

Key Success Factors in the Transfer of Web-Based Training

A case study on commercial training at Volvo Cars done in collaboration with Semcon

Master's thesis in Learning and Leadership

Ida Rosdahl
Jim Bill

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Department of Applied Information Technology
Division of Engineering Education Research
CHALMERS UNIVERSITY OF TECHNOLOGY
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Supervisors: Christian Stöhr, Department of Applied IT & Johan Johnsson, Semcon

Examiner: Samuel Bengmark, Department of Mathematical Sciences

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Department of Applied Information Technology

Division of Engineering Education Research

Chalmers University of Technology

SE-412 96 Gothenburg

Telephone +46 31 772 1000

Cover: Illustration by Jim Bill showing the focus area and the assessed factors in this master's thesis.

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Department of Applied Information Technology

Chalmers University of Technology

Abstract

Training transfer is a well-studied research area. However, what factors that affect transfer from web-based training in corporate contexts need to be studied further. This case study sought to provide a better understanding on transfer of web-based training in the context of commercial training at Volvo Cars. An exploratory and mixed methodology approach was used, by combining a survey sent to sales consultants with interviews carried out with trainers working with sales consultant training. Six factors and their relation to training transfer were assessed in four national markets. From correlation analysis, learning, relatability to work life, learner control, training framing and expected outcomes were all found to positively correlate with transfer. These results imply, among other things; That learning is related to transfer; That web-based training needs to feel relevant and well-adapted to trainees' work life; That extrinsic and intrinsic rewards are correlated with transfer performance. Statistically significant differences in transfer rating could also be observed between the four markets. This imply that how the training program is designed and what attitudes there are towards web-based training in the market influence the transfer outcome. The results of the study also provide suggestions on interesting topics for future research in the field of transfer of web-based training, for example how time pressure affect transfer performance, and how web-based training should be implemented in order to maximize transfer outcome.

Keywords: Training transfer, web-based training, training effectiveness, e-learning.

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Glossary

ILT	Instructor-Led Training.
LMS	Learning Management System.
NSC	National Sales Company.
RQ	Research Question.
SMC	Same-Measurement-Context.
SS	Same-Source.
VCC	Volvo Car Corporation.
VCPA	Volvo Cars Performance Academy, Retail Competence Development's learning management system.
WBT	Web-Based Training.

1 Introduction

In this section the chosen topic for the study is introduced. The aim and purpose, the research questions and the scope and limitations are declared here as well, together with an outline of the thesis.

1.1 Background

The business environment of today is rapidly changing. Science is driving technology and product development forward in an accelerating rate, which partly explains the “dramatic expansion of globalisation” (Dahlman 2007, p. 48). Because of these swift changes, corporations must adapt in order to enhance their competitiveness (Lim, S.-G. Lee, and Nam 2007). One important part of this is continuous training in the workplace (Park and Wentling 2007).

To meet the demands of corporate training in a globalized business environment, e-learning or web-based training has emerged as a new way of providing training. It can be described as training delivered by telecommunication (Sun et al. 2008), often enabled by the use of internet (Selim 2007). Courses can be delivered both in a synchronous way in the form of webinars, and more commonly in corporations, in an asynchronous format where the material is “available to employees at any time of the day” (Welsh et al. 2003, p. 246). The possible benefits of e-learning are for instance the possibility to provide consistent training all over the world, the increased convenience of the learner corresponding to the removal of the boundary of space and time from the training as well as the reduction of expenses on travel costs and instructors (ibid.).

Since all training solutions are investments for companies, it is important to evaluate them in order to justify the existence of the training and to gain information on how to improve training in the future (D. L. Kirkpatrick and J. D. Kirkpatrick 2006). The focus of many organisations is evaluating trainee reactions to e-learning courses, the first level from D. L. Kirkpatrick’s (1979) framework for evaluation (DeRouin, Fritzsche, and Salas 2005). Several studies have also been carried out on the topic of factors associated with learner reactions, satisfaction and learning in the context of web-based training (e.g. Sun et al. 2008; Selim 2007; Musa and Othman 2012). These investigations are interesting, since these levels of the evaluation process needs to be considered in order to fully understand the outcomes of behavior, often called transfer, and result evaluations (D. L. Kirkpatrick and J. D. Kirkpatrick 2006). According to Lim, S.-G. Lee, and Nam (2007) training effectiveness in e-learning has recently emerged as a popular theme and several studies have been carried out specifically on training transfer (e.g. Lim, S.-G. Lee, and Nam 2007; Park and Wentling 2007). These studies have tried to combine previous research in transfer of training with the specifics of e-learning, but there is still work to do in order to provide a framework for e-learning training transfer.

This need for more knowledge in the area of e-learning and transfer was identified by Semcon in collaboration with Retail Competence Development at Volvo Cars. Semcon is a company active in several engineering industries (Semcon 2010), that provides both engineering services, product information and training solutions, and Volvo Cars is a Swedish car manufacturer. The training department at Semcon has worked with Retail Competence Development in several e-learning development projects in commercial training, and the idea was therefore to initiate a master's thesis study on training transfer in e-learning courses to be able to provide input to course development projects led by Retail Competence Development as well as to be able to use the findings in Semcon's future course development projects. This study will focus on factors that influence training transfer in an e-learning context. To do this, sales consultants' perceptions of the selected factors and training transfer will be assessed in four of Volvo Cars national markets.

1.2 Purpose and aim

There are three main purposes of this master's thesis: To provide an overview of the field of training transfer in e-learning built on current literature; To assess six selected factors and their relationship with perceived training transfer in a selected sample of sales consultants who have taken four web-based courses given by Retail Competence Development; To learn about expectations and training plans in the markets and through this, current literature and the assessment, provide implications on how to create and manage e-learning.

The academic aim is to contribute to the research area of training transfer in e-learning. Another aim is to create possibilities for an enhanced understanding of training transfer both for Retail Competence Development and for the training department at Semcon, which hopefully will be of service in creating more effective e-learning and training solutions.

1.3 Research questions

In this study, the focus will be to answer the following questions:

- RQ1: What are the factors in web-based training that lead to training transfer from course to job?
- RQ2: Are there differences between markets regarding training plan designs?
- RQ3: What do actors expect from web-based training?
- RQ4: Are there differences between markets regarding self-perceived training transfer results?

The first question, which is the main focus in this study, is closely connected to the purpose of assessing selected factors and their relationship with perceived transfer. The three other questions are chosen in order to provide an understanding of how the web-based trainings included in the study were used, what actors expected from the training and lastly if there were differences in transfer. The questions will be answered by combining literature review and data collection through both a survey distributed to sales consultants and interviews with actors involved in the training process.

1.4 Scope and limitations

This study will be of an exploratory nature, and will focus on a number of factors that have previously been related to training transfer in general or learner satisfaction and learning in e-learning. The choice of factors will be done both according to previous research in training transfer and web-based training as well as to match input from both Semcon and Retail Competence Development. It is important to note that there are other factors, left out of this thesis, that needs to be taken into account to fully describe the measured perceived training transfer.

Four courses will be studied in a single company. The participants in these courses will all be sales consultants, but they will be diverse in regard to culture since the courses are distributed internationally to a wide target group. Factors concerning the relationship between culture and perceived training transfer will not be focused on.

This thesis' purpose is partly to describe previous literature and the study that will be carried out, and what suggestions and implications that training developers as well as training managers can use as takeaways from this work. The actual implementation of training transfer factors in development, roll out and management of e-learning is therefore not focused on here.

1.5 Thesis outline

To guide the reader through this master's thesis, the sections in this thesis is briefly described here.

The literature review in section 2 presents previous research in the areas of training transfer and training evaluation literature. Findings on training evaluation, a model describing training transfer and success factors for training transfer is presented.

Section 3 describes the factors that are investigated in this thesis and how they were selected. In section 4, background information to this thesis is provided. Descriptions of commercial training at Volvo Cars and the selected web-based trainings for this study, are provided.

Section 5 contains descriptions as well as justifications of the selection of methods used in the realization of this master's thesis. This study is built on a mixed methodology approach, where survey and interview data is collected and analyzed.

The results of this study can be found in section 6, where the survey and interview results are presented and findings are highlighted. In section 7, the results of the case study are discussed in the context of previous research from the literature review. The section will also contain recommendations on how web-based training can be developed and managed according to the findings of the study, as well as suggested topics for future research. Limitations of the thesis work are also addressed and implications from the results are presented. Section 8 contains the conclusions of the study.

2 Previous research

The literature study was made in order to provide a theoretical basis for the study on transfer of training in the context of e-learning. Four key subjects will be described in this chapter. The review will begin with a description of corporate training evaluation literature. This will be provided in order to create a context to the following review on training transfer in general and in the context of e-learning training in particular.

2.1 Training evaluation

Corporate training evaluation is dominated by an evaluation model proposed in D. L. Kirkpatrick (1979) (Alliger et al. 1997). This model is accepted because it meets an organizational need and because of its simple approach (Alliger and Janak 1989). The model consists of four levels of evaluation: reaction, learning, behavior and results (D. L. Kirkpatrick 1979). There are some implicit assumptions built into the model, discussed in Alliger and Janak's (1989) article. The first one is that the levels are hierarchically ordered, the second one is that there is a causal relationship between the levels and the final assumption is that there is a positive intercorrelation between the levels. Even though D. L. Kirkpatrick's (1979) model focused on instructor-led training, it can still be used in the context of e-learning according to Horton (2006). He argues that since the model focus on actual training results and not on the mechanisms that lead up to those results, it can be used in the context of e-learning with some minor configurations. The levels of the model will be briefly described below, and are visualized in figure 2.1.

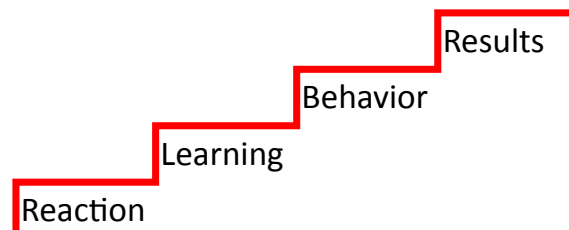


Figure 2.1: This figure describes D. L. Kirkpatrick's (1979) training evaluation model, building on the assumption of the hierarchical order and the causal relationship between the levels described by Alliger and Janak (1989).

The reaction level of D. L. Kirkpatrick's (1979) model measures how trainees perceive and respond to different aspects of the training, for instance perceived usefulness and instructor ability. The learning level focuses on measuring to which extent the trainees have understood the content of the training, for instance if they have learnt specific knowledge or skills. The behavior level, which is often called transfer of training (e.g. Alliger et al. 1997; Colquitt, LePine, and Noe 2000) measures if the training has led to changes in behavior in work life from the training. The fourth

and final level, results, deals with if the training has led to organizational results such as increased production or decreased costs.

The model has been widely accepted in the corporate world as well as to a certain extent by researchers (Alliger et al. 1997) but the model has also been criticized. Kraiger, Ford, and Salas (1993) criticize the lack of clarity in what changes the trainee learning might lead to. Alliger and Janak (1989) discuss the three earlier presented implicit assumptions of Kirkpatrick's model. Building on a study of previous training evaluation research, they argue that these assumptions are problematic. Alliger et al. (1997) test the correlations between the different levels of training evaluation proposed by Kirkpatrick. The authors conclude that "if training criteria do not overlap in content, convergence between or among them should not be expected" (ibid., p. 12), a statement that suggests that the implicit hierarchical structure of the model is inaccurate. Holton III (1996) goes so far as to describe Kirkpatrick's training evaluation model as a taxonomy rather than a model.

Although D. L. Kirkpatrick's (1979) model has been criticized, "it can still serve as a point of departure for communicating understandings about training criteria" (Alliger et al. 1997, p. 2). In this study, Kirkpatrick's taxonomy of training criteria will be used when considering training effectiveness, which can be defined as models that "seek to explicate why training did or did not achieve its intended outcomes" (Kraiger, Ford, and Salas 1993, p. 312).

2.2 Training transfer

As stated earlier, one outcome that training programs strive towards is transfer of training, the third level in D. L. Kirkpatrick's (1979) training evaluation taxonomy. There have been numerous studies done on the subject, where researchers have tried to understand what factors that lead to successful transfer of training. In this section, previous research in the field of training transfer will be described. Baldwin and Ford's (1988) model of the training transfer process will be used as a framework for the review, a model that is frequently cited in transfer literature (e.g. Holton III 1996; Axtell, Maitlis, and Yearta 1997).

In the model by Baldwin and Ford (1988), generalization and maintenance are specified as conditions for transfer, see figure 2.2. Generalization can be explained as being able to use learnings from training at work, and maintenance can in this context be explained as applying learnings at work over time (ibid.). The model demonstrates that transfer is dependent on both training input factors and training output factors and that the input factors affect transfer both directly and indirectly. The training input factors are categorized as trainee characteristics, training design and work environment (ibid.). This model of the training transfer process therefore suggests a complex relationship between factors that should be considered when designing a training program in order to achieve transfer of training.

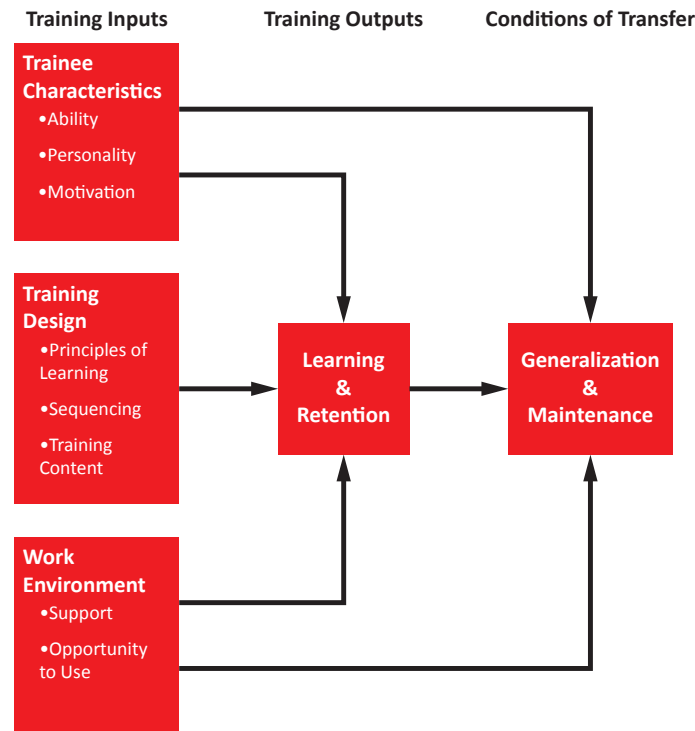


Figure 2.2: A Model of the Transfer Process (Baldwin and Ford 1988, p. 65).

The studied literature on training transfer for this thesis consists of both literature reviews (e.g. Blume et al. 2010; Gegenfurtner et al. 2009) and individual studies (e.g. Axtell, Maitlis, and Yearta 1997; Tai 2006). In Blume et al.'s (2010) meta-analytic review, 89 studies on training transfer were analyzed to find relationships between different predictor variables and transfer. In Gegenfurtner et al.'s (2009) integrative literature review, transfer motivation research between 1986 and 2008 was investigated.

Axtell, Maitlis, and Yearta (1997) examined how factors such as autonomy, course relevance and motivation affected perceived training transfer in an exploratory study. Participants in the study were staff that were not managers who attended one out of a few selected courses. Maurer, Weiss, and Barbeite (2003) performed a study to provide, among other things, more understanding of factors that can predict if employees will involve themselves in learning activities. The study had 800 participants from staff in the United States and data was collected via surveys. In Tai's (2006) study, different effects of training framing by supervisors were examined by collecting data from 126 employees that participated in a training program.

In the following subsections, research on different training input factors and their relationships to training transfer are described and grouped together using the categories from Baldwin and Ford's (1988) model: trainee characteristics, work environment and training design.

2.2.1 Trainee characteristics

Research shows that trainee motivation is important in order to achieve training transfer. For example, Axtell, Maitlis, and Yearta's (1997) study showed, at both the one month and the one year measurements, that motivation to transfer was an important antecedent to transfer. Gegenfurtner et al. (2009) state in their integrative literature review that "learning and motivation are both essential for training transfer" (ibid., p. 410) and Blume et al. (2010) also report in their meta-analytic review that motivation to learn showed a moderate relationship with transfer.

A way to generate motivation could be to offer different kinds of rewards for participation and transfer. This is one of the four conditions stated by D. L. Kirkpatrick and J. D. Kirkpatrick (2006) that are needed in order for transfer to occur. Two different types of rewards, or incentives, are extrinsic and extrinsic benefits. Extrinsic benefits are described by Maurer, Weiss, and Barbeite (2003, p. 709) as "tangible outcomes such as better pay, promotions, or job security" and intrinsic benefits as psychosocial benefits, for example a more interesting job (ibid.). Their study showed that "higher beliefs about favorable benefits and self-efficacy lead to favorable attitudes toward development" (ibid., p. 718).

Another trainee characteristic that has been studied in transfer research is self-efficacy, which can be defined as "one's belief in one's capability to perform a task" (Gist 1987, p. 472). This factor was seen to moderately relate to training transfer in Blume et al.'s (2010) meta-analytic review. Axtell, Maitlis, and Yearta (1997), in opposition to previous research, found no correlation between self-efficacy and transfer in the context of their study, but state that self-efficacy might influence transfer indirectly through motivation.

2.2.2 Work environment

In Blume et al.'s (2010) meta-analytic review, transfer climate and support were found to have the strongest relationships in predicting training transfer when it comes to the environmental factors. Examples of aspects of transfer climate are "opportunity to practice trained skills" (ibid., p. 1068) and consequences occurring when applying new skills. Blume et al. (ibid.) also conclude that supervisor support is more important than peer support when it comes to training transfer.

When examining training framing by supervisors, Tai (2006, p. 61) found that "framing had direct effect on both self-efficacy and training motivation". This suggests that the way a training is framed is likely to affect what trainees think about it, and perhaps also what they get out of it. Other aspects of framing could be for example in which way the training is delivered, at what time it is delivered and by whom.

2.2.3 Training design

Baldwin and Ford (1988) state that training design research has focused on four different dimensions: identical elements, general principles, stimulus variability and various conditions of practice. Identical elements refer to the notion that if the training and transfer setting are similar, transfer performance is maximized. This means that in order to achieve a high transfer performance, the training needs to be adapted to the context in which the training should be transferred into, namely the work environment.

