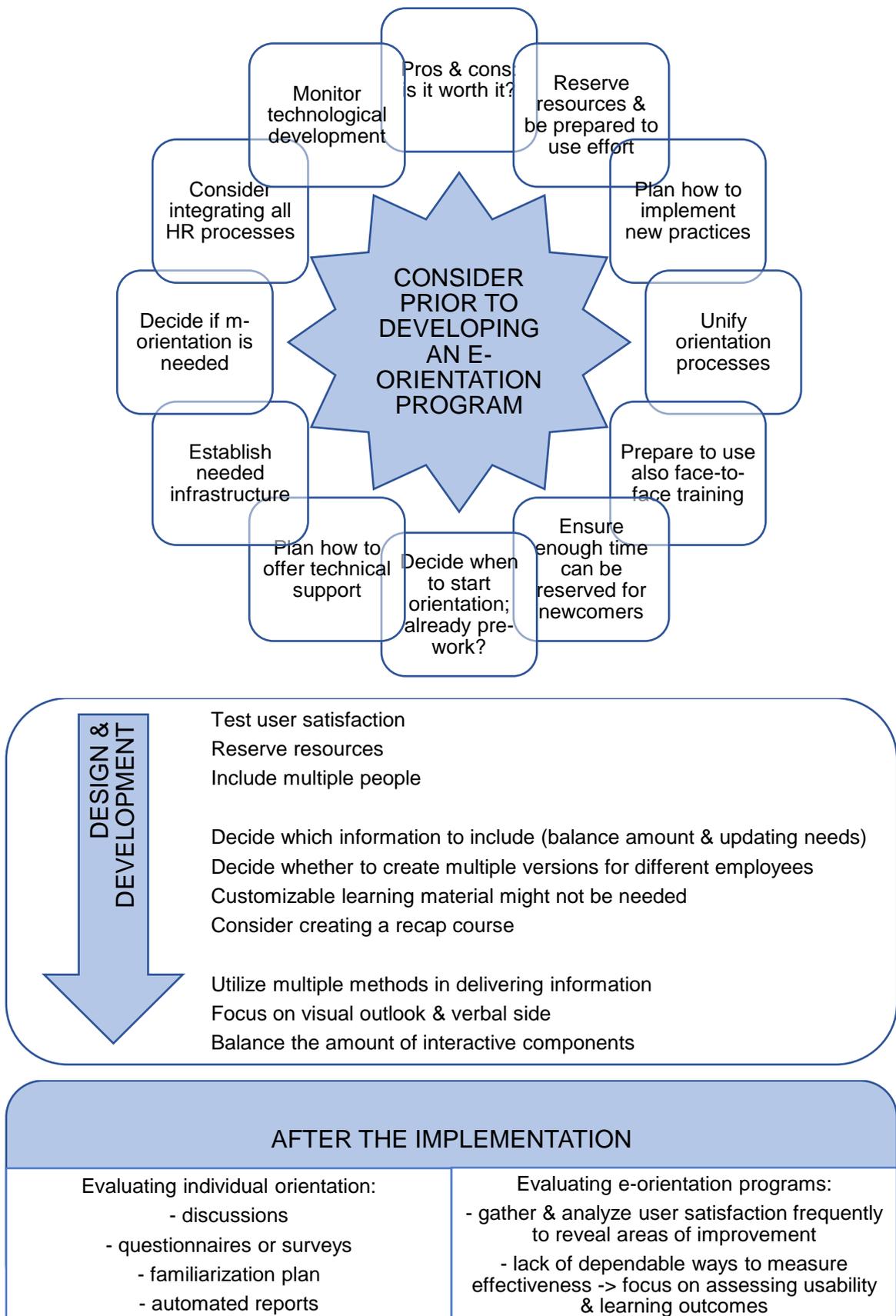
6.5. How to implement e-orientation in new employee familiarization?

