Investigating the post training work environment affect on learning transfer in corporate E-learning (A case study of IKEA IT)

SMMM10- One Year Master's Thesis (15 Credits)

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Spring 2013

ACKNOWLEDGEMENT

I would take an opportunity to thank Jan -Henrik Nilsson for his initial guidance, that helped me to build a structure and direction of the research. Also, a big "Thank You" to my supervisor Su Mi Dahlgaard-Park, for her support and guidance given to me, at the time when I needed it the most. She made all supervising a pleasure, by constantly staying positive and encouraging even when I was exhausted, confused and lost.

Secondly, would like to give thanks from my heart to all the participants who took out their valuable time for me. Without their views, it would not have been possible to complete my research. They were very easy to approach, cooperative and of course communicative. They all explained clearly and discussed their views on the post training environmental constraints and its influence on learning and using knowledge through the E-Learning in their respective departments.

Last but not the least; I would also like to thank the IKEA IT (Delivery) for giving me the opportunity to work in their prestigious department of Process Governance Organization (PGO). Special thanks to Magnus Wetterholt and Per Beremark with whose acceptance I could manage the work in the organization. Special 'thanks 'to Lola Wärn Mohamad for providing valuable information about E-learning on processes, her thoughtful suggestions , information and support has made the work so much easier and smooth

Finally would like to thank my family who understood the importance of my work and supported me, did proof reading and discussed with me, my issues from time to time to successfully complete the thesis.

Helsingborg, August 2013

Parul Bhargava

ABSTRACT

Title: Investigating the post training work environment affect on learning transfer in corporate E-learning (A case study of IKEA IT).

Seminar Date: August 30, 2013

Course: SMMM10 (15 credits)

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Keywords: E-learning transfer, IT process training, Confucius' learning Spiral, work environment factors.

Purpose: The aim of this thesis is to study and achieve deeper understanding on how post training working environment affect E-learning transfer and further to explore how trainees learn IT processes knowledge.

Research Method: The thesis is based on case study design, through exploring qualitatively author has collected data through semi-structured interviews. Analysis is done by coding the transcribed data, and themes are created by identifying categories and analysed through grounded theory method.

Theoretical Background: Theoretical framework provided a guide to understand the post training work environment factor that affects E- learning transfer and motivated to understand the meanings of the data collected. Research by Baldwin & Ford,(1988) and many other researchers have encouraged understanding deeper meaning of learning transfer and the work environment factor in post training scenario. Further to understand how employees learn in an organizational set up, it was rational to understand Confucius, Learning theory.

Empirical Findings: Empirical findings suggested that transfer climate (acceptance climate) plays immense role in technical process knowledge use in IT, in E-learning scenario. Inefficiencies of process mapping, performance of tools affects the use of knowledge to perform and deliver in post E-learning environment. Flexible goal setting has been used by the managers. It may act as cue to use the knowledge. Previous researches shows that feed-back by the

managers have positive influence. In the case author found that feed-back was taken to ensure if co-workers have taken training. Few managers have shown interest and discussed the learning and problems faced by their co workers, but this observation was not expressed by many other interviewees. Recognition such as- giving opportunity to train others and within team recognitions given by managers have been shown to have impact on learning transfer. Co operation from team members was present while solving and discussing the issues faced during application of knowledge. Further to it subject matter experts (colleagues those are expert on certain subjects) was a great support that ensured interviewees that expected problems will be solved. Perceived lack of extensive support in the form of testing in test environment, hands-on practice workshops added to the dissatisfaction to the interviewees.

Conclusions: Author recommends that training transfer issue in post training evaluation can be understood with system approach. The three profound categories - the acceptance climate, organizational support and follow up can be seen as three subsystems integrated and encapsulated within the boundaries of work environment. Systems are bounded by time thus an integrated system approach may lead to better focus to all the three subsystems in the context of training. Author also thinks that in implementing organization wide training programme on a large scale, extent of engagements and commitment by line managers (immediate supervisor) should not be left on their (manager's)disposition. The learning for interviewees is a continuous need and approach. Obsolescence of technology process in IT demands continuous learning effort by employees. As observed in the responses of interviewees.