In line with this, Axtell, Maitlis, and Yearta (1997) assessed if course relevance would affect transfer performance. In that study, the notion of identical elements was found to be an important factor to consider for transfer performance, both at the one month and the one year measurement.

2.3 Training effectiveness and web-based training

In this thesis, the focus is on factors affecting transfer of web-based training. Recently there has been a change of focus in research, from factors associated with learner satisfaction to what factors that can be associated with learning and transfer in web-based training (Lim, S.-G. Lee, and Nam 2007). In this section, some of the articles written on the topic of training transfer and learning will be described, to provide a description of what learning and training transfer factors that have been examined in the context of web-based training. Other factors that should be considered when working with web-based training are also described. First, a brief description of the reviewed studies will be provided, followed by a more thorough description of factors that have been found to be related to learning and transfer in the context of web-based training.

Park and Wentling (2007) studied transfer of training in a global corporation. 47 learners were included in the study, who had either participated in a soft-skill or hard-skill web-based training. In Gunawardena et al.'s (2010) study, transfer of learning was studied in a corporation in USA. 37 participants were included in the study, who had participated in one of three web-based trainings that had both asynchronous and synchronous elements. Lim, S.-G. Lee, and Nam (2007) studied factors affecting training effectiveness in three companies in Korea. 151 respondents were included, who had taken online training between 1 and 6 months ago. Chien (2012) also studied training effectiveness, where 314 respondents working in the financial services industry in Taiwan participated. Another study on training effectiveness and web-based training was done by Mbarek and Zaddem (2013), who studied this subject with a survey sent to 410 employees in Tunisian organizations. Learning and web-based training was the focus of both Aydogdu and Tanrikulu (2013) as well as Zhang et al. (2006). Aydogdu and Tanrikulu (2013) used data mining methodologies on data from a private bank in Turkey while Zhang et al. (2006) studied if instructional video led to increased learning performance in a group of undergradu-

ate students in the United States.

2.3.1 Trainee characteristics

The main trainee characteristic that has been focused on in the six articles described above, is computer self-efficacy. This is a web-based training specific dimension of self-efficacy, a trainee characteristic that has been studied in general training transfer literature.

In Lim, S.-G. Lee, and Nam's (2007) study on factors leading to training transfer, computer self-efficacy was observed to weakly influence transfer. Another study that investigated this was Mbarek and Zaddem (2013) who found that computer self-efficacy had no direct relation with learning. In a study by Chien (2012), computer self-efficacy was hypothesized to act as a mediator between system factors and training transfer. It was found that a high computer self-efficacy positively mediated the effect of system functionality, which in turn influenced training transfer. Park and Wentling (2007) studied the relationship between learner's computer attitudes and training transfer, which is closely related to computer self-efficacy. They found that two sub-dimensions of computer attitudes, anxiety and confidence, were directly related to training transfer.

As stated earlier, motivation is an important antecedent of training transfer. Certification, which could be seen as a motivator to participate in web-based training, and its relation to training effectiveness has been studied in the context of e-learning. Aydogdu and Tanrikulu (2013) found that certification had a positive relationship with learning, where there was 97 % success rate in certified web-based trainings while there was 18 % in non-certified web-based trainings. These findings led to Aydogdu and Tanrikulu's (ibid.) conclusion that motivators like certification leads to more time spent in the training, which in turn leads to improved learning performance.

2.3.2 Work environment

The six studies described above on web-based training and training transfer have not identified any new factors related to work environment that are specific to this context. However, factors that have been investigated in training transfer from instructor-led training have been studied in the web-based context as well.

In Gunawardena et al.'s (2010) study, the relations between collegial support, organizational support, manager support and organizational incentives and training transfer were studied. Manager support includes managers' facilitation of trainees' attendance in trainings and also that managers support the trainees' implementation of things learned at work (ibid.). The highest predictive factor of training transfer was collegial support, followed by organizational support. The index measuring manager support had low internal consistency, which might have affected

the measured relation between manager support and training transfer. What relations there were between organizational incentives and training transfer were not described neither in the results nor in the discussion section of the article. Lim, S.-G. Lee, and Nam (2007) measured manager support by asking questions on whether the managers supported the trainees transfer process. In that study, they found that manager support was correlated with training transfer.

2.3.3 Training design

When considering training design, several factors which are related to training transfer in general have been studied in the context of web-based training.

One training design factor is what type of content that the training consists of. Lim, S.-G. Lee, and Nam (ibid.) measured training content by asking about “whether the content helped them [trainees] perform job-related tasks” (ibid., p. 28). In that study, training content was observed to influence both learning and training transfer. In Aydogdu and Tanrikulu’s (2013) study, content was defined as either vocational or skill development and depending on the context, different types of content predicted different amounts of learning outcomes.

Interaction in web-based training and its relation to training transfer has also been studied, as a predictor for learning in studies that have both studied learning and transfer. Lim, S.-G. Lee, and Nam (2007) investigated both if face-to-face meetings between trainers and trainees as well as if e-mail communication between trainers and trainees affected the learning performance. Face-to-face meetings were found to be related to improved learning performance, but the hypothesis that e-mail communication would be related to learning was unsupported. Mbarek and Zaddem (2013) partly built their study on Lim, S.-G. Lee, and Nam (2007), and found that both face-to-face as well as e-mail interaction was related to learning.

Web-based training also creates possibilities for handing over control to the learner. Several different aspects of the training can be controlled by the trainee, for instance pace, sequencing, content and task difficulty (DeRouin, Fritzsche, and Salas 2005). In Zhang et al.’s (2006) study, the impact of interactive video on learning performance was tested. In this article, interactivity meant being able to navigate back and forth between different sections, and also being able to choose what section of a lecture that the student want to see by being provided with a hierarchical content list. Students using interactive video had higher learning performance than students using non-interactive video, and they were also more satisfied (ibid.).

2.3.4 Web-based training systems

A new dimension of the training transfer process in web-based training is the interaction with a computer system. Research has been done on several different aspects

of web-based training systems and their relationships with training transfer.

Park and Wentling (2007) studied if usability aspects of the web-based training system were related to training transfer. Usability consisted of three different sub-dimensions: Satisfaction, learnability and efficiency. Satisfaction meant that the trainee felt satisfied when interacting with the system, learnability was defined as the trainees perception that the system was easy to understand and efficiency was described as the trainees perception of to what level the system enables him or her to carry out the learning without feeling burdened by it (ibid.). The analysis showed that all three dimensions correlated with overall transfer, where satisfaction was the strongest correlated factor.

A factor similar to learnability which has been studied is ease of use. Lim, S.-G. Lee, and Nam (2007) studied ease of use by using items measuring trainees perception on how easy it was to access online resources. In that study, the hypothesis of increased ease of use leading to increased learning performance was adopted. Mbarek and Zaddem (2013) used the definition “the degree to which an individual believes that using a particular system would be free of physical and mental effort”(Davis 1989, p. 320) to study ease of use and its relation to learning, and found a positive relationship between the two.

Chien (2012) studied three different sub-dimensions of web-based training systems, namely functionality, interaction and response, and their influence on e-learning effectiveness. These sub-dimensions originated from Pituch and Y.-K. Lee (2006) who defined functionality as “the perceived ability of an e-learning system to provide flexible access to instructional and assessment media” (ibid., p. 225), interaction as the possibility to communicate between learners themselves as well as between learners and instructors, and response as how fast the response time from the system is. All these factors were found to positively influence training effectiveness.

3 Examined factors

There are many different factors influencing training transfer that have been studied in previous research. In this study, six different factors were chosen. The choice of factors was based on the authors' background in pedagogical studies, how well studied the factors were in training transfer research as well as on input from formal and informal discussions with representatives both from Semcon's training department as well as representatives from Retail Competence Development and sales consultant trainers in some of Volvo Cars' markets. The following factors were included in this study: learning, relatability to work life, learner control, time pressure, training framing and expected outcomes. These factors will be described on the basis of previous research, and the explanation to why these specific factors were included in the study will be presented.

3.1 Learning

Learning can be defined as knowledge, skills and attitudes resulting from training (D. L. Kirkpatrick and J. D. Kirkpatrick 2006). In Baldwin and Ford's (1988) model, learning is shown to be directly related to training transfer. That transfer of knowledge or skills can not happen if nothing was learned can feel rather obvious, but even so, several studies have been done on the topic of the relation between learning and transfer. Lim, S.-G. Lee, and Nam (2007) found that learning performance in the form of self-perceived learning achievements affected training transfer. Learning achievement was also studied by Mbarek and Zaddem (2013) who found a positive relationship between this factor and training transfer.

Learning was chosen as a factor, because it had been studied and measured previously both as an outcome of its own and as an antecedent of training transfer. The information from a measurement of learning was also seen as interesting when discussing market differences in for instance training transfer and market plans.

3.2 Relatability to work life

When designing training, the type of content that is used and how this content is presented are important aspects to consider. In Lim, S.-G. Lee, and Nam's (2007) study on web-based training and training transfer, to which degree the training was related to work life was seen as a factor which positively influenced training transfer. This factor was chosen to be studied because it is closely related to training design, and could therefore provide important implications to both Retail Competence Development and Semcon in how to design and develop web-based training in a way that supports training transfer.

3.3 Learner control

Web-based training provides possibilities to provide the trainee with learner control, which can be defined as “a mode of instruction in which one or more key instructional decisions are delegated to the learner” (Wydra 1988, p. 3). Zhang et al. (2006) found that instructional videos containing learner control elements led to better learning performance both than videos without these elements and than instructor-led training.

Learner control was included in this study for two reasons. The first was that the authors had an interest in how to design and conduct training in general, and web-based training in particular. There was also interest from Semcon’s point of view to see if learner control led to self-perceived training transfer.

3.4 Time pressure

During conversations with both the supervisor from Semcon as well as with training employees in several of the markets where Volvo Cars is represented, time pressure was brought up as a factor that might influence sales consultants’ learning and transfer processes. Therefore, time pressure was chosen for further study, since different actors brought this up as important for the specific context of this case study.

Axtell, Maitlis, and Yearta (1997) measured time pressure, but did not present their findings from this particular scale. The scale used in Axtell, Maitlis, and Yearta’s (ibid.) study was also used by Gjers (2015), after time pressure had been brought up in preparatory interviews of her study. The results of that study could neither confirm nor contradict a relation between time pressure and transfer.

3.5 Training framing

Another factor and its relation to training transfer which was brought up by the supervisor from Semcon was training framing. Several sub dimensions of framing were identified, such as how information about the web-based trainings was presented to the trainee, how managers presented the web-based trainings to the trainees and the timing of the distribution of the web-based training.

Tai (2006) studied training framing and its effect on training effectiveness. In that study, training framing measured how well the respondents’ managers framed the training and the result was that this dimension of training framing correlated positively with transfer motivation. When discussing framing in this thesis, managers’ training framing is what is meant.

3.6 Expected outcomes

Motivation has been seen as one important factor which affects training transfer (e.g. Gegenfurtner et al. 2009). In this study, a sub dimension of motivation, expected outcomes, was chosen as a factor to be studied. This way of measuring motivators was partly chosen because an instrument measuring expected outcomes in the form of extrinsic and intrinsic benefits was used in Maurer, Weiss, and Barbeite (2003). This instrument was also used in Gjers's (2015) study. The factor was chosen because motivation has been seen as important, as well as because it provided a possibility to present implications on how the included markets could work with outcome expectations if a correlation could be found with transfer performance.

4 Case background

The study was carried out in the context of commercial training in four of Volvo Cars' national markets. The focus was on the web-based trainings concerning the all-new XC90 and their impact on sales consultants working with car sales. The all-new XC90 is a luxury sport utility vehicle (SUV) that was released in late 2014. In this section, a macro perspective of sales consultant training at Volvo Cars is described, and the four web-based trainings that were the basis of the study are introduced.

4.1 Training of sales consultants at Volvo Cars

The description of the training process will be structured using the graphical description in figure 4.1. Each step of the process will be described, from the central directives from Retail Competence Development to the specifics of the sales consultants' training in the markets.

Retail Competence Development works with both technical as well as product and commercial training. On the commercial side, Retail Competence Development provides training to all of Volvo Cars' markets as well as to retailers that sell Volvo cars. The provided trainings are both web-based as well as other types of events, all published through their learning management system (LMS) called Volvo Cars Performance Academy (VCPA). An important event in the training process of some car releases, such as the all-new XC90, are events hosted by Retail Competence Development called "Train the Trainer". During these events, training managers, trainers and persons with similar roles meet at Volvo Cars headquarters in Gothenburg and partake in sessions, presentations and exhibitions of the new car. During these events, project managers, specialists and other key persons who were involved in the development of the new car, provide unique insights about the product. This is complemented with presentations on Volvo Cars' core values. The events provide the participants with information and training material dealing with the new product, that the trainers then have to convert into specific training plans adapted for their own markets.

The next step in the training process is the market level, where trainers with input from "Train the Trainer"-events, web-based trainings as well as other material create and conduct market specific training. Web-based trainings can originate from Retail Competence Development, but some markets also produce their own e-learning. The market training plans can include events such as road shows, where the focus is on getting hands-on driving experience of the new car, events similar to the "Train the Trainer" as well as in-retailer training. There are sometimes requirements from Retail Competence Development's side on which web-based trainings that are mandatory, often connected to the issue of certification, but other than that, web-based trainings can be used in different ways to meet the demands of the specific

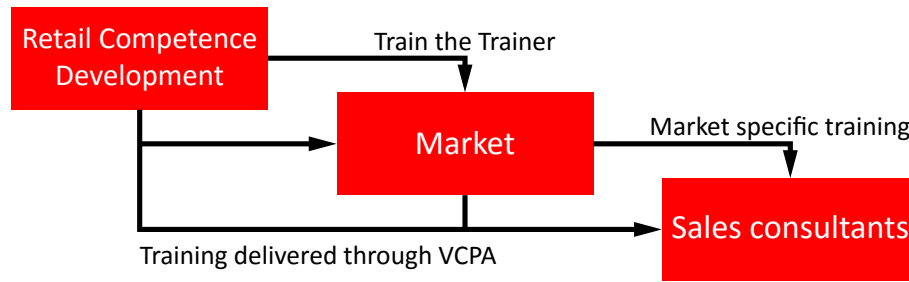


Figure 4.1: This figure describes the outline of the training process of sales consultants. The “Train the Trainer” event is a course for commercial trainers in the markets, and VCPA is the online portal where different types of both instructor-led and web-based trainings are posted.

market. The web-based trainings chosen by each market, are made available for sales consultants on VCPA, so that they can be completed when there is time.

4.2 Web-based trainings on the all-new XC90

This section will provide an understanding of the four selected web-based trainings on the all-new XC90 investigated in this thesis. Mainly, the web-based training content, design and assessments are described.

4.2.1 Selling the All-new Volvo XC90

This web-based training was extensive and dealt with trim levels, interior and exterior design, power-train options, safety features, accessories and connectivity. It was slide based, contained both text and images and required some interaction from the trainee. The training was concluded with a quiz upon which feedback was received immediately.

4.2.2 Demonstrating The All-New Volvo XC90

In this course, information about City Safety features was given as well as information about how these were to be used. Communication and interaction features were also handled. This training included animations that showed what happened when the different features were used. The course required some interactivity. It was possible to navigate back and forth, and this course was concluded with an assessment where the trainee got immediate feedback upon completion.

4.2.3 Explaining the All-New XC90

This training was a film which focused on showing different ways to present the car to potential customers. The two persons who acted as potential customer and potential sales consultant respectively were both key persons in the development process of the all-new XC90. It revealed hands-on tips in this procedure and some anecdotes to tell customers. There was no interactivity, and no possibility to easily navigate between different topics. This web-based training did not include a quiz.

4.2.4 All-new Volvo XC90 T8 Twin Engine

This course contained information of benefits of the T8 Twin Engine, a plug-in hybrid model of the all-new XC90. It explained the different drive modes, how to optimize driving as well as how to take care of the battery. The course contained quizzes that were given after each finished section in the course. On completion of each quiz, immediate feedback was given. It was possible to navigate between main sections but it was not possible to start a section before finishing the preceding one.

4. Case background

5 Methods

In this chapter, three different aspects of the methodology of this study will be described. One section describes the chosen research approach for this study. Another section describes the used approach for collecting data with a survey instrument, while the third and final section describes the methodology behind the interviews that were used to complement the survey data.

5.1 Research approach

This is a social research study of an exploratory nature where factors affecting the transfer of web-based training are investigated in a specific context. This field is young and “exploratory research is often conducted in new areas of inquiry” (Bhattacharjee 2012, p. 6). Exploratory research can be useful in creating ideas and pointing towards areas for further and more detailed research (*ibid.*, p. 6) and this will be done in this thesis. In social research studies, three different research approaches are commonly used. Depending on the research questions and what data that will be required to answer the said questions, different approaches are suitable (Punch 2005, p. 19).

One of them is the quantitative research approach. A common thing for all quantitative methodologies is that they all build on the use of statistics in one way or another (Djurfeldt, Larsson, and Stjärnhagen 2003, p. 17). This approach can be suitable when answering questions such as “how often, how many or how common” something is (Trost 2012, p. 23). There is also the qualitative approach, which is commonly seen as the opposite of the quantitative approach. Qualitative approaches are very diverse, but are generally context sensitive, and focuses on getting to the bottom of a specific case (Punch 2005, p. 238). This way of conducting research is suitable when studying the “lived experience of people” reflecting meanings and purposes (*ibid.*, p. 238). A third approach to social research is to combine quantitative and qualitative data, which is called a mixed approach. One advantage with a mixed approach is that it combines the advantages of both quantitative and qualitative methodology (*ibid.*, p. 240). An example of such a combination could be using qualitative methods to understand the context of a case, and then use this data to support construction of a quantitative instrument that aims to study the case further (Bryman 1988, p. 133).

This study used a mixed methodology approach. This choice of approach was built upon the type of research questions that were supposed to be answered. The first research question was seen as suitable to answer using statistical analysis. For this, a quantitative method was used in the form of a survey sent to sales consultants. Research questions two to four were focused on the specific context of sales consultant training at Volvo Cars. The data required for these questions were of a qualitative and more unstructured nature. Therefore it was decided that interviews should be

carried out as well. To use quantitative and qualitative approaches together like this is described as a way to “flesh out the meaning of findings established through quantitative methods” (Bryman 1988, p. 145). The qualitative and quantitative methods used are described in the two following sections.