By finding the answers to these secondary research questions presented above, we are able to conclude answers to the main research question, which is: **How to implement e-orientation in new employee familiarization?** In the implementation process of e-orientation, organizations must first of all consider the advantages and disadvantages of e-orientation from their perspective and in their organizational context to see whether it would be wise to implement e-orientation in their case or not. After organizations have evaluated the potential benefits and drawbacks from e-orientation implementation, they should consider multiple factors before they start developing and implementing an e-orientation program, such as how to ensure enough effort and resources are reserved for the development project, and how to implement the new practices throughout the entire organization. When developing an e-orientation program, organizations must ponder what kind of choices to make regarding the learning material and technical realization. And finally, when the new

system has been taken into use it is important to evaluate the success and effectiveness both from individual and organizational levels.

The answers to the main research question have been summarized in Figure 4, based on the results acquired from empirical analysis. The results have been formed into a framework that summarizes how e-orientation should be implemented according to the empirical analysis of this study. The framework can be utilized both in academic research and in practical implementation of e-orientation. The framework consists of what aspects to take into consideration prior to developing and implementing an e-orientation program, what factors to acknowledge in the design & development of e-orientation courses, and what to consider after the implementation, especially regarding how e-orientation should be evaluated on an individual and organizational level.

Figure 4. Framework for e-orientation



6.6. Conclusions

Overall it seems that there exists many potential advantages and disadvantages that can be realized when e-orientation is implemented. An organization that is considering the utilization of e-orientation in their new employee training must consider the potential gains and drawbacks from the perspective of their company, as some organizations are more suited towards the utilization of e-learning than others. For example, as it takes a lot of resources and effort to create a customized e-orientation program, smaller organizations might not have the capability to implement e-orientation as it takes longer time for e.g. monetary savings to become apparent, and smaller organizations don't generally have to repeat the orientation process as often which means the potential gains are possibly too small in comparison to the effort it takes to implement e-orientation.

There are some outside partners that can aid organizations in developing their own e-orientation, but the entire creation process of e-orientation programs can't be outsourced, as e.g. the learning material has to be extracted from the existing workforce and employee feedback is required to develop e-orientation in a way that suits the unique needs of an organization. Organizations must analyze the pros and cons of e-orientation that are possibly realized in their own organization, as many organizational factors will effect on how successfully e-orientation can be implemented, such as organizational culture, size, number of employees, frequency of hiring, frequency of conducting orientation to new employees, available resources, the nature of jobs and the working environment, the amount of learning material that is suitable for computer-based learning, anticipated reactions and satisfaction of users, and the possibilities of unifying the orientation process in order to conduct at least a part of the orientation in a similar manner to most of the new employees.

In the case company, basically the same training is given to all employees, which means the familiarization program is not customizable to suit the needs of the individual employees and their learning preferences. As it must be made sure that every employee is given the same information regarding e.g. code of conduct, the training does need to be similar to all newcomers, but a generalized familiarization

program may not serve individual needs or learning styles or take into account the fact that people may have different starting points on what they already know. In theory, one major advantage of e-learning has been the possibility to customize learning according to individual needs, but it seems that in e-orientation this advantage is lost as the exact same orientation training is usually given to all newcomers to ensure all employees learn the needed subjects in the same manner.

Klein & Weaver (2000) suggest that orientation training programs are likely to result in employees' commitment towards an organization because of socialization, but in e-orientation the social aspect plays a smaller role. In e-orientation social interactions are harder to realize, as pointed out by the empirical analysis of this study. E-orientation might make it harder for some employees to become social members of the organization, as it will shift some interactions to virtual environments without face-to-face communication. E-orientation will not work in all cases as it will without a doubt diminish the amount of interaction, which is important especially in the beginning of work relationships. Effort must be used to otherwise ensure newcomers get socialized to the organization if e-orientation is used extensively in the familiarization process.

All in all, e-orientation is a good way to conduct parts of the orientation, but it does not yet suit for the entire orientation process, as some things are better to be conducted in traditional face-to-face training. But as technology develops, more and more tools are developed that can be used in supporting the orientation process in more comprehensive ways, and as a result, the amount of things that can be trained through e-environments increase. At some point, simulations may even become the norm in practicing and learning work-related skills in organizations, but as for now, the creation of simulations is too expensive and difficult for them to be used extensively in training. E-orientation provides support for the orientation process, but face-to-face training will still be needed alongside it, at least for now.