Research Limitation: This exploratory case study lacks the generalisation of the findings, more over qualitative method of data collection and analysis makes it had to replicate the study

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List of figures and Tables:

1. CHAPTER I –INTRODUCTION

In this chapter background of the thesis will be presented. Author will introduce the purpose and the research questions that will set the direction of this thesis. The research flow describes the sequence of the thesis, which is followed by detailed case description.

While working in sales, I got several opportunities to attend training programs. Coming back to work place from training, always felt that sometimes I was exhibiting and using what I learnt in the training and at other times not, that made me wonder, if it was always me or some factors at the work place which were helping me or hindering the process of putting training(learning) at work. It was quite intriguing as I have seen my own organization spending significant effort on providing different kind of trainings. As understood, changed on-the job behaviour or knowledge level of trainees is certainly the main objective of most corporate training programmes.

After almost a decade I got an opportunity to know little bit more about training transfer. A simple discussion with a friend, on recent surge in use of E-Learning particularly by large corporate, where various kind of knowledge and skills were imparted through training, brought an argument that in post training scenario, work environment might play significant role in transfer. Interest was further developed by reading recent statistics on corporate E learning spending and its expansion not only in compliance trainings (e.g. company policies and procedures) and soft skills (e.g. communication skills, negotiation, problem management etc) but also in IT trainings. (Application and desktop etc)

For the moment, if we see in past and predictably in future more exponential rise in corporate E- learning expenditure will be observed. With increased technology advancements and ever increasing communication technology standards, (3G~4G) technology-led learning is continuing to grow at a phenomenal rate across developed world. According to Global Industry Analysts, by 2010 the world market for e-learning has reached up to US$ 52.6 billion. The US retained its dominance in the corporate e-learning market with a share of over 60%, followed by Europe with a share of less than 15%. (Blain, 2009)

In today's knowledge organizations, Electronic Learning (E-learning) has been widely accepted as a means to transfer tacit knowledge to explicit knowledge. Here few characteristics about E-learning are worth mentioning – its cost effectiveness, geographical coverage, greater learner control in terms of contents adaptability, flexibility and time pacing

(even self control). In recent years, corporations have spent great deal of investment in developing E-learning development tools. IT corporate spending in U.S, has shown upsurge in this direction. A survey conducted by E-learning! (A magazine) included more than 600 organizations which strongly emphasised the development of IT training tools especially in the E-learning segment. The growth of IT training has surged along with compliance training. (Elearning!, 2012). Looking at the historical spending of E-learning and more recent trends on IT training, careful assessment and evaluation of real organizational learning benefits that can be derived from e-training has to be performed. The need of such an evaluation must justify the corporate attention towards imparting training. As a result there had been evaluation of training at variety of levels. The complex and perpetual issue of training evaluation has been studied at various levels (Kirkpatrick, 2006). However in the wake of growing corporate expenditure on E- learning, one way to understand the effectiveness of the training programme is by understanding the E-learning Transfer.

More so evaluation of transfer of corporate E-learning programmes in post training scenario is not widely discussed (Joo, et al., 2011) . "Although E-learning is becoming a dominant delivery method in workplace, learning within various sectors of varying sizes, this quantitative increase has not always guaranteed the quality of training". (Joo, et al., 2011, p. 974) . The learning transfer can be approached by studying the input factors, such as internal trainee's characteristics (efficacy, motivation etc), training design (content complexity, process, and design) and work environment characteristics. (Salas, et al., 2012) .There had been quite an extensive study on learning transfer and factors affecting it but there is a clear lack of any such comprehensive study on E-learning transfer, which makes it difficult to get a holistic view.

1.1 Purpose of the study

With ever increasing use of E-learning as a method of training in the corporate world, E-learning is touted as 'gold standard' of organizational training. (Granger & Levine, 2010). Organizations use E-learning as training method at various instances, such as imparting knowledge, skill building and IT training.