5.2 Survey

A survey was designed and distributed to collect mainly ordinal but also nominal data from sales consultants in the four chosen markets who had taken three or four of the chosen web-based trainings. The survey consisted of rating items and open questions, and can be seen in its entirety in appendix B.

5.2.1 Development of the instrument

The instrument used in this study was based both on instruments used in other studies on training transfer, as well as self-developed items which were more applicable in this study’s specific context. In the following sections, the different questions used in the instrument will be described. This will be complemented with the review process used for the instrument, and how the introduction letter was formulated.

5.2.1.1 Operationalizing the factors

The focus of the survey was to collect ordinal data on sales consultants’ opinions on the central factors in this study. Ordinal data is categorized as qualitative in Stevens’s (1946) classification, and can for instance be used when measuring attitudes like manager support or satisfaction. An ordinal scale can be ranked, but there is no given spacing between values (Trost 2012, p. 19). The scale also lacks an absolute zero, and because of these two properties, it is not meaningful to do mathematical operations on the data (Djurfeldt, Larsson, and Stjärnhagen 2003, p. 41).

To be able to construct items that matched this, a conceptual chart was created that included the sub dimensions of each factor and self-perceived training transfer, see table 5.1. This way of working with survey creation was inspired by the survey development process in Punch (2005, pp. 92–94). In that process, the first step is to conceptually define each variable, the second step is to choose measurement technique and the third step is to produce items which measure specific aspects of all variables. The factors that were to be measured in this study were listed and broken down into as many sub factors as the thesis authors considered needed to catch the complete meaning of each of the factors.

All rating items corresponding to the defined variables were of a five point Likert-type. The Likert-type scale is an ordinal scale that is commonly used in for example

education and business management (Karlin 2008, p. 202). Specific statements were formulated to which the respondents were to answer “to which extent” they agreed or disagreed. This approach was selected since “a questionnaire designer should consider using fewer frequency items (how often) and more agreement items” (Braun et al. 2012, p. 7). Inspiration to ask “to which extent” that the respondents agreed was taken from Gjers (2015) who in turn refer to Axtell, Maitlis, and Yearta (1997).

The items were formulated in order not to ask more than one question per item, and to make them easy to understand, advice originating from Trost (2012, pp. 79-82). Inspiration in the creation of the instrument was taken from Gjers (2015) as well as from other studies on training transfer and web-based training. All items and their origin can be found in appendix A. Descriptions of which items were used to measure which factor, as well as what origin the items used in the instrument had is described below.

Learning

Learning can be measured in many ways. Most commonly, learning is measured as some type of test score (Alliger et al. 1997) but in this study learning was measured by letting respondents estimate how much they learned about some key learning goals. Nine items were constructed, derived from the combined learning goals of the web-based trainings described in section 4.2. Inspiration to measure learning like this was taken from Axtell, Maitlis, and Yearta (1997) and Gjers (2015). The respondents were asked to rate how much they perceived that they learned about the learning goals. An example of such a learning goal was: “the Sensus User Interface”.

Relatability to work life

How related the training was to the respondents work life was measured with two self-developed items. These items were designed in order to cover both if the content was appropriate and if it was adapted to the respondents’ work situation and need. One of the two items were: “The web-based training content was **relevant** to my work”.

Learner control

The learner control index consisted of six self-developed items. The items in the index were constructed to measure the following sub-dimensions of learner control: The possibility to track progress, to control the pace, to receive feedback and to be able to navigate. An example item which the respondents rated was: “I could navigate freely between different subjects in the content”.

Factor	Sub factors	No. of items	Example item	Origin
Learning	Content knowledge from selected web-based trainings.	9	<i>How much do you perceive that you learned about the following from attending the All-New Volvo XC90 web-based trainings: The trim levels.</i>	Adapted from (Axtell, Maitlis, and Yearta 1997).
Relatability to work life	Content complies with job description, well adjusted information, appropriate information.	2	<i>The web-based training content was relevant to my work.</i>	Developed by the authors.
Learner control	Control sequence, read more, see progress and present location, control pace, navigation	6	<i>I could skip content that I already had knowledge on.</i>	Developed by the authors.
Time pressure	Distractions (expected to do other things), stressful environment, lack of time	3	<i>I experienced time pressure throughout the web-based trainings.</i>	Adapted from (Axtell, Maitlis, and Yearta 1997).
Training framing	Supervisor encouragement to complete e-learnings. Training delivered by a credible source.	3	<i>My supervisor clearly communicated that the web-based trainings would improve my performance at work.</i>	Adapted from Tai (2006, p. 56).
Expected outcome	Expected extrinsic and intrinsic rewards.	7	<i>Participation in web-based training will help me get promotions into higher level jobs</i>	Adapted from Maurer, Weiss, and Barbeite (2003).
Transfer	Percieved use of the content knowledge at work	9	<i>How much do you perceive that you used or use the following knowledge in your work: The trim levels.</i>	Adapted from (Axtell, Maitlis, and Yearta 1997).

Table 5.1: Conceptual chart for the survey development including example items and sources. The level of measurement for all factors was decided to be ordinal.

Time pressure

Time pressure was measured using three items adapted from Axtell, Maitlis, and Yearta (1997). An example item used in this study was: “I experienced time pressure throughout the web-based trainings.”.

Training framing

The training framing scale mainly focused on how the web-based trainings were framed by the respondents’ managers. Three items were included, where two originated from Tai’s (2006) three items included in his framing index and one was self-developed. An example item was: “My supervisor clearly communicated that the web-based trainings would improve my performance at work”.

Expected outcomes

Expected outcomes were measured in two dimensions, expected extrinsic and intrinsic outcomes. The three items used by Maurer, Weiss, and Barbeite (2003) to measure extrinsic benefits were used, and adapted to the specific context of web-based training. One of the three items was: “Participation in web-based training will help me get promotions into higher level jobs”.

The expected intrinsic outcome index used in this study consisted of three out of eight of Maurer, Weiss, and Barbeite’s (ibid.) items measuring intrinsic or psychosocial benefits. The chosen items were focused on how participation in web-based training would influence how interesting the respondents work life was, and how beneficial the respondents perceived that participation in web-based training was. An example item was: “I am likely to get more stimulating work if I participate in web-based training”.

Expected outcomes were also measured in total, where both items dealing with extrinsic and intrinsic outcomes were included. One additional item was added to this index in order to cover other types of outcomes from web-based training the respondents expected. This item was adapted from Maurer, Weiss, and Barbeite (ibid.) and formulated as: “Other rewards are likely to result from my participation in web-based training”.

5.2.1.2 Open questions

Four open questions were included in the survey in order to give the sales consultants the possibility to in their own words express opinions regarding the web-based trainings. This data was seen as a way of capturing important views of the sales consultants that were not caught in the rating questions. The open questions were formulated together with the Chalmers supervisor, and an example question was:

“List up to three positive things related to your learning when using web-based training”. Why this formulation was used was to provide the respondents with a guideline of how much information they should provide in their answer, which the Chalmers supervisor saw as important. In his opinion, an open question without this type of guidelines might result in respondents simply skipping it.

5.2.1.3 Introduction letter

When sending a survey, an important thing is to “ensure that the respondents have been approached professionally” (Punch 2005, p. 100). One of the ways this was handled was through the design of an introduction letter to the survey inspired by the guidelines of Trost (2012, pp. 110–115). These guidelines are for instance the importance of not writing an overwhelmingly long introduction letter, and that information on the purpose of the study as well as how the results of the survey will be used should be given to the recipient. The introduction letter used in this study can be seen in appendix C.

5.2.1.4 Introduction texts

For some of the sales consultants included in this study, up to one and a half year had passed between their participation in the chosen web-based trainings and their participation in the survey. Because of this, the authors wanted to remind the sales consultants on the specific web-based trainings that were central to the study. Therefore, a start page was included in the survey with a short description of the four web-based trainings and on all pages in the survey, except on the demographics page, shorter introduction texts presented a reminder of which web-based trainings the survey was about (see appendix B).

5.2.1.5 Review

The items from the first version of the conceptual chart were put together in a document where response alternatives were outlined, which was reviewed by the Semcon and the Chalmers supervisors. With the provided feedback changes were implemented. An example of this was to ask the demographical questions first, instead of last which is recommended by Braun et al. (2012). The argument for this change was to start the survey with questions which would be easy for the respondents to answer. Braun et al. (ibid.) argues that asking demographic questions first might influence the responses in following questions, but since the instrument used did not contain sensitive questions in regard to for example gender or ethnicity this was not seen as a problem.

The time scale was also rewritten to measure how the respondent perceived the factor during the web-based training rather than generally at work. The feedback

also led to placing the extrinsic and intrinsic outcome items in the same section in the survey, and the order of some items were changed.

5.2.1.6 Pre-test

A pre-test was performed with eight participants from Semcon. The respondents had different work titles, and included training developers, team managers and technical communicators. The pre-test respondents were asked to carefully review the wordings and denote where they saw a risk of misinterpretations. They were also asked to register the time it took to fill out the survey, and if any items were difficult to answer since “one characteristic of a poor item is that people have difficulty placing their response on the scale” (Punch 2005, p. 93).

Examples of feedback that was incorporated in the final survey was that the appearance of the introduction texts and the actual questions should differ visually. Therefore the introduction texts were written in a smaller font and also in italics so that they stood out from the questions. All five response alternatives were provided in text for each question to make the survey easier to fill out, in accordance with feedback from the pre-test.

5.2.2 Participants

The survey was sent to four different samples, one for each of the four selected markets A, B, C and D. All respondents included in the samples were sales consultants working with selling Volvo cars. The four markets were all English speaking, but there were differences between them such as market size.

To be included in the sample, the initial criteria was that the sales consultants should have completed the four selected web-based trainings central to this study. However, in market A, only two respondents matched this criteria and because of this neither anonymity could be guaranteed nor could the sample be seen as representative. In market C, the web-based training “All-new Volvo XC90 T8 Twin Engine” had been replaced with a market specific web-based training. Therefore, participants from market A and C were selected using the criteria that they should have completed three of the four web-based trainings central to this study. This did not alter the items in the survey however, since the learning goals were more or less overlapping between the chosen web-based trainings. In markets A, B and D, the survey was sent to all sales consultants that matched the described criteria. In market C though, this would have resulted in a very large number of participants, and too much qualitative data to handle for the authors alone. Therefore, a randomized, smaller sample was used from the list with sales consultants that matched the criteria.

Each sample was to represent the population of sales consultants in the corresponding market who had completed the selected web-based trainings. In table 5.2 the number of distributed surveys as well as response frequencies for each market are

visualized, and table 5.3 contains the demographic information of the survey respondents.

Market	A	B	C	D	Total
Number of invited respondents	12	207	230	35	484
Response rate (frequency)	66,7 % (8)	14,5 % (30)	13,5 % (31)	40,0 % (14)	17,1 % (83)

Table 5.2: This table contains the number of distributed surveys and the response frequency for each market included in the study.

Market	A	B	C	D	Total
Number of respondents	8	30	31	14	83
Age					
Up to 20	0 %	3,2 %	3,2 %	0 %	2,4 %
21-30	12,5 %	25,8 %	9,7 %	7,1 %	14,5 %
31-40	37,5 %	9,7 %	9,7 %	42,9 %	18,1 %
41-50	50 %	48,4 %	48,4 %	50 %	49,4 %
51-60	0 %	12,9 %	29,0 %	0 %	15,7 %
Gender					
Male	87,5 %	87,1 %	80,6 %	85,7 %	84,3 %
Female	0 %	12,9 %	12,9 %	14,3 %	12,0 %
Prefer not to answer	12,5 %	0 %	6,4 %	0 %	3,6 %
Number of years selling Volvo cars					
0-1	37,5 %	19,4 %	35,5 %	35,7 %	30,1 %
2-3	12,5 %	25,8 %	16,1 %	28,6 %	21,7 %
4-5	25 %	12,9 %	16,1 %	21,4 %	15,7 %
6-7	0 %	6,5 %	6,5 %	0 %	4,8 %
8-9	0 %	6,5 %	3,2 %	14,3 %	6,0 %
10+	25 %	29,0 %	22,6 %	0 %	21,7 %

Table 5.3: Demographics for the survey respondents.

5.2.3 Distribution

The survey was distributed via SurveyMonkey®. An e-mail containing the introductory letter and a link to the survey was sent to all participants included in the study. The survey was open for about two weeks for each market and a first reminder to fill out the survey was sent one week after the survey launch to participants who had not responded yet. The first reminder e-mail was created with inspiration taken

from Trost (2012, pp. 120–122) where considerations were made regarding being careful not to put pressure, but encourage and motivate participation in the study. This reminder can be seen in appendix D. When two days remained on the survey, a second reminder was sent out to participants who still had not responded, which can be seen in appendix E. This e-mail contained the same information as the first, except for the title “last reminder” instead of “reminder” and it said that the survey would be open for two more days.

5.2.3.1 Confidentiality and data

Another point made by Punch (2005) is that “the researcher should stay in control of the data collection procedure” (ibid., p. 100). To address this, the authors ensured the correct configuration of the survey instrument in SurveyMonkey. The authors also administered the distribution of the survey and handled the data collection. The authors ensured authorization to remove the data when the thesis was completed.

It was decided to anonymize the markets in this thesis and to refer to them as A, B, C and D. There were reasons behind this, and one was that it should not be possible to form a prejudiced opinion of any of the markets based on this study. Another reason was that only one interview was performed for each market, and this was a way to protect the interviewees’ anonymity.

5.2.4 Analysis of ordinal data

The analysis of the ordinal data was done in IBM® SPSS® Statistics 23. In the following sections, the different steps of the ordinal data analysis will be described.

5.2.4.1 Data preparation

The first thing that was done was to identify respondents who should not be included in the data analysis. Respondents who had only responded to the demographic questions were deleted from further data analysis, since they had not provided any information that could be used in this study. Some respondents did not rate any of the transfer items, and were therefore eliminated from the correlation analysis, since no transfer correlations could be assessed on respondents who had completely left out transfer ratings.

After the initial removal of respondents was done, cells with missing values were identified. The learning and transfer scales did not have a N/A response alternative in the survey, so when respondents left a single unanswered statement in the learning or transfer scales, they were given the value of zero since the authors interpreted empty values as “not applicable” and that in turn was interpreted as less than the lowest provided rating alternative, “a little”. Even though a respondent had one

missing value in the learning or transfer scale, they were still included in the study, since the response frequency was quite low.

Some of the questions in the survey were asked so that a high rating meant a low measure of the factor. These items were reversed (recoded) and renamed. The survey included two items about better pay that asked the same thing, but one of the items was on a reversed scale. These were seen as control items. For respondents who had rated 5 on the first and 5 on the second, all other answers from that particular respondent were reviewed to see if it seemed like they had checked one alternative throughout the survey which would then lead to disqualification. This was not the case for any of the respondents however.

5.2.4.2 Reliability analysis

The internal reliability within all indexes was assessed using Cronbach's alpha. This test measures "the average of all the possible split-half coefficients for a given test" (Cronbach 1951), where a split-half coefficient of a test can be found by splitting a test in half, summing the score of the two halves and then determining the correlation between the two halves. Cronbach's alpha commonly range from 0 to 1, but can in some cases take negative values if there are negative correlations between the included items. What value of alpha that should be deemed as satisfactory for internal consistency varies from study to study, but a value of over 0.7 is commonly seen as a lower limit (e.g. Streiner 2003; Cortina 1993). Even though the usage of the coefficient has been questioned, it is still the most widely used measure of reliability (Tavakol and Dennick 2011).

Before the reliability analysis was carried out, the items corresponding to different factors were summed into indexes. The item "other rewards are likely to result from my participation in web-based training" was only included in the expected outcomes index and not in the expected extrinsic or intrinsic outcome indexes, since it could be interpreted as both an intrinsic and/or an extrinsic outcome. The item "web-based trainings are not likely to help me get better pay" was not included in the extrinsic outcomes index since it was preceded by an item that asked the same thing, but not negated. If both were included, the issue of better pay would give double impact.

Cronbach's alpha for the constructed indexes can be found in table 5.4. As can be seen, the learner control index, the time pressure index and the training framing index all had alpha values of less than 0.7 initially, and were therefore modified to exceed the acceptance level of 0.7 commonly used. The items "I could not estimate how much time remained to complete the web-based trainings" and "I could do the web-based trainings in my own pace" were removed from the learner control scale. The item "once started, I can complete my assigned web-based trainings without disruptions" was removed from the time scale. The item "I felt pressured to complete the web-based trainings" was removed from the framing scale. Removed items were excluded from further analysis. Cronbach's alpha of the modified and final indexes can be seen in table 5.4. See appendix F for the items included in each scale.

Factor	α_0	α_1
Learning	0.960	-
Relatability to work life	0.818	-
Learner control	0.655	0.718
Time pressure	0.623	0.783
Training framing	0.552	0.946
Expected outcomes	0.844	-
Expected extrinsic outcomes	0.838	-
Expected intrinsic outcomes	0.704	-
Transfer	0.928	-

Table 5.4: In this table, values of Cronbach’s alpha calculated for all scales are presented. α_0 represents Cronbach’s alpha of the original scales, while α_1 represents Cronbach’s alpha of the indexes that were modified through removal of items.

5.2.4.3 Correlation analysis

To investigate which factors that were related to training transfer, correlation analysis was carried out for each factor and training transfer. An analysis of two variables at a time looking for possible relationships is called a bivariate analysis (Bryman and Bell 2003). If one variable increases and the other variable also does so, this implies a positive correlation between the variables. On the other hand, if one variable increases and the other decreases alongside it, this implies a negative correlation (Rugg 2007). A method within the area of bivariate analysis is Spearman’s Rho which is also recommended by Bryman and Bell (2003) when investigating the correlation between ordinal variables. This method investigates how the ranks of two variables correlate by calculating the Spearman rho coefficient. This coefficient can take values from -1 to +1 and if $0.9 \leq \rho \leq 1$, the correlation can be seen as very strong, while a correlation of $0.7 \leq \rho \leq 0.9$ can be seen as strong and $0.5 \leq \rho \leq 0.7$ can be seen as moderate (Karlin 2008).

In this thesis, each selected factor was checked for correlation with training transfer using the Spearman’s rho analysis in SPSS.