6.7. Managerial implications

Often organizations tend to repeatedly hire the same people to work in the organization because they do not need to be re-trained or re-familiarized to work in

the organization, despite the fact that new employees might be better in the work than the previous employees. By making newcomer training easier, faster and cheaper through e-orientation, the organization also allows it to have more freedom of choice when choosing which employees to hire. When it is easier to hire and train newcomers, the organization is able to be more adaptable and strengthen its human resource with new talents as they are needed in a more flexible manner.

Practitioners may use the presented framework to evaluate the potential advantages and disadvantages of e-orientation in their case, and to anticipate what kind of resources and effort should be reserved for e-orientation implementation. Despite the potential gains, e-orientation should be implemented only when the benefits outweigh the possible disadvantages and the costs of creating an e-orientation program. The framework presented in this study can aid practitioners to first of all evaluate whether they should implement e-orientation or not, then take into consideration the necessary aspects regarding e-orientation implementation, evaluate how the design and development of an e-orientation program should be conducted, and how the success of e-orientation programs should be evaluated after the implementation. A checklist for e-orientation implementation has been presented in Appendix 2, that can be used especially by practitioners.

E-orientation can be used in organizations to make the orientation processes more efficient, especially regarding the distribution of information. For example Johnson & Senges (2010) presented in their study various methods and web-based tools that Google has utilized to enhance their orientation process. In order for the e-orientation material to be accurate and effective, knowledge and information must be extracted from the existing workforce, and organizations should carefully analyze and evaluate what methods or tools suit best in delivering the orientation information in their organizations. For some organizations, it might be wise to utilize e-learning platforms to only distribute information in a flexible manner, where as other organizations may benefit from creating an entire simulation game to aid in the development of required skills of new employees. All organizations must however be prepared to utilize also face-to-face training alongside e-orientation, as a

significant downside of e-orientation is the lack of face-to-face interaction and the difficulties in becoming socialized to the organization.

Tavangarian et al. (2004) have suggested that in order to truly support individual learning, learners must be able to create personalized learning paths by learning from individualized content. As e-orientation is often used for only the general part of orientation, which needs to be the same or at least very similar to all of the new employees of an organization, it might be hard to give the learners any possibilities of customizing. But as technology develops further and it is becoming easier to conduct also more specific orientation with the aid of web-based tools, organizations must take the personalization aspect into consideration. For example, organizations can support the learning process by allowing the learners to create their own personalized learning portfolios, in which newcomers can create and store the most relevant information that can be accessed later in case of need. Newcomers need to learn and memorize a lot of information in the beginning of their working relationship, so it might be beneficial to allow the new employees to create their own personalized data bank in a cloud-based system, which they can access later on to refresh their memories about the previously learned subjects.

It might also be beneficial to create recap courses for the most crucial information, as newcomers can easily become overwhelmed in the start of the working relationship and forget some important pieces of information. A recap course can not only be used to remind learners of previous topics, but also to give deeper information and chances for new employees to train their skills and knowledge. E-orientation can overall be used to give the new employees chances to practice their knowledge in a safe environment and learn in a flexible manner to suit their personal learning needs. It is likely that e-orientation will likely become the norm in most organizations and industries, as it makes the orientation process more efficient, but it is good to note that not all pieces of information are suitable to be delivered online.

6.8. Future research suggests

There exists a clear need for more theoretical and empirical research on this subject, in order to deepen the scientific and academic understanding of e-orientation.

Future research should examine the effects, impacts, content and timing of organizational orientation programs (Klein & Weaver 2000, 63). Empirical research on e-orientation is still scarce, and more research on the subject is needed in order for both professionals and academics to understand e-orientation more thoroughly to improve both the implementation and research efforts. Research shows that organizations will continue to increase the utilization of e-learning in training (Rossett 2002), so it is likely that also the utilization of e-orientation will increase in the years to come. Utilization of technology will likely become the norm in training in organizations, but also traditional classroom training will not be forgotten (Welsh et al. 2003, 248), so there exists a need for research to figure out how to optimally combine face-to-face training and e-learning in orientation. One suggestion for future research would be to compare the experiences of employees that have been trained with face-to-face orientation and e-orientation to clarify what kind of differences exists between these forms of training and further examine what kind of consequences may result from e-orientation implementation.