However, very little has been researched on how E-learning transfers at the work place. While considering the issue of transfer, post E-training evaluation can be studied by exploring the factors within work environment which may affect immediate on –the-job application of knowledge and may eventually affect change adaption. *Hence the aim of this thesis is to study and achieve deeper understanding on how post training work environment*

affect E-learning transfer and further to explore how trainees learn Information Technology(IT) process knowledge.

To achieve the purpose, present study is conducted in an IT organization, which has undergone major strategic changes in their way of working. E-learning was a considerable support to provide necessary knowledge, to work in a new and changed work environment. Following questions were conceptualised that needed to be answered, regarding E-learning transfer:

1.2 Research Questions

- Does E- learning transfer at work takes place?
- What are the critical organizational factors in post training that affects E-learning transfer?
- How individual learning takes place in E-learning context*?*

1.3 Scope of the Study

To explore and build in depth understanding, case study design is thought to be a suitable choice. (Stake, 1994). The organization case was chosen, as it has long history of E-learning as a method to impart various other trainings. The organization was approached with an initial understanding that organization consists of various systems, structure processes and of course human resources that learns to survive by adapting the change. So it was important to rationalize and limit the scope of understanding. To fulfil the purpose, IKEA IT was approached, prior contact in the organization helped to gain access to the site. IKEA IT had long history of E-Training. E- Learning was the method used by the organisation to impart technical IT knowledge in order to implement change. Thus to fulfil the aim and also to seek answers to the research questions, the study is limited to the single case. Further availability of respondents from various different departments within IT delivery (E-learning transfer is researched in this department as technical changes were brought in here) helped to limit the scope of the study. The case of the organization is described in later section.

1.4 The Research Flow

The research process of this study is followed by keeping the following logical approach to study and seek answers to the research questions.

Chapter I -Introduction

This section begins with introduction of the thesis, to give the reader an idea about the subject, the scope of the study .Which is followed by detailed description of the case.

Chapter II- Literature Review

This chapter is related to the literature review of learning transfer concept and factors influencing transfer, particularly related to external work environment in post training evaluation. Later author will introduce to the theoretical understanding of nature and process of learning by reviewing Confucius' Learning Spiral.

Chapter III- Research method:

In this chapter author will describe the research design, data collection method and qualitative semi-structured interview details. Later small description of the interviewees and the role theory in the research is presented.

Chapter IV- Empirical Study: Result and analysis of Results

This chapter includes empirical finding from ten interviews expressed in the form of various expression and information in response to three research questions. These findings were analysed by finding theoretical connection with previous researches

Chapter V-Findings and Discussions:

In this part, investigation of E-learning transfer and the work environment factors affecting learning transfer will be discussed. Author will also discuss how employees learn in the context. This chapter contributes the deeper discussion regarding empirical data shared and analysed in the previous chapter.

Chapter VI-Conclusions and Reflections *beginning of an end:*

The conclusive report in this chapter will present recommendations that can help the organization to look back and perform corrective actions. Further it raises issues which affect individual and organization at various levels related to training program, during major and minor changes.

Often research encounters some potential problems, which acts as limitation. The case is focused on a large IT organization- getting access to interviewees and finding E-Learning

documents was a time consuming activity. Such and many other limitations will be described here. Thesis will end with future research recommendations.

In the below segment detail of the case is described.

1.5 The Case of IKEA IT: the role of IT in Group IKEA

IKEA was founded in 1943 by Ingvar Kamprad in Sweden. It has since then grown to become a global furniture retail brand with constant presence on Forbes list of top 50 organizations. Need to change in IKEA IT (A group function of the organization) was driven by the group IKEA's business strategy of growth "Growing IKEA Together 2020". IKEA, expects to increase revenue as much as 85% by 2020, as well as aims at doubling the number of people visiting stores on an annual basis. IKEA plans to generate between €45 billion and €50 billion ($58.8 billion to $65.3 billion) in annual revenue, almost doubling the recent revenue gains and store count to 500 from approximately 300. (The wall Street Journal, 2012)

Such ambitious strategy required certain business capabilities, which are supported by IT capabilities. IT delivery delivers, operate and support information technology in group IKEA. IT services are used in store operations, websites, warehouses, trading offices, product development in other words, is the backbone of information flow in the organization, both internally and externally.