5.2.4.4 Descriptive statistics

Descriptive statistics were used in order to see if there were relations between factors such as training transfer, learning, expected outcomes and market. To do this, cross tables were created. To be able to make sense of these, the ordinal summed data in each index was categorized into a new ordinal variable which described the rating level for each respondent as either high, medium or low. The first step in the conversion was to take one respondent’s rating value of some index, and divide this by the number of items included in the index. This led to a new variable, x , with

a value between 1 and 5. When this was done, the value was categorized either as low ($x < 2.33$), medium ($2.33 \leq x < 3.66$) or high ($3.66 \leq x \leq 5$).

With these new variables, the data was tested using χ^2 as well as Fisher's exact test to see if there were statistically significant differences between markets regarding how the variables had been rated. To be able to visualize the results, stacked bar charts were created.

5.2.5 Analysis of nominal data

The answers of the open questions in the survey were analyzed per question and market. Going through one market at a time, each response to an open question was denoted on a separate piece of paper and then these pieces of paper were grouped together in categories that the authors found were represented in the answers. See table 5.5 for examples of categories on the first two open questions from the survey. The categories, including response frequency for each category and market were visually represented using bar graphs.

Open question	Example categories
List up to three other factors that you think affect your learning from web-based trainings	Time, interruptions/distractions
List up to three outcomes that you expected from the specific web-based trainings	Product knowledge, proficiency

Table 5.5: This table shows example categories used in the analysis of the open questions in the survey.

5.3 Interview

The survey which is described in section 5.2 was used in order to see if relations could be observed between the chosen factors and transfer from the web-based trainings as well as to see if there were market differences in outcome expectations and self-perceived transfer. To better understand and interpret the results from the survey, interviews with respondents working with sales consultant training were carried out. The interviews were designed to provide information on the differences between the markets, how the markets conducted the sales consultant training on the all-new XC90 and what the markets expected from the training of their sales consultants.

5.3.1 Instrument

Interviews can be done in different ways, and one way of categorization is the amount of structure that is built into it (e.g. Punch 2005, p. 123). In one end of the in-

interview continuum there is the structured interview. This type of interview has predetermined questions, and both phrasing of the questions as well as the order of the questions are the same between all interviews (Stacey 1969). Because of this standardization of the interview, the structured approach is useful when the interviewer wants to be able to compare respondent answers to one another (ibid.). This can be compared to an unstructured interview, where the interviewer do not want to impose any predetermined categorization of the responses which could limit the collected data (Punch 2005).

The qualitative method used in this study was based on a structured interview schedule designed in accordance with guidelines from Kvale (1996) and Stacey (1969). Most of the items were self-developed, but one item category and its corresponding items was translated and adapted from Gjers (2015).

The interview schedule was assessed by both the Chalmers and the Semcon supervisors. The full interview schedule can be seen in appendix G, and an overview can be seen in table 5.6. The main parts of the interview will be described below.

Section	No. of items	Example item	Origin
Market characteristics	2	<i>How many colleagues do you approximately have that works with training in your market?</i>	Self-developed
XC90 launch	3	<i>What were the sales expectations on the XC90 in your market?</i>	Self-developed
XC90 training	10	<i>Were there any market specific objectives with the sales consultant training on the XC90?</i>	Self-developed
XC90 WBT outcome expectations	5	<i>What outcomes were you expecting for the car salesmen from the specific web-based trainings?</i>	Translated and adapted from Gjers (2015)

Table 5.6: The main categories of the interview schedule that was used in the study is presented here, with example questions and the origin of the questions.

WBT is an abbreviation of web-based training.

5.3.1.1 Market characteristics

In this study, market characteristics meant the size of the market and the size of the training department in the market. Two questions were developed by the authors. An example question was: “How many colleagues do you approximately have that work with training in your market?”.

5.3.1.2 XC90 launch

To be able to understand the expectations on both the training in general and the four specific web-based trainings in particular, it was seen as important to understand what expectations there were on the all-new XC90 regarding sales in the markets. Another important aspect was when the car was launched. Three questions were developed by the authors. An example question was: “What were the sales expectations on the XC90 in your market?”.

5.3.1.3 XC90 training characteristics

From previous research, it is clear that there are a lot of different factors that affect training transfer in corporate training. The survey measured perceived training transfer from four web-based trainings on the all-new XC90, but to be able to understand the results of the survey there was a need for a holistic view on the all-new XC90 training. Therefore, ten questions concerning the training characteristics were developed by the authors. An example question was: “Were there any market specific objectives with the sales consultant training on the XC90?”.

5.3.1.4 XC90 web-based training outcome expectations

In the survey, the respondents rated statements dealing with extrinsic and intrinsic expectations on the four web-based trainings. To be able to understand the trainers’ expectations, five questions were developed dealing with what outcomes and expectations there were from the training department. These questions were translated and adapted to the context of web-based training from the interview schedule used in Gjers’s (2015) study on antecedents of training transfer. An example question was: “What outcomes were you expecting for the car salesmen from the specific web-based trainings?”.

5.3.2 Participants

As for the survey, the names of the markets which the respondents belonged to were not published. The respondents representing the four different markets were chosen by the market representatives the authors had contact with throughout the study. The criteria for the selection were that the respondent currently worked or had worked with sales consultant training in the specific market, and that he or she had played a part in the training on the all-new XC90. The respondent representing Retail Competence Development at Volvo Cars was chosen because he or she had an extensive knowledge on the web-based trainings. Each market was represented by one interviewee, except for market C where two respondents were present during the interview because they had complementary knowledge on the training process of that specific market.

5.3.3 Procedure

The interviews were carried out using Skype for business, because the respondents represented markets all over the world. Two interviewers were present at all interviews, where one acted as the main interviewer while the other took a supportive role which consisted of taking notes and also making sure that the main interviewer covered all topics. The interviewers used meeting rooms at Semcon to be able to have a quiet and private environment when conducting the interviews. The interviews were also recorded. After each interview, the two interviewers had a briefing meeting in order to have time to discuss both the data collected in the interview as well as the interview itself.

5.3.4 Analysis

The analysis method was designed around the purpose of the interviews, which mainly was to compare the training and the characteristics of the four markets in order to be able to interpret the survey results. When the interviews had been carried out, all data from the interviews was transcribed. After this, the data which was seen as important for the study was coded using the main sections of the interview: Market characteristics, XC90 launch characteristics, XC90 training characteristics and XC90 web-based training outcome expectations.

The data coded as XC90 training characteristics was then coded into subdivisions of the training characteristics. The subdivisions used were market specific objectives, training activities and web-based training. The data coded as XC90 web-based training outcome expectations was recoded into categories such as trainer expectations, manager expectations and sales consultant expectations. When all data that was deemed important was coded, data from the four separate markets was compared in order to understand what the differences and the similarities were between the four markets and their training solution for sales consultants on the all-new XC90.

6 Results

In this section, the results of analyzed data will be presented, categorized depending on what research question it corresponds with as well as from what data collection method the result originates. First, the results from the data collected via the survey will be described. This will be followed by the results of the five interviews with different actors in the sales consultant training process that were carried out.

6.1 Results from the survey

The results in this section all originates from the data collected via the survey. First, the correlation analysis will be displayed. After that, data regarding sales consultants expectations on outcomes from web-based training will be described. In section 6.1.3 training transfer ratings will be described and compared between the markets.

6.1.1 Correlation analysis of factors in web-based training that correlate with training transfer

The correlation between chosen factors and self-perceived training transfer was analyzed using Spearman's rank correlation. The results of this analysis are the basis of the answer of research question 1 about what factors in web-based training that are related to training transfer. As shown in table 6.1, learning, relatability, learner

Factor	Mean	SD	ρ
Learning	35.2	8.95	0.681**
Relatability to work life	8.57	1.92	0.536**
Learner control	15.3	3.63	0.458**
Time pressure	4.40	2.31	-0.034
Framing	8.16	2.46	0.451**
Expected outcomes	18.5	6.22	0.505**
Expected extrinsic outcomes	4.81	2.65	0.417**
Expected intrinsic outcomes	10.4	3.06	0.507**
Transfer	35.6	7.64	1.000

Table 6.1: This table displays the mean, the standard deviation(SD) and the Spearman's rank correlation coefficient(ρ) between each factor included in this study and training transfer. $n = 83$ for each factor except time pressure and relatability to work life, where $n = 82$. ** represents a significance level of < 0.001 .

control, framing, expected extrinsic outcomes, expected intrinsic outcomes and expected outcomes were all correlated with training transfer ($p < 0.001$). Using the

general rules from Karlin (2008), the four factors that had a moderate correlation with transfer were learning (0.681), reliability (0.536), intrinsic outcomes (0.507) and expected outcomes (0.505). The implications of these results will be discussed further in section 7.1.1.

The only examined factor which was not significantly correlated with training transfer is time pressure (-0.034 , $p = 0.764$). To be able to interpret this result further, respondent answers to the open question “list up to three other factors that you think affect your learning from web-based trainings” were used. 21.7 % of the survey respondents stated that time was a factor that affected their learning, even though no significant correlation was observed between time pressure and learning ($\rho = 0.066$, $p = 0.554$).

6.1.2 Market differences between sales consultant expectations on outcomes from web-based training

The results regarding market differences in outcome expectations were both ordinal data from the indices expected extrinsic and intrinsic outcomes as well as data from open-ended survey questions. The data was categorized using the process described in section 5.2.4.1. In figure 6.1 and 6.2, percentages of differing ratings for each market are displayed. These data are also represented as cross tables in table H.1 and H.2. Since the samples were small, Fisher’s exact test was used, which showed a statistically significant relation between market and expected extrinsic outcomes ($p < 0.05$) but not between market and intrinsic outcomes.

In figure 6.1 it can be observed that almost two thirds of the sales consultants in market A and around three out of four of the sales consultants in market C rated their extrinsic outcome expectations as either medium or high. On the other hand, the majority of the sales consultants in market B and D rated expected extrinsic outcomes as low.

No statistically significant differences could be found with Fisher’s exact test ($p > 0.05$) regarding market differences in expected intrinsic outcome ratings. As can be seen in figure 6.2, the sales consultants’ ratings were quite similar between the different markets. Almost 60 % of all sales consultants’ responses were categorized as high, and responses in the high category were the most frequent for each market as well. In market A, no sales consultants rated their expectations as low, while sales consultants from market B stood out as the group that had the most responses categorized as low, around one fourth of all responses in that particular market.

Similarities and differences could also be observed qualitatively in the analyzed data from the open-ended question about outcomes that the sales consultants expected from the web-based training. A summary of this data for market A, B, C and D can be found in figure 6.3, 6.4, 6.5 and 6.6 respectively. The most frequent outcome that the sales consultants perceived that they would get from web-based training in markets A, C and D was increased product knowledge followed by an

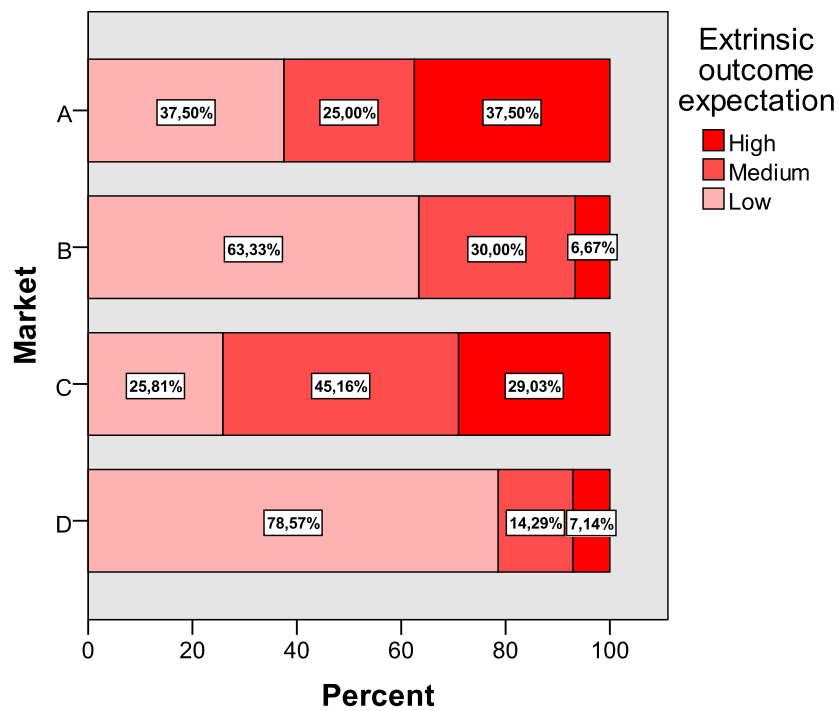


Figure 6.1: Figure displaying expected extrinsic outcome rating divided by market. Ratings have been categorized into three different categories.

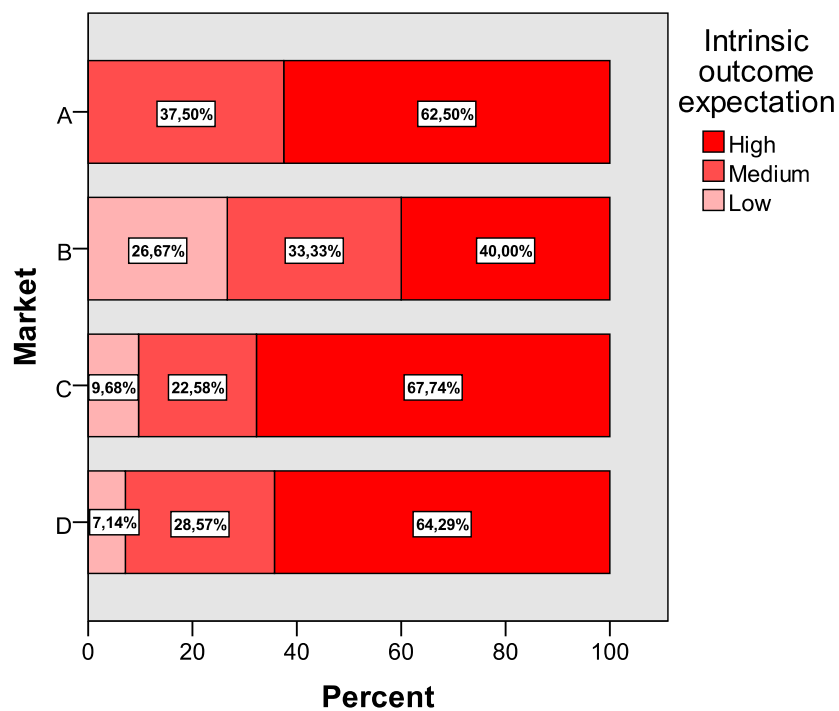


Figure 6.2: Figure displaying expected intrinsic outcome rating divided by market. Ratings have been categorized into three different categories.

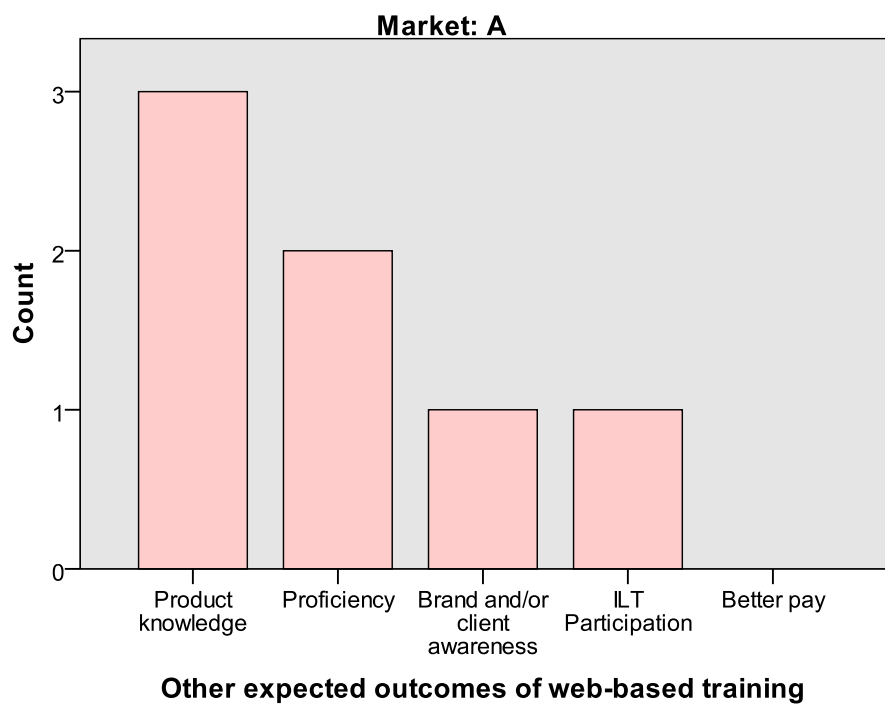


Figure 6.3: Other expected outcomes from the web-based trainings in market A.

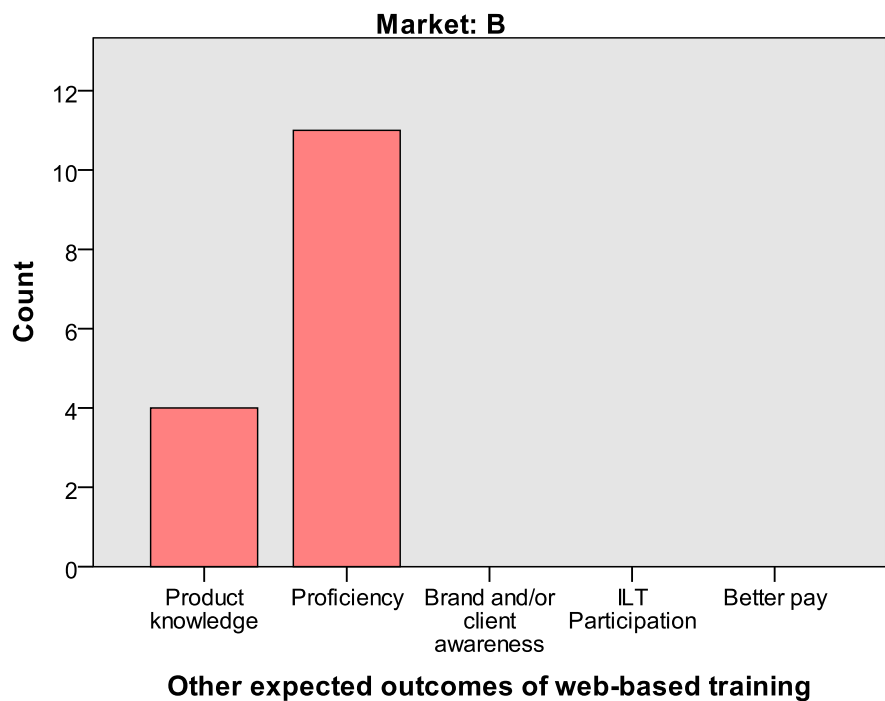


Figure 6.4: Other expected outcomes from the web-based trainings in market B.