Despite the existing research on e-learning and orientation, more research is needed that combines these two fields of research similarly to this study to develop e-orientation practices further and academically and empirically examine e-orientation from multiple points of view. E-orientation will likely become the norm in many organizations' orientation training, so there is a clear need for more studies on this subject. This study could be replicated in different companies to see how e-orientation is conducted in other organizations, to shed more light on various e-orientation practices companies are utilizing. As this study focuses more on general staff induction, future research could try to analyze how e-orientation can be used in specific job guidance.

As existing research on e-orientation is scarce, the effectiveness of monitoring individual orientation progress on automated reports has not yet been researched. There does not either yet exist studies that would have focused on creating a usable framework for measuring e-orientation's impact or successfulness, even though there exists a practical need for figuring out how well e-orientation is working and what kind of effects it has on organizations in order to make it even better. It would

also be beneficial to research m-orientation further, as it has not received any attention in research to this date, and it is not often used in practice either, even though recent technological developments that have allowed m-orientation to emerge could make orientation even more flexible and convenient for learners and organizations. Technological developments have also enabled the utilization of simulations in training. Future research could try to examine how simulations could be used in new employee familiarization and in specific job guidance even further to enable organizations to train new employees to their jobs even more efficiently. Technological developments overall enable orientation practices to advance unlike never seen before, if necessary research is conducted to help organizations to utilize new practices and ways of conducting training.

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APPENDICES

Appendix 1. Interview questions

A) Interview for employees that have completed the e-orientation in the case organization

1. Background:

- Age, gender, and work task?
- When did you complete the e-orientation?
- When did you start working in this organization?

2. Information quality

- Did you receive enough information on the things you need to know regarding your job?
- Was the information in the course adequate, easily understandable and up-to-date?
- What do you think of the contents of the e-orientation courses? Would you have liked to see more information on some topics?
- Do you feel there was enough, too little or too much material in the e-orientation?

3. System quality

- What do you think regarding the usability of the system, was it easy to use?
- Do you feel the courses were interactive enough? Did they contain enough games or tests in addition to textual material?
- Would you have liked to see more audiovisual material, such as audio recordings, music, videos, animations or pictures?
- Would you have liked to be able to modify the orientation to suit your personal needs better, e.g. having the option to bypass things you already knew?
- Would you regard it as useful, if the orientation would be possible to complete via mobile phones (i.e. m-orientation)?

4. Service quality

- Do you feel you got enough support and guidance in using the system?

5. System usage

- Do you feel you completed the e-orientation in the right time in regards to when your work started?
- How much time would it take for you to complete the e-orientation on estimate?
- After you completed the e-orientation, have you reverted to the course material to e.g. check something?
- Would you feel it would be beneficial to recap the things you learned in the form of an e-course after some time has passed?

6. User satisfaction

- Do you regard e-orientation as more positive or negative? Why?
- Do you think the e-orientation was useful? Are you satisfied with it?

7. Pros, cons & risks

- What do you feel are the 3 biggest benefits resulting from e-orientation?
- Did e-orientation help you to function in your work better, or did you find some answers to your questions or some solutions to your problems?
- What cons, risks or possible problems you feel might be associated with conducting familiarization training partly as e-orientation?

8. Final questions

- In comparison to your earlier familiarization experiences, how do you regard e-orientation?
- Do you have any experience from pre-work onboarding, which means starting familiarization training already before the work starts? How do you regard pre-work onboarding in comparison to training that begins only after the work has started?
- Would you have any suggestions for improvement for e-orientation?

B) Interview for employees that have partaken in the development of the e-orientation program

1. Background

- Age, gender, and work task?
- How did you participate in the development of the e-orientation program?

2. Information quality

- How did you choose what information to teach in the e-orientation program?
- Did you limit some things out of the learning material?
- Did you consult new or older employees regarding the learning material of the courses?
- How often do you check the information, and how often is it updated?

3. System quality

- How did you plan the realization of the e-orientation program?
- Which parties contributed to the development of the program?
- Did you consult new or older employees regarding the usability of the courses?
- How did you take into consideration the user aspect in the development phase?
- How did you take into consideration the following aspects:
 - interactivity (e.g. games or tests)?
 - the utilization of multiple methods in presenting information (e.g. text, audio, video, pictures)?
 - visual outlook?
 - accessibility (ensuring that all the required employees are able to access the learning material)?