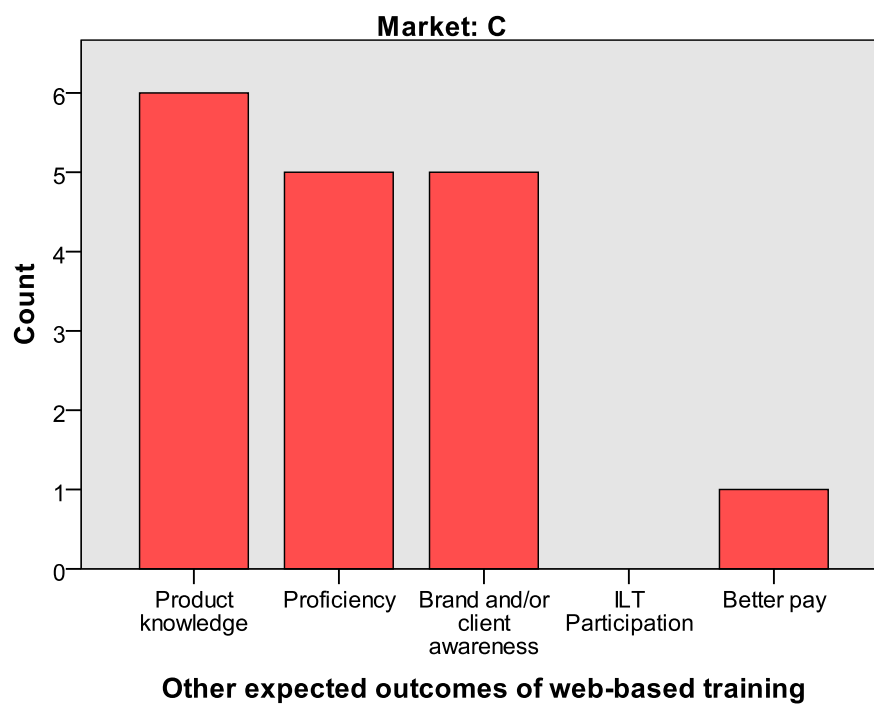


Figure 6.5: Other expected outcomes from the web-based trainings in market C.

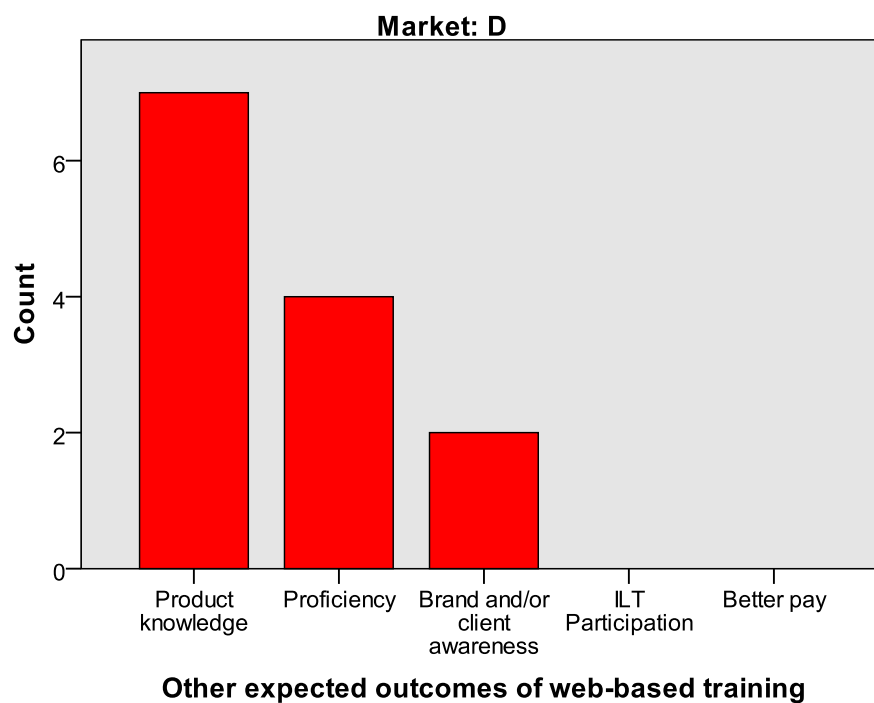


Figure 6.6: Other expected outcomes from the web-based trainings in market D.

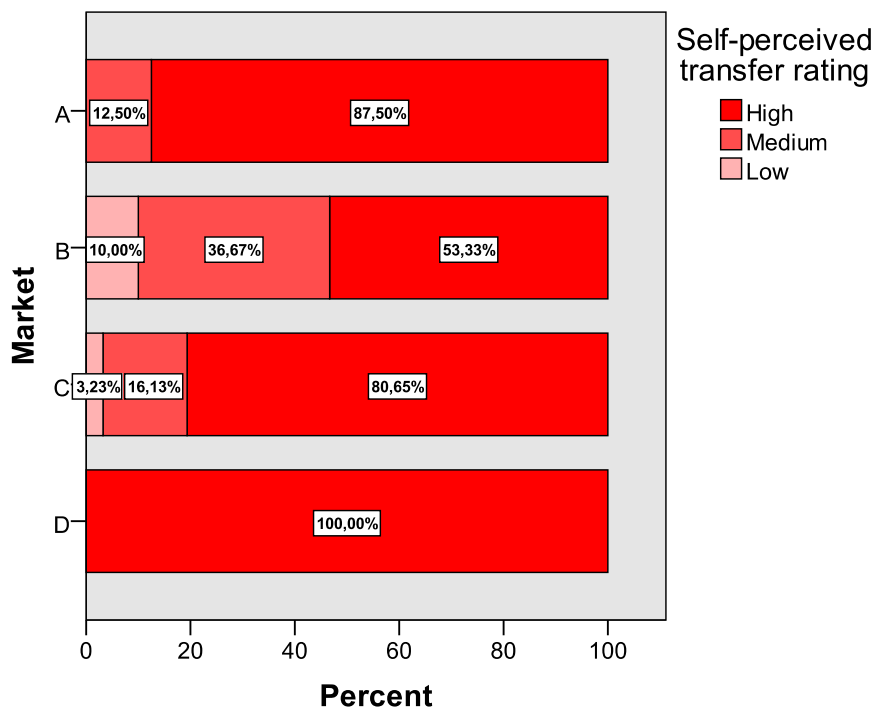


Figure 6.7: Figure displaying self-perceived training transfer rating divided by market. Ratings have been categorized into three different categories.

increased proficiency. Responses categorized as increased product knowledge was for instance “better understanding of features and benefits”. Examples of responses labeled as proficiency were “confidence” and “selling tips”. In market B, proficiency was the most commonly noted outcome, followed by product knowledge. Only one respondent from market B, expressed that he or she expected better pay by participating in the web-based trainings. Another outcome that only one respondent listed, in market A, was “involvement in hands-on training”.

6.1.3 Market differences on self-perceived training transfer rating

The market differences in self-perceived training transfer were analyzed using a cross table and the statistical significance of the results was assessed using Fisher’s exact test. The cross table generated by this data can be found in table H.3, and the information contained in that table is also represented in figure 6.7.

The data on sales consultants’ self-perceived training transfer ratings were recoded using the process described in section 5.2.4.1. Fisher’s exact test showed that there were statistically significant differences between the four markets regarding how sales consultants had rated their self-perceived transfer ($p < 0.05$). Market A and D stood out as the markets where sales consultants had the highest rates of self-perceived training transfer. These were the same markets that accounted for less comprehensive training plans. Another thing that stood out was how the responses

from market B were distributed. Market B had a more even distribution of ratings across the three categories (low, medium and high) in contrast to the other markets, where the majority of the sales consultants rated their transfer as high.

6.2 Results from the interviews

In this section, results originating from the interviews with trainers from the four markets and with a representative from Retail Competence Development will be presented. First, the market characteristics of the four chosen markets will be described. Section 6.2.2 contains the interviewees descriptions of their markets training plan for the sales consultants on the all-new XC90. The third section describes the interviewees perceptions on what different stakeholders expected from the four chosen web-based trainings.

6.2.1 Background information

Some of the data collected was more focused on providing a background to the markets that were studied. This data was not directly connected to a research question, but was seen as important in order to be able to interpret both interview and survey results.

6.2.1.1 Market characteristics

The four markets differed in size both in regard to the number of sales consultants as well as to the number of employees working with training in the corresponding market. The data in this section is based on answers from the interview respondents.

	A	B	C	D
Employed sales consultants	60-90	500-600	1500-1600	100-120
Employees working with training	3	9	11	10

Table 6.2: In this table, the number of sales consultants and employees working with training in the four markets is displayed. It's important to note that these numbers are approximations done by the interviewees. Market C is by far the largest market in regard to the number of employed sales consultants, while market A and D are quite similar in that regard.

A summary of the market characteristics can be seen in table 6.2. Market C was by far the largest in regard to the number of employed sales consultants. This market also had the most trainers, around 11 people. In addition to that, the interviewees from market C also noted that the number of employees involved in the training process sometimes exceeded this depending on which training launch they were currently working with. Market A and D were similar in regard to the number of employed sales consultants in their markets, but they differed in regard to the number of employees working with training. In the interview, the interviewee from

market D explained that “we [employees for the National Sales Company (NSC) in market D] all have a multi functional role in presenting and preparing material”, which might explain why the number of people involved in the training process in market D differed so much from market A.

6.2.1.2 XC90 launch characteristics

To provide further background, all interviewees were asked when the all-new XC90 was launched in their market, what expectations they had on the car itself and if these expectations were met when the car was launched.

The all-new XC90 was released in August 2015 in market A. The interviewee explained that the expectations from the perspective of the NSC were very high, since the first XC90 was a success in their market. However the interviewee perceived the market expectations as low. The outcome of the all-new XC90 landed somewhere in the middle of these two differing perspectives.

In market B, the all-new XC90 arrived to the market around May 2015, but the order books opened somewhere between late January and early February. The interviewee felt that there were high expectations and a real buzz around the new car, and that both customers as well as dealer associates were very excited. In the end, as the interviewee put it, the expectations were thankfully met and the car was a real success.

Market C had their port release around June 2015. There were a lot of expectations on the car, both from the NSC as well as from sales consultants. The interviewees felt that there were both nervousness and a high energy surrounding the car launch. In the interviewees opinion, the car met and exceeded the expectations.

The fourth market, D, had their release in August 2015. The interviewee perceived that there were high expectations on the car from the NSC, partly because there was a need for a new Volvo car in the SUV segment in the market. In hindsight, the interviewee also expressed that he or she felt that the car met the sales expectations.

There were certain similarities between market A and D in regard to both their release dates as well as to their market expectations. Both had release dates in August according to the interviewees, and both interviewees thought that the market expectations were low due to the long lifecycle of the first XC90. In the interviews with representatives from market B and C these opinions were not presented, and the expectations there were perceived to be high both from the NSCs as well as from the customers.

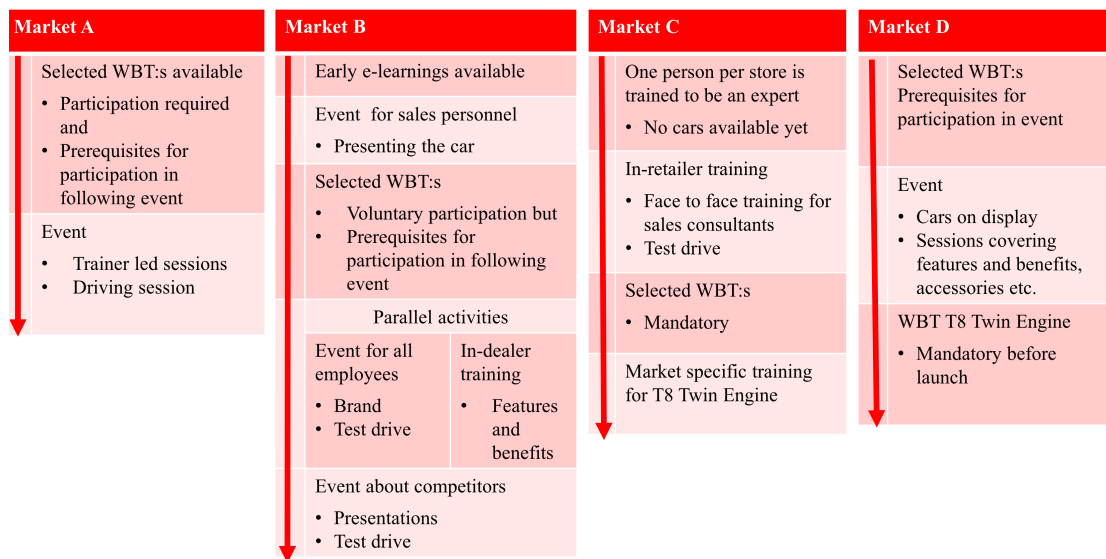


Figure 6.8: This figure visualizes the training plans in market A, B, C and D. As can be seen, there were several different types of training activities in market B and C, while market A and D are quite similar in the way that there was only one central training event carried out in the launch of the all-new XC90.

6.2.2 Sales consultant training on the all-new XC90 in the four markets

The all-new XC90 aimed for a new customer segment, and Retail Competence Development played an important part in the adaptation to this new setting. They provided web-based trainings and hosted a “Train the Trainer”-event, where people involved in the training process in the markets could participate. The event was supposed to be used as a basis when training activities were planned in the markets. An important outcome of the “Train the Trainer” was that it should not only have provided facts about the new car, but also have conveyed the thought behind the new design and features.

When it came to the web-based trainings provided by Retail Competence Development, there was a big focus on what content they should contain. Careful considerations were also made regarding how detailed the content was to be. The “Explaining the All-New XC90” web-based training presented the real people behind the car, even though some might have preferred actors that were native English speakers. Retail Competence Development saw a benefit in providing the real people since they really knew what they were talking about and this shone through, as the Retail Competence Development representative put it in the interview, “it feels more real”. Another important thing was that the courses should not be too long. Retail Competence Development perceived that sales consultants had limited time that could be spent taking web-based training, and therefore the length of the e-learnings were important to consider: “Rather three [courses] of twenty minutes each than one [course] of one hour”. During the interview, the Retail Competence Development representative also stressed the importance of timing when considering

the release of the web-based trainings. The different courses were designed to be implemented at different times, for example the “Selling the All-new Volvo XC90” was to be implemented when the order books opened and “Demonstrating The All-New Volvo XC90” was to be implemented when the car had actually arrived at the stores.

The interview with the Retail Competence Development representative contributed with knowledge about the intended usage of the selected web-based trainings. From the interviews with market representatives, an understanding was provided about the training plans in the four markets and how the web-based trainings were actually used. A high level visualization of the markets’ training plans in the all-new XC90 launch can be seen in figure 6.8. The training plans of the smaller markets, A and D, were similar in the way that the selected web-based trainings (except the “All-new Volvo XC90 T8 Twin Engine” web-based training that was launched after the initial training on the all-new XC90) were prerequisites for participation in a following training event. In these events, there were instructor-led training (ILT), there were driving sessions and/or cars on display. Another training aspect that market A and D had in common was that they did not have in-dealer trainings for sales consultants. The larger markets, B and C, had more comprehensive training plans and different activities that followed each other in a longer sequence. These larger markets’ training plans also included both in-dealer trainings and test-drives.

In market C, the web-based training was made available after the ILT, and the interviewees from this market said that the web-based trainings were used as a way to provide “[...] a little bit of sustaining to remind them the car is coming”. This stood out from the rest of the training plans where at least some of the web-based trainings were prerequisites for participation in ILT.

In all the markets, except market B, the selected web-based trainings were mandatory. As the interviewee from market A noted, “if you leave it to the hands of the consultants, they won’t do it [the web-based training]”. During the interview with the representative from Retail Competence Development, it was also explained that some of the four web-based trainings that were central to this study were measured centrally. This was also reflected by the interviewees in market C, who said that “they [central Volvo Cars] were monitoring [the participation numbers of the web-based trainings] very close”. Therefore, the mandatory participation could both be the result of the thoughts aired by the interviewee from market A, but also a result of pressure from management of the NSC.

6.2.3 Expectations on the web-based trainings in the four markets

A high level visualization of different actors’ expectations on the outcome of the selected web-based trainings can be seen in table 6.3 where the interviewees expectations on web-based training and their perception of other actors’ expectations are shown. When it comes to interviewees’ perceptions of sales managers’ expectations, these varied between markets. The interviewee from market A thought that “they

[sales consultants' managers] would expect that they [sales consultants] would have a reasonable knowledge of the car [all-new XC90]" after participation in web-based training. The interviewee from market B thought that the managers in that market expected the trainings to work as a "magic wand". To explain that, he or she said that "they [sales consultants' managers] have this assumption that if they [sales consultants] spend twenty minutes on a piece of e-learning they're going to be experts [on the topic of the web-based training]". In market C, the interviewee said that "I think some managers are very interested in developing their people and will give them the time, I think other managers just want to show compliance". This corresponds to large variations of sales manager's expectations within the market.

When it comes to incentives for participating in web-based training, also shown in table 6.3, the interviewees from market A, B and D talked about instructor-led trainings as a reward from participation in web-based training. Direct extrinsic incentives were only present in the D market in the form of a tailor-made suit.

The data in table 6.3 can be compared to the survey data on sales consultants outcome expectations on the four web-based trainings in section 6.1.2. When comparing these, one observation is that the interviewees' expectations and perceptions were well in line with the sales consultants' outcome expectations. Both these actors saw product knowledge as the key outcome of web-based training, which should broaden the understanding of the product and provide tools to be able to explain the product to customers.

Expectations	Market A	Market B	Market C	Market D
Trainer/ manager involved in training	To provide a broad understanding of the product	To generate a deeper understanding of the product and to explain how to handle the customers	To provide critical product information	To make sure that the sales consultants were able to really explain the product and that they knew more than a well-informed customer
Sales consultants' managers	To provide a large product knowledge to the sales consultants	That the sales consultants would learn very much in a short time, as if WBT:s were "magic wands"	Varying, from the sales consultants to develop to only show compliance in participation	Same as above and that the sales consultants thereby would sell more cars
Sales consultants	To provide a strong introduction to the car	To supplement other information and to tie together knowledge	To provide product information	To provide product information
Incentives	A tailor-made suit and qualification to participate in further training	Qualification to participate in further training	No individual rewards	Qualification to participate in further training and prerequisite to qualify for some awards

Table 6.3: This table shows a high level visualization of the interviewees outcome expectations of web-based training and their perception of other actors' expectations on the four specific web-based trainings that are the focus of this study. The table also accounts for incentives in the markets for participation in web-based training.

7 Discussion

Discussions about this study's answers to the research questions, limitations in the research approach, the survey and the interviews are provided in this chapter. Implications of findings and future research are also presented.

7.1 Research questions

In this section, the answers to the study's four research questions will be described and discussed. They are organized in sections corresponding to each question.

7.1.1 RQ1: What are the factors in web-based training that lead to training transfer from course to job?

The first research question dealt with what factors in web-based training that lead to training transfer. This study focused on assessing if the factors learning, relatability to work life, learner control, time pressure, framing and expected outcomes were related to training transfer, and the data was analyzed using correlation analysis. It is therefore important to note that causality has not been assessed in the performed statistical analysis. In this section, the results from this analysis will be discussed and compared to previous research.

Learning was the factor with the strongest correlation to training transfer ($\rho = 0.681$, $p < 0.001$). That the factor with the strongest correlation with transfer is learning seems natural, since transfer of knowledge or skills should be hard if no learning has occurred during web-based training. Gjers (2015), who used a learning measure similar to the one used in this study, found that learning was the strongest predictor to training transfer. That learning is related to training transfer has also been observed both in Lim, S.-G. Lee, and Nam's (2007) study as well as in Blume et al.'s (2010) meta study. This might justify the assumption that factors affecting learning are of central importance when designing web-based trainings that should lead to training transfer. However, it is not the only factor affecting transfer.

The factor called relatability to work life, which in this study meant trainees' perceptions of how well the training content was adapted and related to their work life, was moderately correlated to transfer ($\rho = 0.536$, $p < 0.001$). This result implies that it is important to make sure that the training content provided in web-based training is perceived as relevant by the target group, and that the content is presented in a way which is perceived as adapted to work life, since relatability ratings positively correlate with transfer ratings. Lim, S.-G. Lee, and Nam (2007) found that task-related content increases transfer performance, which indicates that relatability might be an antecedent of training transfer. That perceived content relevance is moderately correlated to training transfer may not be that surprising, and as one

reviewer said in Alliger et al.'s (1997, p. 352) article, "what we think is useful may correlate with what we use".

Learner control, the trainees' perception of how much control they had over content, pace and sequencing among other things, was found to correlate with training transfer ($\rho = 0.458$, $p < 0.001$). Research where the relationship between these two factors has been assessed has not been found by the authors, and the found learner control studies have been more focused on how learner control affects learning outcomes (e.g. Zhang et al. 2006). Therefore, this finding is of interest in the web-based training transfer field. Further studies should be done in order to test the validity of the self-constructed index used in this study, to check if the observed correlation can be found in other contexts and if learner control is an antecedent of transfer in the context of web-based training.

The only factor assessed in this study which did not correlate with training transfer was time pressure. This finding was surprising to the authors, since time as a factor was frequently given as an answer to the open question about what factors that affected sales consultants' learning in the survey. Time and time pressure were also expressed as possibly affecting learning and transfer during informal conversations with trainers representing different markets. One possible explanation to this might be that the items used to measure time pressure did not measure the aspects of time which both sales consultants and trainers perceived affected learning and transfer performance. Gjers (2015) studied time pressure as an antecedent of training transfer, using the same items from Axtell, Maitlis, and Yearta's (1997) article that were used in this study, and did not find any statistically significant correlation between the two factors either. Therefore, the results regarding time pressure and its relation to training transfer should be studied further.

Training framing which was measured by asking sales consultants to rate how their managers communicated their expectations on the web-based trainings, was found to positively correlate with training transfer ($\rho = 0.451$, $p < 0.001$). Research has previously shown that training framing is a predictor of training motivation, which in turn is a predictor of training transfer and training effectiveness (e.g. Tai 2006). A possible explanation to the result obtained in this study is therefore that how sales consultants' managers frame the training affects how motivated the sales consultants are to both participate and engage themselves in web-based training, which in turn affects how much they transfer from the training to the job. This hypothesized explanation is based both on the observed positive correlation in this study, but also on the fact that causality between motivation and transfer has been observed in previous research.

Motivation is an important factor to consider in the context of training transfer (Gegenfurtner et al. 2009). One dimension of motivation is what incentives there are to participate in training, and what outcomes the training would lead to. In this study, the factor expected outcomes was seen to positively correlate with training transfer ($\rho = 0.505$, $p < 0.001$). It therefore seems like trainees' expectations on outcomes need to be considered when designing and managing web-based training.

Of the two dimensions of expected outcomes, intrinsic outcomes had the highest correlation with transfer ($\rho = 0.507$, $p < 0.001$). This seems to be in line with Maurer, Weiss, and Barbeite's (2003) study, where expected intrinsic outcomes was seen as the most important motivational construct predicting participation in training. This implies that it is important both for managers as well as training developers to create and manage training that leads to more interesting work tasks and that feels beneficial for the trainees. That expected extrinsic outcomes were less correlated with training transfer ($\rho = 0.417$, $p < 0.001$) might be explained by the lack of clear extrinsic rewards from the four web-based trainings included in this study. However, since most sales consultants selling Volvo cars work on provision, increased sales would lead to increased pay which might explain why there is still a positive significant correlation.

In this study, six factors and their relations with training transfer were studied. It is important to note that these included factors are only a few of many factors that in one way or another correlate with training transfer.

7.1.2 RQ2: Are there differences between markets regarding training plan designs?

To answer this research question, interview data was used. The results from the examination of similarities and differences between the markets when it comes to training plans and training activities will be discussed in this section.

Markets A and D were similar in size, they were the smaller markets, and markets B and C were the larger markets (see section 6.2.1.1). It was expected that the smaller markets (A and D) would have similar training plans and that these would be less comprehensive than the training plans of the larger markets (B and C). These expectations were confirmed (see figure 6.8 for a high-level overview of the different markets' training plans). The interview findings show that market A and D resemble each other. Their plans basically consisted of sales consultants participating in web-based trainings and then attending an event. In these events, there were instructor-led sessions, cars on display and/or test drives available.

Market B and C resembled each other in that they both included in-dealer trainings and interviewees from these markets accounted for comprehensive training plans. It was somewhat surprising though, that the training plan of market C had a somewhat smaller extent than B, even though market C is the largest of them.

It was expected that the training plans would show that web-based training were used before different instructor-led sessions. This was expected mostly since the trainees in these cases could come more prepared for the instructor-led sessions and thereby be able to, for example, ask more questions and get more out of the training. That web-based training were implemented before instructor-led was confirmed in markets A, B and D. In these markets, the web-based trainings were used as prerequisites for participation in events that included instructor-led sessions. Mar-

ket C stood out as the one market where the web-based trainings were used after instructor-led trainings. This seems to take away some of the importance of the role the web-based trainings had in the launch of the all-new XC90 in this market, since the instructor-led sessions seemed to have already covered the content of the web-based trainings. One of the two interviewees representing market C said the following regarding participation in web-based training: “For us it was trying to make somebody take a web based course on something they already knew”.

In market C, the interviewees indicated that this market saw a value in the web-based trainings outside the training plan of the launch of the all-new XC90. This other value is suggested to be training for sales consultants that are new on the job. The interviewees in market C accounted for a high turnover rate among sales consultants: “there are people selling the XC90 today that never had any [...] training on it because they’ve missed it.” More support for the idea that the web-based trainings were used differently in market C were the following quotes: “it’s [the web-based training] critical information, especially for someone who is new to the brand or a new sales consultant” and “we rely on those courses to provide basic product information to new people as well”.

The interviewee from market B was the only respondent who said that the web-based trainings were voluntary. Market B was also the market that accounted for the most comprehensive training plan. Maybe, since there were so many other activities going on, this market were sure that all sales consultants would be prepared to sell the new car regardless of attendance on the web-based trainings. It can be noted that even though the web-based trainings were voluntary in this market, they were still prerequisites for participation in a following event.

It is important to note that the data concerning this research question is based on one interview with one or two representatives from each market. This means that in some cases, it might only represent one person’s view and opinion, and it is therefore not certain that it fully represents how the training actually was carried out.

7.1.3 RQ3: What do actors expect from web-based training?

To answer the third research question, both interview and survey data was used. This section will describe what different actors expected from the four specific web-based trainings focused on in this study, and what similarities and differences there were between the four studied markets regarding expectations.

In regard to what different actors expected from the four web-based trainings, the collected data implies that the expectations were similar between both markets as well as actors. The most frequent expected outcome independent of actor was product knowledge and product information. Thus, there seem to be conformity in what trainers expect that the web-based trainings provide to the sales consultants, and what the sales consultants actually perceive that they get out of participation in web-based training. This finding is also in line with the authors perceptions of

their outcomes from participation in the four web-based trainings. As can be seen in the descriptions of the trainings in section 4.2, the trainings were packed with product knowledge, for example trim levels and safety systems.

In both the interview with the representative from market D as well as the interview with the representative from Retail Competence Development, the interviewees also expressed the expectation that the sales consultants would improve their ability to sell cars after participation in the four web-based trainings. Why this was not voiced in the three other interviews might be because the interviewees felt that the goal of competence development leading to better sales was so obvious that it was unnecessary to express, but it might also be because the interviewees felt that improvements in proficiency would be the result of instructor-led training, and not of web-based training. Proficiency was also the second most frequently given expected outcome of the four web-based trainings by sales consultants. This might imply that the four web-based trainings both led to an increased product knowledge, but also to sales consultants who were better and more confident when selling the all-new XC90 to customers.

The actors whose expectations differed the most both between markets as well as between different actors involved in the commercial training process were sales consultants' managers, according to the interviewed trainers from the four markets. In market B, the sales consultants' managers were thought to have too high expectations on what outcomes web-based training would lead to, represented by the notion of web-based training as a "magic wand". On the other hand, the interviewees from market C thought that managers in their market had different expectations dependent on which dealership they were working at. It is important to note that the collected data on managers' expectations were built upon anecdotal reflections from trainers in the four markets, and that this data has not been verified in order to see if the data really reflects managers' opinions. However, a possible explanation for the observed differences might be that sales managers' expectations on web-based training outcomes are highly dependent on how the market training plan looks like, since if web-based training is seen as important by employees working with training this should probably also reflect on how sales consultants' managers view the training. Since the training plans differed between markets, this might explain the sales consultants' managers differing expectations.

There were statistically significant differences between markets in regard to how sales consultants rated their expected extrinsic outcomes. This was seen through Fisher's exact test ($p < 0.05$). A hypothesis to why there were such low ratings in market D is that dealerships in that market are mixed, which means that they sell different brands in the same dealership. Therefore, the sales consultants might not feel that web-based trainings on one car model from one brand directly affects their pay or promotion possibilities. A possible explanation to the low ratings in market B might be that their training plan is most extensive of all the four markets included in this study. Sales consultants in market B might therefore think that web-based training is such a small part in the training process, and that they expect extrinsic outcomes from other modules in that process instead.

That expectations on web-based training seem to be aligned between trainers and sales consultants independent of markets might explain why no statistically significant differences could be observed on sales consultants ratings of expected intrinsic outcomes. Since more or less the same outcomes were expressed independent of market, there is a possibility that they also had the same expectations regarding how much more interesting their work would become after participation, and how much they would develop as persons.

From the collected data, it seems like the main expected outcomes from web-based training were product information and proficiency, which was expressed by all different actors in the training process. There were market differences in how expected extrinsic outcomes were rated, which possibly could be explained by market characteristics, whilst there were no statistically significant differences in expected intrinsic outcome ratings which were predominated by high ratings independent of market.

7.1.4 RQ4: Are there differences between markets regarding self-perceived training transfer results?

To answer this question, mainly ordinal survey data from sales consultants was used. Interview data and qualitative data from the survey have also been added to support the reasoning.

There were statistically significant differences in self-perceived transfer rating between the markets, assessed with Fisher's exact test ($p < 0.05$). The respondents to the survey generally reported high self-perceived training transfer from the selected web-based trainings (see figure 6.7). In the markets, the percentage of respondents that reported their transfer as high ranged from around 75 % up to 100 %. Market A and D were the ones that reported the highest rates of self-perceived training transfer. In market D, all respondents rated their self-perceived training transfer in the "high" category. Market A was not far behind, where no sales consultants rated their transfer as low, and nine out of ten reported their transfer as high. A and D were also the smaller markets of the four, so the small markets reported higher self-perceived training transfer results than the larger markets (B and C).

The market which stood out with the lowest respondent ratings on training transfer was market B, where 10 % of the sales consultants rated their transfer as low. Market B was also the market where the interviewee accounted for the most comprehensive training plan. This suggests that if sales consultants participate in training programs with extensive ILT modules, they will rate their transfer from web-based training lower. This implication seems to be in line with what could also be observed in market C, which also had extensive ILT. As one interviewee from market C said: "You may interview some people here who may not even remember what this [web-based] course is, because there were so many other things going on".

Another thing that might partly explain that market B was the market where respondents rated their transfer as low most frequently was that in this market, the

sales consultants sometimes compared the web-based trainings to “real training” in the answers to the open questions of the survey. For example, one sales consultant expressed that web-based training “cannot replace classroom hands on training” and another sales consultant claimed that he or she “learn better in person and physically”. Maybe, if these sentiments exist in a market, sales consultants might want to accredit the transfer to the training parts that they liked best, namely the ILT. Market B was also the only market where the web-based trainings were voluntary. Perhaps this gave a feeling that they were not that important, and thus made the respondents feel that the web-based training did not contribute as much to their learning and transfer compared to instructor-led modules.

A possible error in the data used to answer this research question can be found in the formulation of the rating question on transfer. The question in the survey was asked as follows: “This part of the survey deals with the impact on your work life from the following web-based trainings” followed by a list of the selected web-based trainings. The respondents were then asked to rate “how much do you [they] perceive that you [they] used or use the following knowledge in your work”. There is a risk that some respondents did not register that the question regarded transfer from the specific web-based trainings and rather thought about what they transferred from the training program on the all-new XC90 as a whole.

Some differences in transfer rating might be caused by cultural differences, and this is something that needs to be noted when interpreting the survey data. That this might have been an issue was recognized in the fact that in market D, all respondents rated their self-perceived training transfer as high. The lack of variance in the sales consultant ratings are somewhat troubling and may mean that people answered as they thought they were expected to, rather than how much they really perceived that they had transferred. This could be an aspect of these kinds of cultural differences between markets.

7.2 Limitations

The choices regarding research approach and how the different data collectors were designed have affected the outcomes of this thesis. Some of these choices and how they could have been done differently will be described in this section.

7.2.1 Research approach

The intention of using an exploratory mixed methodology approach in this study was to both collect quantitative data and analyze it statistically, but also to gather qualitative data which both could support what conclusions that could be drawn from the quantitative analysis as well as to provide a holistic view of sales consultant training in Volvo Cars. In this study the interviews and the survey distribution were done parallel to each other, mostly because of lack of time to use them sequentially.

Therefore, the interviews did not include discussions with the interviewees on the results of the survey data, even though the interviews were seen as a possibility to provide further interpretation of the survey results. If it would have been possible, the interviews would have been used differently. One way that they could have been used would have been to carry them out prior to the survey distribution, as a way to facilitate the survey, or after the survey, to be able to ask trainers what possible explanations they could find to the survey results (Punch 2005, p. 242). Both of these approaches would probably have provided different data than the data collected in this study, which might have provided a better understanding of training transfer in the context of sales consultant training at Volvo Cars.

In this study, respondents' perceptions of their learning and transfer were measured. Therefore, the ratings can not be seen as objective measures of how much they actually transferred or learned. If it would have been possible, triangulation of these measures could have been done in order to collect more representative and objective results. For instance, quiz scores from the four web-based trainings could have been used to be able to collect more data connected to the sales consultants' learning. In regard to transfer, the included sales consultants' managers could have been asked to rate how much they perceived that the sales consultants had transferred. This would probably have strengthened the results, especially regarding the fourth research question on market differences in transfer ratings. This was not carried out in this study, partly because of the time limitations, but also because there were limited possibilities to get in touch with sales consultants' managers.

7.2.2 Survey

In the survey used in this study, respondents were asked to self-rate their perceptions regarding the selected factors and training transfer all at the same time. Blume et al. (2010) investigated how correlations were affected when transfer and context factors were measured at the same time, called same-source/same-measurement-context (SS/SMC) bias. A finding in this meta-analytic review is that "SS/SMC bias consistently inflates the observed relationships between predictors and transfer" Blume et al. (ibid., p. 1082). Because of the time limitations in this study, it was not possible to distribute two instruments. It is important to note however, that this might have inflated the observed correlations.

The response rate was quite low in some of the markets, as an example only 15 % of the respondents in market B fully answered the survey. This should be considered in regards to if the findings are possible to generalize. Incentives, even more reminders and/or that the survey had been framed by the market managers or similar might have improved the response rates. A few respondents stopped responding halfway through the survey. This might imply that the survey could have been designed differently, to be able to motivate the respondents to complete it. There is also a possibility that these partially answered surveys were a result of the sales consultants work environment, where interruptions and distractions seems to be frequent. For

instance, if a customer would have entered the dealership while the consultant took the survey, the potential to sell a car would probably be prioritized over participation in this study.

Mainly due to time limitations, the pre-test respondents of the survey were people outside of the target group. A pre-test of the survey on a sample of the actual target group would probably have added substantial value to the pre-test. The initial test of the statistical analyses, mainly the reliability analysis, would have created results more applicable to the context of sales consultants, which might have led to the possibility to adjust the scales before the survey was implemented instead of afterwards. The four open ended questions might also have been adjusted in order to in a better way differentiate between the meanings of them. The time limitations also meant that the survey needed to be created quickly, and this in turn meant that the literature was not searched as thoroughly as it could have been, for verified scales that measured the factors.