4. Service quality

- Do you offer some sort of technical support to users in case of technical problems?
- Have you considered utilizing virtual guides?

5. System usage

- Is it mandatory for all employees to complete the e-orientation regardless of work tasks or business unit?
- At what time should the e-orientation be optimally completed? Have you e.g. set any deadlines for it in regards to when an employee has started to work in the organization?
- How are you following up on e-orientation? How can you make sure that the needed employees have completed the required e-orientation?

6. User satisfaction

- Have you gathered information about user satisfaction in the development or implementation phases or after it has been taken into use?
- Has the received feedback lead to any kind of changes or improvements in the e-orientation program?
- Have you considered the option of opening an feedback questionnaire for all users?

7. Pros, cons & risks

- What do you feel are the 3 biggest pros in using e-orientation?
- Does the utilization of e-orientation make functioning more efficient, or does it enable faster reactions to possible changes?
- Does the utilization of e-orientation improve competitiveness or create strategical competitive advantage?
- Does the utilization of e-orientation help in reaching organizational goals?
- Have you measured the effectiveness of e-orientation on some measures (e.g. time savings, job satisfaction, cost savings etc.)?
- What cons, risks or possible problems you feel might be associated with conducting familiarization training partly as e-orientation?
- Do you feel it has been worth the investment to implement e-orientation?

8. Final questions

- What do you feel it takes from organizations to implement e-orientation?

- What kind of development plans do you have for the future regarding e-orientation?

Appendix 2. A checklist for e-orientation implementation

PRIOR	DURING	AFTER
<ul style="list-style-type: none"> •What to consider? 1) planning & reserving resources <ul style="list-style-type: none"> a. ensure pros outweigh the cons & costs, and that it is worth it to invest in creating an e-orientation program b. reserve adequate resources for planning, developing, implementing & maintaining c. use effort in especially design & implementation phases d. plan how to implement new practices throughout the entire organization from top to bottom e. unify orientation processes f. prepare to utilize also face-to-face-training alongside e-orientation 2) time-related choices <ul style="list-style-type: none"> a. ensure that newcomers are given enough time to complete e-orientation and that supervisors know how much time should be reserved b. decide when to start orientation in regard to when the work starts in the organization; already pre-work? 3) technical decisions <ul style="list-style-type: none"> a. consider how to offer technical support b. establish needed technological infrastructure and make sure required employees have access to computers c. decide if m-orientation should be used d. consider having all the HR processes integrated in the same system e. monitor the possibilities technological developments may bring 	<ul style="list-style-type: none"> •How to design? -test user satisfaction to ensure it serves its purpose 1) Reserve resources & include multiple people <ul style="list-style-type: none"> a. reserve adequate resources for design and development b. utilize the expertise of multiple people from inside and outside the organization 2) Developing learning material <ul style="list-style-type: none"> a. decide which piece of information is delivered through e-orientation b. balance the amount of learning material c. regularly follow up and update information; but include only such learning material, that needs to be updated rarely d. decide whether to have multiple versions of e-orientation for different employees from different functions e. learners might not need having a possibility to modify the e-orientation program to suit personal needs better f. consider having a voluntary recap e-course 3) Technical realization <ul style="list-style-type: none"> a. utilize multiple methods in delivering information b. focus on the visual outlook c. focus on verbal side and express things in a manner that encourages learners, and gives a positive image of the company d. balance the amount of interactive components 	<ul style="list-style-type: none"> •Evaluating e-orientation: 1) Evaluating on an individual level <ul style="list-style-type: none"> a. have discussions with the employees and mentors b. utilize questionnaires or surveys c. use a familiarization plan to follow up on progress d. have automated reports to be uploaded to personnel master data 2) Evaluating the entire program on an organizational level <ul style="list-style-type: none"> a. gather & analyze user satisfaction frequently to reveal chances for improvement b. there is a lack of dependable ways to measure the effectiveness of e-learning systems and the impact to the organization; technical metrics may not work and it might be extremely difficult to determine which effects are caused by the utilization of e-orientation c. focus on usability and learning outcomes