The statistical correlation analysis on the ordinal data only assessed the selected factors' possible correlation with training transfer. It did not test in which way the selected factors were related to training transfer, which meant that no conclusions could be drawn on if the factors were antecedents of transfer, or the opposite. Correlations between other factors, such as between relatability to work life and learner control, were not analyzed in any detail. These correlations were therefore not presented in this thesis, even though they might have provided some interesting findings, since the focus and scope of this study was to look at correlations between chosen factors and transfer.

The item that measured transfer in the survey was formulated as follows: "How much do you perceive that you used or use the following knowledge in your work" and then a list of learning goals followed. There is a risk that it was not clear that the item concerned transfer from the selected web based trainings in particular. This was only stated in a text above the item and may have been missed by respondents. The item that measured transfer can be compared with the one that measured learning. This was formulated as follows: "How much do you perceive that you learned about the following from attending the All-New Volvo XC90 web-based trainings". This might have been a clearer way to communicate that the item regarded the selected web-based trainings.

7.2.3 Interview

The interviews carried out in this study were structured in their nature, with predetermined questions that each interviewee answered. This was mainly done in order to be able to easier compare the responses between markets and actors, which was seen as a way to save time. However, because of the built-in structure of the interview, interesting aspects of the markets and their training might have been missed that would have been identified if a more unstructured and open approach was used. If time would have allowed, a more semi-structured approach would have been used,

which would have provided possibilities to adapt each interview to the respondent in order to be able to “follow up answers given and the stories told by the subject” (Kvale 1996, p. 124).

7.3 Implications of findings

Because of the low response rate, and the exploratory nature of the study, the results might not be generalizable to the whole populations of sales consultants in the four markets. Even so, there are some implications that possibly can be used both by Retail Competence Development when ordering and managing their web-based trainings and by Semcon in future web-based training development projects both for Retail Competence Development as well as for other customers.

All factors except time pressure were seen to positively correlate with training transfer in this study. The factors with the highest correlation were learning, relatability to work life and expected intrinsic outcomes. These findings provide implications for how to design and manage web-based trainings when taking into consideration the factors that were correlated with transfer. Firstly, learning was the factor which correlated the strongest with training transfer, which might imply that web-based trainings should be designed in a way that positively affects trainees’ learning if the goal is to achieve training transfer. This implication is in line with Blume et al. (2010, p. 1096), who wrote “that to the extent that the training program can increase post-training knowledge [...], the more likely trainees will be to transfer the training. This implies that it is important to consider how to achieve effective learning in web-based training environments”. Secondly, the results imply that the content of web-based training needs to feel both relevant and adapted to participating trainees’ work life. If the needs of the target groups of a web-based training can be met, by incorporating feedback from target group interviews in the early stages of the training development for instance, this might lead to a better transfer performance. Thirdly, expected intrinsic outcomes also correlated with training transfer. This implies that it is important that the training programs are designed and framed in a way that helps sales consultants feel that participation in web-based training leads to outcomes such as personal development.

A key finding was that the web-based trainings that were the focus of this study were used in very different ways in the four markets. Most markets used web-based trainings as prerequisites for instructor-led training, while others used it as more of a way to sustain information from instructor-led training. The courses also seemed to be mandatory in some markets, while they seemed to be optional in others. When designing web-based trainings for a global organization like Volvo Cars, it is therefore important to consider that different sites might use trainings in different ways. This implies that the trainings need to be designed in such a way that they can be adapted and used in multiple ways.

Another interesting finding was that expected extrinsic outcome ratings differed

between markets. Two of the markets rated their extrinsic outcome expectations as high, while in two markets the expectations were lower. An increase in extrinsic outcomes for participation in web-based training in those two markets might lead to improved transfer performance. The implication is based on the found results that expected extrinsic outcome rating was correlated with self-perceived transfer, and on previous research which has found that motivation is an antecedent of transfer. This could for instance be done by providing incentives, such as possibilities for promotions or the chance of better pay, from participation in web-based training.

7.4 Future research

The research field of training transfer is well developed. There are several models through which aspects of transfer is researched (e.g. Tai 2006; Gegenfurtner et al. 2009), and different criteria for transfer have been used (Ford and Weissbein 1997) as well as different ways of measuring training transfer. During the literature review phase in this thesis, this complexity was seen and in future research, it seems that a more unified view would be beneficial for example when it comes to comparisons of results.

There is a risk that the important aspects of the time factor were not caught in the measurement in this study since no correlation could be observed even though survey respondents repeatedly mentioned “time” as something that affected their learning from web-based training. In Gjers’s (2015, p. 40) study, employees claimed “that time pressure has a lot of influence on whether new skills are used or not” but even so, no correlation between time pressure and transfer was found. Because of this, and lack of research, it would be interesting if time and its possible relationship with learning and transfer was investigated in future research. To be able to better understand what trainees and trainers mean when describing time as a limiting factor for learning and transfer, an exploratory interview study could be done in order to collect in-depth data on the topic. From that data, it might be possible to suggest a time scale that could be used in future quantitative transfer studies to collect more valid results.

This study indicates that web-based trainings are used in different stages of training programs. It would be interesting to investigate in future research if different usages of web-based training, such as using it as a prerequisite to ILT or as a way to retain information after ILT, affect the outcomes of the training. A recommendation regarding a preferred point of time for web-based trainings to be implemented in training plans would probably be valuable information. An adjacent matter is that this thesis indicates that web-based training is perceived as more useful when it is not surrounded with many other learning activities. It would be interesting to examine this further, and if this is the case, investigate how corporations could take advantage of it.

8 Conclusion

Web-based training has emerged as a popular way to deliver corporate training (Park and Wentling 2007) which provides possibilities to meet the need of rapidly changing global organizations. A common goal for any type of training is to achieve training transfer, which is described by D. L. Kirkpatrick and J. D. Kirkpatrick (2006) as applying skills or knowledge learned from training to the job. As could be seen in the literature review, numerous factors are important to consider when designing and managing web-based training with the goal to achieve a high transfer performance. The results from this study showed that learning, relatability to work life, learner control, training framing and expected outcomes all were positively correlated to trainees' self-perceived training transfer. That time pressure did not show a correlation with transfer was surprising, and should be investigated further.

The contextual data collected suggests that the four web-based trainings that were focused on in this study were used in different ways in the four included markets, which might have affected sales consultants' transfer performance. The expectations on what the web-based trainings would lead to were similar between different actors in the training process generally. However, there were differences between markets in regard to expected extrinsic outcomes, which might imply that some markets could implement more extrinsic incentives which possibly could lead to improved transfer performance. The transfer ratings also differed between markets, which might be connected to how the web-based trainings were used and what attitudes there were in the markets regarding web-based training in general. Finally, this study has provided a brief insight into how web-based training is used in the training of sales consultants at Volvo Cars, but further research needs to be done in order to see what market differences that are associated with training transfer, and how generalizable the results of the study are.

References

1. Alliger, G. M. and Janak, E. M. (1989) A meta-analysis of the relations among training criteria. *Personnel Psychology*, vol. 42, no. 2, pp. 331–342.
2. Alliger, G. M., Tannenbaum, S. I., Bennett Jr, W., Traver, H., and Shotland, A. (1997) A meta-analysis of the relations among training criteria. *Personnel Psychology*, vol. 50, no. 2, pp. 341–358.
3. Axtell, C. M., Maitlis, S., and Yearta, S. K. (1997) Predicting immediate and longer-term transfer of training. *Personnel Review*, vol. 26, no. 3, pp. 201–213.
4. Aydogdu, Y. and Tanrikulu, Z. (2013) Corporate E-Learning Success Model Development by Using Data Mining Methodologies. *Education and Science*, vol. 38, no. 170, pp. 95–111.
5. Baldwin, T. T. and Ford, J. K. (1988) Transfer of Training: A Review and Directions for Future Research. *Personnel Psychology*, vol. 41, no. 1, pp. 63–105.
6. Bhattacharjee, A. (2012) *Social Science Research: Principles, Methods, and Practices*. Second edition. Textbooks Collection. Book 3.
URL: http://scholarcommons.usf.edu/oa_textbooks/3. (2016-05-27).
7. Blume, B. D., Ford, J. K., Baldwin, T. T., and Huang, J. L. (2010) Transfer of Training: A Meta-Analytic Review. *Journal of Management*, vol. 36, no. 4, pp. 1065–1105.
8. Braun, E., Woodley, A., Richardson, J. T., and Leidner, B. (2012) Self-rated competences questionnaires from a design perspective. *Educational Research Review*, vol. 7, no. 1, pp. 1–18.
9. Bryman, A. (1988) *Quantity and Quality in Social Research*. New York: Routledge. [Electronic].
10. Bryman, A. and Bell, E. (2003) *Business research methods*. Oxford: Oxford University Press. [Electronic].
11. Chien, T.-C. (2012) Computer self-efficacy and factors influencing e-learning effectiveness. *European Journal of Training and Development*, vol. 36, no. 7, pp. 670–686.
12. Colquitt, J. A., LePine, J. A., and Noe, R. A. (2000) Toward an Integrative Theory of Training Motivation: A Meta-Analytic Path Analysis of 20 Years of Research. *Journal of Applied Psychology*, vol. 85, no. 5, pp. 678–707.

13. Cortina, J. M. (1993) What Is Coefficient Alpha? An Examination of Theory and Applications. *Journal of Applied Psychology*, vol. 78, no. 1, pp. 98–104.
14. Cronbach, L. J. (1951) Coefficient alpha and the internal structure of tests. *Psychometrika*, vol. 16, no. 3, pp. 297–334.
15. Dahlman, C. (2007) Technology, globalization, and international competitiveness: Challenges for developing countries. In: *Industrial development for the 21st century; sustainable development perspectives*. Ed. by D. of Economic and S. Affairs. New York: United Nations Publications, pp. 29–83.
16. Davis, F. D. (1989) Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information. *MIS Quarterly*, vol. 13, no. 3, pp. 319–340.
17. DeRouin, R. E., Fritzsche, B. A., and Salas, E. (2005) E-Learning in Organizations. *Journal of Management*, vol. 31, no. 6, pp. 920–940.
18. Djurfeldt, G., Larsson, R., and Stjärnhagen, O. (2003) *Statistisk verktyglåda - samhällsvetenskaplig orsaksanalys med kvantitativa metoder*. Lund: Studentlitteratur.
19. Ford, J. K. and Weissbein, D. A. (1997) Transfer of Training: An Updated Review and Analysis. *Performance Improvement Quarterly*, vol. 10, no. 2, pp. 22–41.
20. Gegenfurtner, A., Veermans, K., Festner, D., and Gruber, H. (2009) Motivation to Transfer Training: An Integrative Literature Review. *Human Resource Development Review*, vol. 8, no. 3, pp. 403–423.
21. Gist, M. E. (1987) Self-efficacy: Implications for Organizational Behavior and Human Resource Management. *The Academy of Management Review*, vol. 12, no. 3, pp. 472–485.
22. Gjers, A. C. (2015) *Antecedents of training transfer*. Gothenburg: Chalmers University of Technology. (Master’s thesis in the Department of Applied Information Technology. Division of Engineering Education Research).
23. Gunawardena, C. N., Linder-VanBerschot, J. A., LaPointe, D. K., and Rao, L. (2010) Predictors of Learner Satisfaction and Transfer of Learning in a Corporate Online Education Program. *American Journal of Distance Education*, vol. 24, no. 4, pp. 207–226.
24. Holton III, E. F. (1996) The flawed four-level evaluation model. *Human Resource Development Quarterly*, vol. 7, no. 1, pp. 5–21.
25. Horton, W. (2006) So How is E-Learning Different? In: *Evaluating Training Programs: The Four Levels*. Ed. by D. L. Kirkpatrick and J. D. Kirk-

- patrick. Third edition. San Fransisco: Berett-Koehler Publishers, pp. 29–83. [Electronic].
26. Karlin, B. (2008) *Statistics in a Nutshell*. First edition. Farnham: O'Reilly. [Electronic].
 27. Kirkpatrick, D. L. (1979) Techniques for evaluating training programs. *Training and development journal*, vol. 33, no. 6, pp. 78–92.
 28. Kirkpatrick, D. L. and Kirkpatrick, J. D. (2006) *Evaluating Training Programs: The Four Levels*. Third edition. San Fransisco: Berett-Koehler Publishers. [Electronic].
 29. Kraiger, K., Ford, J. K., and Salas, E. (1993) Application of Cognitive, Skill-Based, and Affective Theories of Learning Outcomes to New Methods of Training Evaluation. *Journal of Applied Psychology*, vol. 78, no. 2, pp. 311–328.
 30. Kvale, S. (1996) *Interviews: An Introduction to Qualitative Research Interviewing*. London: SAGE. [Electronic].
 31. Lim, H., Lee, S.-G., and Nam, K. (2007) Validating E-learning Factors Affecting Training Effectiveness. *International Journal of Information Management*, vol. 27, no. 1, pp. 22–35.
 32. Maurer, T. J., Weiss, E. M., and Barbeite, F. G. (2003) A Model of Involvement in Work-Related Learning and Development Activity: The Effects of Individual, Situational, Motivational, and Age Variables. *Journal of Applied Psychology*, vol. 88, no. 4, pp. 707–724.
 33. Mbarek, R. and Zaddem, F. (2013) The examination of factors affecting e-learning effectiveness. *International Journal of Innovation and Applied Studies*, vol. 2, no. 4, pp. 423–435.
 34. Musa, M. A. and Othman, M. S. (2012) Critical Succes Factor in E-Learning: An Examination of Technology and Student Factors. *International Journal of Advances in Engineering & Technology*, vol. 3, no. 2, pp. 140–148.
 35. Park, J.-H. and Wentling, T. (2007) Factors associated with transfer of training in workplace e-learning. *Journal of Workplace Learning*, vol. 19, no. 5, pp. 311–329.
 36. Pituch, K. A. and Lee, Y.-K. (2006) The influence of system characteristics on e-learning use. *Computers & Education*, vol. 47, no. 2, pp. 222–244.
 37. Punch, K. F. (2005) *Introduction to social research: Quantitative and qualitative approaches*. Second edition. London: SAGE.
 38. Rugg, G. (2007) *Using statistics: A gentle introduction*. New York; Maidenhead, England: McGraw Hill/Open University Press. [Electronic].

39. Selim, H. M. (2007) E-learning critical success factors: an exploratory investigation of student perceptions. *International Journal of Technology Marketing*, vol. 2, no. 2, pp. 157–182.
40. Semcon (2010) *Industry Solutions*. URL: <http://www.semcon.com/en/Industries/>. (2016-02-16).
41. Stacey, M. (1969) *Methods of Social Research*. Oxford: Pergamon Press.
42. Stevens, S. S. (1946) On the Theory of Scales of Measurement. *Science*, vol. 103, no. 2684, pp. 677–680.
43. Streiner, D. L. (2003) Starting at the Beginning: An Introduction to Coefficient Alpha and Internal Consistency. *Journal of Personality Assessment*, vol. 80, no. 1, pp. 99–103.
44. Sun, P.-C., Tsai, R. J., Finger, G., Chen, Y.-Y., and Yeh, D. (2008) What drives a successful e-Learning? An empirical investigation of the critical factors influencing learner satisfaction. *Computers & Education*, vol. 50, no. 4, pp. 1183–1202.
45. Tai, W.-T. (2006) Effects of training framing, general self-efficacy and training motivation on trainees' training effectiveness. *Personnel Review*, vol. 35, no. 1, pp. 51–65.
46. Tavakol, M. and Dennick, R. (2011) Making sense of Cronbach's alpha. *International Journal of Medical Education*, vol. 2, pp. 53–55.
47. Trost, J. (2012) *Enkätboken*. Fourth edition. Lund: Studentlitteratur.
48. Welsh, E. T., Wanberg, C. R., Brown, K. G., and Simmering, M. J. (2003) E-learning: emerging uses, empirical results and future directions. *International Journal of Training and Development*, vol. 7, no. 4, pp. 245–258.
49. Wydra, F. T. (1988) *Learner Controlled Instruction*. Eaglewood Cliffs, NJ: Educational Technology Publications. [Electronic].
50. Zhang, D., Zhou, L., Briggs, R. O., and Nunamaker, J. F. (2006) Instructional video in e-learning: Assessing the impact of interactive video on learning effectiveness. *Information & Management*, vol. 43, no. 1, pp. 15–27.

A Survey items and their origin

Factor	Question/Items	Source or inspiration
Learning	How much do you perceive that you learned about the following from attending the All-New Volvo XC90 web-based trainings: <ol style="list-style-type: none"> 1. The advantages of the T8 Twin Engine 2. A holistic view of designed around you. 3. The IntelliSafe features 4. The Sensus User Interface 5. The climate system 6. The air quality control systems 7. The Sound systems 8. The trim levels 9. The launch accessories 	This way of measuring learning originates from Axtell, Maitlis, and Yearta (1997).
Relatability to work life	To which extent do you agree with the following statements? <ol style="list-style-type: none"> 1. The web-based training content was <i>relevant</i> to my work 2. The web-based training content was <i>adapted</i> to relate to my work 	Developed by the authors.
Learner control	To which extent do you agree with the following statements? <ol style="list-style-type: none"> 1. I could navigate freely between different subjects in the content 2. I could do the web-based trainings in my own pace 3. I could skip content that I already had knowledge on 4. I could see my progress throughout the web-based trainings 5. I could not estimate how much time remained to complete the web-based trainings 6. The quizzes gave me feedback on what subjects I needed to revisit 	Developed by the authors.
Time	To which extent do you agree with the following statements? <ol style="list-style-type: none"> 1. I experienced time pressure throughout the web-based trainings 2. I needed to go through the web-based trainings faster than I wished I had to 3. Once started, I can complete my assigned web-based trainings without disruptions 	The 1:st and 2:nd items originates from Axtell, Maitlis, and Yearta (1997). The items have been modified to fit the context of this master's thesis. The 3:rd item was developed by the authors.
N/A	List up to three other factors that you think affect your learning from web-based trainings.	Developed by the authors.
Training framing	To which extent do you agree with the following statements? <ol style="list-style-type: none"> 1. My supervisor clearly communicated that the web-based trainings would be helpful to my job 2. My supervisor clearly communicated that the web-based trainings would improve my performance at work 3. I felt pressured to complete the web-based trainings 	The 1:st and 2:nd items originates from Tai (2006, p. 56). Modifications have been made for them to fit in the context of this master's thesis. The 3:rd item was developed by the authors.
Expected outcome	To which extent do you agree with the following statements? <ol style="list-style-type: none"> 1. Participation in web-based training will help me get promotions into higher level jobs 2. Better pay are likely to result from my participation in web-based training 3. Web-based trainings are not likely to help me get better pay 4. I am likely to get more stimulating work if I participate in web-based training 5. My participation in web-based training will not make a difference in how interesting my work is 6. I think web-based trainings related to my career are beneficial to me 7. Other rewards are likely to result from my participation in web-based training 	These items originate from Maurer, Weiss, and Barbeite (2003). The items have been modified to fit the context of this master's thesis.
N/A	List up to three other outcomes that you expected from the specific web-based trainings.	Developed by the authors.
Transfer	How much do you perceive that you used or use the following knowledge in your work: <ol style="list-style-type: none"> 1. The advantages of the T8 Twin Engine 2. A holistic view of designed around you. 3. The IntelliSafe features 4. The Sensus User Interface 5. The climate system 6. The air quality control systems 7. The Sound systems 8. The trim levels 9. The launch accessories 	This way of measuring transfer originates from Axtell, Maitlis, and Yearta (1997).
N/A	List up to three positive things related to your learning when using web-based training.	Produced by the authors.
N/A	List up to three negative things related to your learning when using web-based training.	Produced by the authors.

B Survey

Study on web-based training
Introduction
<p>Thank you for participating in this study. Your responses are important! This survey focuses on four particular web-based trainings and what results they have led to in your work life.</p> <p>Since you might have taken these web-based trainings quite some time ago, a brief description of the four courses can be read below to set the scene of the study.</p> <p>Selling the All-new Volvo XC90 (VCC2050) This web-based training provides extensive information on details that are needed in order to sell the XC90 across all the available trim levels. Key features of design, user interface and other options are presented.</p> <p>DEMONSTRATING THE ALL-NEW VOLVO XC90 (VCC2072) This web-based training uses animations to demonstrate functionality and key features to equip sales consultants with information for conversations with customers. Goes into depth on the IntelliSafe system and the Sensus User Interface among other things.</p> <p>Explaining the All-New XC90 (VCC2074) This is a film showing the program manager and the product manager of the new XC90 demonstrating the car and its features. One key outcome from this course is that it provides understanding of functions and features worthwhile to show a potential customer.</p> <p>All-new Volvo XC90 T8 Twin Engine (VCC2089) This web-based training provides the details needed to understand the most important facts concerning the All-new Volvo XC90 T8 Twin engine.</p>

Study on web-based training

Demographics

1. Age

Up to 20 years old

21-30 years old

31-40 years old

41-50 years old

51-60 years old

61 years old or above

☐

☐

☐

☐

☐

☐

2. Gender

Male

Female

Prefer not to answer

☐

☐

☐

3. What national sales company do you work in?

4. How long have you been working with selling Volvo cars?

0-1 years

2-3 years

4-5 years

6-7 years

8-9 years

10 years or above

☐

☐

☐

☐

☐

☐

Study on web-based training					
Learning					
<p>When we talk about web-based training in this survey, we refer to the four following web-based trainings which can be found on Volvo Cars Performance Academy:</p> <ul style="list-style-type: none"> • Selling the All-new Volvo XC90 (VCC2050) • DEMONSTRATING THE ALL-NEW VOLVO XC90 (VCC2072) • Explaining the All-New XC90 (VCC2074) • All-new Volvo XC90 T8 Twin Engine (VCC2089) 					
<p>5. How much do you perceive that you learned about the following from attending the All-New Volvo XC90 web-based trainings:</p>					
	A little				A lot
The advantages of the T8 Twin Engine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A holistic view of "Designed around you"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The IntelliSafe features	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Sensus User Interface	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The climate system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The air quality control systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The sound systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The trim levels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The launch accessories	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Study on web-based training

Design of Web-Based Training

This part of the survey deals with the design of the following web-based trainings:

- Selling the All-new Volvo XC90 (VCC2050)
- DEMONSTRATING THE ALL-NEW VOLVO XC90 (VCC2072)
- Explaining the All-New XC90 (VCC2074)
- All-new Volvo XC90 T8 Twin Engine (VCC2089)

Try to remember the trainings and answer according to your general impression of the four courses weighed together if possible.

6. To which extent do you agree with the following statements?

	I fully disagree	I somewhat disagree	Neutral	I somewhat agree	I fully agree	N/A
The web-based training content was relevant to my work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The web-based training content was adapted to my work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. To which extent do you agree with the following statements?

	I fully disagree	I somewhat disagree	Neutral	I somewhat agree	I fully agree	N/A
I could navigate freely between different subjects in the content	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I could do the web-based trainings in my own pace	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I could skip content that I already had knowledge of	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I could see my progress throughout the web-based trainings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I could not estimate how much time remained to complete the web-based trainings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The quizzes gave me feedback on what subjects I needed to revisit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Study on web-based training

Organizational Factors

This part of the survey deals with organizational factors that you experienced when you took the following web-based trainings:

- *Selling the All-new Volvo XC90 (VCC2050)*
- *DEMONSTRATING THE ALL-NEW VOLVO XC90 (VCC2072)*
- *Explaining the All-New XC90 (VCC2074)*
- *All-new Volvo XC90 T8 Twin Engine (VCC2089)*

If you can't recall the situation at that time, answer according to your current experience of the following factors.

8. To which extent do you agree with the following statements?

	I fully disagree	I somewhat disagree	Neutral	I somewhat agree	I fully agree	N/A
I experienced time pressure throughout the web-based trainings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I needed to go through the web-based trainings faster than I wished I had to	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Once started, I can complete my assigned web-based trainings without disruptions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. List up to three other factors that you think affect your learning from web-based trainings.

10. To which extent do you agree with the following statements?

	I fully disagree	I somewhat disagree	Neutral	I somewhat agree	I fully agree	N/A
My supervisor clearly communicated that the web-based trainings would be helpful to my job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My supervisor clearly communicated that the web-based trainings would improve my performance at work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt pressured to complete the web-based trainings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Study on web-based training						
Expectations						
<p>This part of the survey deals with your expectations on the following web-based trainings:</p> <ul style="list-style-type: none"> • Selling the All-new Volvo XC90 (VCC2050) • DEMONSTRATING THE ALL-NEW VOLVO XC90 (VCC2072) • Explaining the All-New XC90 (VCC2074) • All-new Volvo XC90 T8 Twin Engine (VCC2089) <p>If you can't recall the situation at that time, answer according to your current expectations on web-based training courses from Volvo Cars Performance Academy.</p>						
<p>11. To which extent do you agree with the following statements?</p>						
	I fully disagree	I somewhat disagree	Neutral	I somewhat agree	I fully agree	N/A
Participation in web-based training will help me get promotions into higher level jobs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Better pay are likely to result from my participation in web-based training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Web-based trainings are not likely to help me get better pay	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am likely to get more stimulating work if I participate in web-based training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My participation in web-based training will not make a difference in how interesting my work is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think web-based trainings related to my career are beneficial to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other rewards are likely to result from my participation in web-based training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. List up to three other outcomes that you expected from the specific web-based trainings.

Study on web-based training

Training Effectiveness

This part of the survey deals with the impact on your work life from the following web-based trainings:

- *Selling the All-new Volvo XC90 (VCC2050)*
- *DEMONSTRATING THE ALL-NEW VOLVO XC90 (VCC2072)*
- *Explaining the All-New XC90 (VCC2074)*
- *All-new Volvo XC90 T8 Twin Engine (VCC2089)*

13. How much do you perceive that you used or use the following knowledge in your work:

	A little				A lot
The advantages of the T8 Twin Engine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A holistic view of "Designed around you"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The IntelliSafe features	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Sensus User Interface	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The climate system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The air quality control systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The sound systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The trim levels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The launch accessories	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. List up to three positive things related to your learning when using web-based training.

15. List up to three negative things related to your learning when using web-based training.

C Survey introduction letter

Study on web-based training

Hi,

Our names are Jim Bill and Ida Rosdahl and we are engineering students at Chalmers University of Technology in Gothenburg, Sweden. We are currently writing our master's thesis in cooperation with Eva Andersson at Volvo Car Corporation Retail Competence Development.

The master's thesis aims at learning more about success factors in web-based training in corporate environments, and specifically factors that makes the web-based trainings useful in trainees' work life. To learn about this, a part of the master's thesis will be to collect information through a survey that concerns the web-based training associated with the all-new Volvo XC90 launch.

The survey will take no more than 15 minutes. It will be sent to you because you are a Volvo Cars Sales Consultant in one of four selected markets and have completed the following four web-based trainings: Selling the All-new Volvo XC90 (VCC2050), DEMONSTRATING THE ALL-NEW VOLVO XC90 (VCC2072), Explaining the All-New XC90 (VCC2074) and All-new Volvo XC90 T8 Twin Engine (VCC2089).

All responses will be handled confidentially. The results from the master's thesis will be used as input when creating and managing web-based trainings in the future. The survey will be open from today until [END DATE].

We hope that you find this interesting and that you will answer the questionnaire. It would be greatly appreciated!

Best regards,
Jim Bill and Ida Rosdahl

Master's thesis students at Learning and Leadership at Chalmers University of Technology, Sweden

Contact information:
bjim@student.chalmers.se
idaifa@student.chalmers.se

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Please do not forward this email as its survey link is unique to you.
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D Survey reminder letter

Study on web-based training

Reminder

Hi,

Our names are Jim Bill and Ida Rosdahl and we are currently writing our master's thesis in cooperation with Eva Andersson at Volvo Car Corporation Retail Competence Development. The master's thesis aims at learning more about success factors in web-based training in corporate environments and the results will be used as input when creating and managing web-based trainings in the future.

About a week ago we sent a survey questionnaire and we would greatly appreciate if you responded. Your response is important to us!

The survey will take no more than 15 minutes to answer and all responses will be handled confidentially.

The survey will be open until [END DATE].

Best regards,
Jim Bill and Ida Rosdahl

Contact information:
bjim@student.chalmers.se
idafa@student.chalmers.se

[Begin Survey](#)

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E Second survey reminder letter

Study on web-based training

Last reminder

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This survey will close in two days, and we would greatly appreciate if you responded. Your response is important to us!

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Best regards,
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F Survey items included in analysis

Factor	Items
Learning	How much do you perceive that you learned about the following from attending the All-New Volvo XC90 web-based trainings: <ul style="list-style-type: none"> • The advantages of the T8 Twin Engine • A holistic view of designed around you. • The IntelliSafe features • The Sensus User Interface • The climate system • The air quality control systems • The Sound systems • The trim levels • The launch accessories
Relatability to work life	To which extent do you agree with the following statements? <ul style="list-style-type: none"> • The web-based training content was <i>relevant</i> to my work • The web-based training content was <i>adapted</i> to relate to my work
Learner control	To which extent do you agree with the following statements? <ul style="list-style-type: none"> • I could navigate freely between different subjects in the content • I could skip content that I already had knowledge on • I could see my progress throughout the web-based trainings • The quizzes gave me feedback on what subjects I needed to revisit
Time	To which extent do you agree with the following statements? <ul style="list-style-type: none"> • I experienced time pressure throughout the web-based trainings • I needed to go through the web-based trainings faster than I wished I had to
Training framing	To which extent do you agree with the following statements? <ul style="list-style-type: none"> • My supervisor clearly communicated that the web-based trainings would be helpful to my job • My supervisor clearly communicated that the web-based trainings would improve my performance at work
Expected overall outcome	To which extent do you agree with the following statements? <ul style="list-style-type: none"> • Participation in web-based training will help me get promotions into higher level jobs • Better pay are likely to result from my participation in web-based training • I am likely to get more stimulating work if I participate in web-based training • My participation in web-based training will not make a difference in how interesting my work is • I think web-based trainings related to my career are beneficial to me • Other rewards are likely to result from my participation in web-based training
Expected intrinsic outcome	To which extent do you agree with the following statements? <ul style="list-style-type: none"> • Participation in web-based training will help me get promotions into higher level jobs • Better pay are likely to result from my participation in web-based training
Expected extrinsic outcome	<ul style="list-style-type: none"> • I am likely to get more stimulating work if I participate in web-based training • I think web-based trainings related to my career are beneficial to me • My participation in web-based training will not make a difference in how interesting my work is
Transfer	How much do you perceive that you used or use the following knowledge in your work: <ul style="list-style-type: none"> • The advantages of the T8 Twin Engine • A holistic view of designed around you. • The IntelliSafe features • The Sensus User Interface • The climate system • The air quality control systems • The Sound systems • The trim levels • The launch accessories

G Interview schedule

Interview Schedule

Introduction

We are students from Chalmers University of Technology in Sweden, and we are doing this study to investigate key factors in web-based training that correlates with improved performance in work life. The study is done in collaboration with Eva Andersson, Retail Competence Development at Volvo Cars and will be focused on car sales consultants from four different national markets. Our investigation will mainly be based on a survey distributed to sales consultants. In order to better understand the training process, and specifically the training on the All-New Volvo XC90, we are complementing these surveys with interviews like this one.

One of us will take the role as interviewer, while the other will take notes and complement the main interviewer if something is missed.

The data we collect will only be used for our study. We unfortunately can't guarantee complete anonymity because we only interview one trainer from each market, but we will not publish your name nor any more personal information. You can whenever during our study communicate to us that you don't want to participate, and we will then not use material collected from you in our study. If it's okay with you, we will tape this interview.

Do you have any questions?

Respondent Characteristics

I will start off by asking some questions about you.

What is your job title?

What are your job tasks as [insert title]?

How long have you worked as [insert title] for Volvo Cars?

What is your role in the training process?

Market Characteristics

To be able to interpret the combined results of both this interview as well as the surveys, I will ask you two questions that are related to your market:

How many colleagues do you approximately have that work with training in your market?

Approximately how many car sales consultants selling Volvo cars are there in your market?

XC90 Launch Characteristics

Our study will focus on the launch of the XC90, because it was released quite some time ago and we therefor can see if the sales consultants perceived the web-based trainings as helpful. Therefor I have some questions on your market and the XC90 launch:

At what year and month was the XC90 launched in your market?

What were the sales expectations on the XC90 in your market?

In hindsight, has the XC90 met the market expectations?

XC90 Training Characteristics

Our study is focused on the web-based trainings “Selling the All-new Volvo XC90”, “Explaining the All-New XC90”, “DEMONSTRATING THE ALL-NEW XC90” and “All-new Volvo XC90 T8 Twin Engine”.

“Selling...” was an extensive introduction to the new XC90. “Explaining...” illustrates how to present the car to a customer. “DEMONSTRATING...” describes different functionalities in the car using animations and “All-new...” introduces the T8 Twin Engine. I will now ask you some questions on how the XC90 training was designed, and how the specific web-based trainings were used:

What was your involvement in the training of sales consultants on the XC90 in your market?

What tasks were related to that involvement?

Were there any market specific objectives with the sales consultants training of the XC90?

If so, what were the market specific objectives?

Describe the training plan for the XC90

When was the training carried out?

What learning activities were included in the training plan?

At what stage of the training were the specific web-based trainings used?

How were the specific web-based trainings used in the training?

Why were the specific web-based trainings used in the training?

XC90 WBT Outcome Expectations

One factor that we study is expectations and how they can affect the outcome of a web-based training. Therefor I will ask you some questions around this:

What outcomes were you expecting for the sales consultants from the specific web-based trainings?

What outcomes did you observe for the sales consultants from the specific web-based trainings?

What outcomes do you think that the sales consultants’ managers expected from the specific web-based trainings?

What outcomes do you think that the sales consultants expected from the specific web-based trainings?

What benefits did the trainees receive for taking the specific web-based trainings?

Ending

Summarize key points.

Thank you for taking the time to participating in this study. Your participation will be really helpful to be able to understand and interpret our results. Do you have anything else to add on the topic of web-based training and what results it leads to?

H Cross tables

			Market				
			A	B	C	D	Total
Rated extrinsic outcomes	Low	Count	3	19	8	11	41
		Expected count	4.0	14.8	15.3	6.9	41.0
		% within Market	37.5%	63.3%	25.8%	78.6%	49.4%
	Medium	Count	2	9	14	2	27
		Expected count	2.6	9.8	10.1	4.6	27.0
		% within Market	25.0%	30.0%	45.2%	14.3%	32.5%
	High	Count	3	2	9	1	15
		Expected count	1.4	5.4	5.6	2.5	15.0
		% within Market	37.5%	6.7%	29.0%	7.1%	18.1%
Total		Count	8	30	31	14	83
		Expected Count	8.0	30.0	31.0	14.0	83.0
		% within Market	100%	100%	100%	100%	100%

Table H.1: Cross table displaying market differences on sales consultants' expected extrinsic outcomes. The categories are low(2-4), medium(5-7) and high(8-10).

			Market				
			A	B	C	D	Total
Rated intrinsic outcomes	Low	Count	0	8	3	1	12
		Expected count	1.2	4.3	4.5	2.0	12.0
		% within Market	0.0%	26.7%	9.7%	7.1%	14.5%
	Medium	Count	3	10	7	4	24
		Expected count	2.3	8.7	9.0	4.0	24.0
		% within Market	37.5%	33.3%	22.6%	28.6%	28.9%
	High	Count	5	12	21	9	47
		Expected count	4.5	17.0	17.6	7.9	47.0
		% within Market	62.5%	40.0%	67.7%	64.3%	56.6%
Total		Count	8	30	31	14	83
		Expected Count	8.0	30.0	31.0	14.0	83.0
		% within Market	100%	100%	100%	100%	100%

Table H.2: Cross table displaying market differences on sales consultants' expected intrinsic outcomes. The categories are low (3-6), medium (7-11) and high (12-15).

			Market				
			A	B	C	D	Total
Rated transfer	Low	Count	0	3	1	0	4
		Expected count	0.4	1.4	1.5	0.7	4.0
		% within Market	0.0%	10.0%	3.2%	0.0%	4.8%
	Medium	Count	1	11	5	0	17
		Expected count	1.6	6.1	6.3	2.9	17.0
		% within Market	12.5%	36.7%	16.1%	0.0%	20.5%
	High	Count	7	16	25	14	62
		Expected count	6.0	22.4	23.2	10.5	62.0
		% within Market	87.5%	53.3%	80.6%	100.0%	74.7%
Total		Count	8	30	31	14	83
		Expected Count	8.0	30.0	31.0	14.0	83.0
		% within Market	100%	100%	100%	100%	100%

Table H.3: Cross table displaying market differences on sales consultants' self-perceived training transfer rating. The categories are low (8-20), medium (21-32), high (33-45).