1.5.1 Development of Common IT Process Approach in IKEA IT

'Process approach' refers to a management of interaction of system of various identified IT processes within the organization by creating and understanding a network of those processes. A process makes an organization to run smoothly, plan and forecast demand more accurately in changing environment as against solving the issues and problems as they arise. The process approach as found in group IKEA was embraced by IT delivery.

The IT process[1] deemed as 'delivering processes' (example- Incident management, Change management, generic terms used in ITIL) underwent major strategic change[2]. The broad plan of change included implementation of supplier's capabilities and capacities to achieve stable and quality IT services by structuring common processes and bring maturity in project execution.

[1] IT Processes: In IT services a structured set of activities designed to accomplish a specific Objective which may define policies, guidelines or work instructions and include roles, tools to reliably deliver the output.

[2] Change: The addition, modification or removal of anything that could have an effect on IT services. The scope could include changes to all architectures, processes, tools, metrics and documentation, as well as changes to IT services

IKEA IT adopted common process approach to bring more co-ordination and efficiency between various stakeholders (e.g. outsourced partners, Information Technology demand and Information Technology delivery). The tacit knowledge present in the mental model of employees in a knowledge intensive environment had to be formalized into articulated and standardized processes and practices. To bring greater coordination and communication between different parties (such as Vendors and IKEA governing body) formalized IT processes, task models[3] and enabling tools[4] were identified, upgraded and implemented across different departments.

These IT processes change were aimed to create a structured approach to develop a systemic service mindset, simplification of the structure and a common process platform to deal with the growing IT demand in the organization. The broader objectives were to enhance efficiency, service quality and increase maturity in project execution within IT. The changes were also aimed to utilize supplier capabilities and deepen transparency and smooth functioning with them. The goal is to achieve the above mentioned objectives by 2015.
To use the well defined processes it was important to bring new knowledge and learning. The changes would be helping IT delivery in providing solutions to their end user (The IKEA Group) which were of varying degree, minor to major, introduction of new processes and the tools (Enabling programs that helps to follow process within the system) .These major changes were equally supported by extensive communication network to convey about the new ways of working (WOW)[5].

(Please note: All definitions described in the case are based on ITIL and organization uses these generic terms in its daily operation. Source: (APM Group Ltd.(ITIL), 2007)

1.5.2 E-Learning: A method to support learning of "New Ways of Working"

E-learning was the major backbone, to not only initiate awareness but also provide knowledge and develop skill in the form of technical training modules about individual processes. It also depicted one process relationship with other processes, required to do list, the responsibility matrixes showing the relationship of various roles and responsibilities (RACI model) equally supported by screen shots of tool. Technical details and description of associated new tool, was also provided.

[3] Task Model: Task models are logical descriptions of the activities to be performed in reaching user's goals and is useful for designing, analyzing and evaluating interactive software applications.
[4] Enabling Tool: It automates the workflow of process frameworks (such as ITIL) specific to IT service support.
[5] WOW: Refers to ways of working- term given by the organization for common process approach at IT Delivery.

The design of training had an intention to support self-learning initiative, which is quite well embedded in IKEA culture. E-learning modules were designed to support greater learner control, in terms of content, sequencing and timing which was considered important as a method to bring cognitive and behavioral – affective (learning transfer on the job) outcomes.

The E-learning modules for majority of processes were introduced in the beginning of introduction of change. The target group was all the co-workers (end users of these processes identified as holders of specific role and job titles), line managers of IT delivery division. Subject matter experts and employees from most of the vendor companies were also provided the opportunity to learn through E-training.

The aim of these E- Learning modules was to develop better understanding and knowledge enhancement to bring it in the performance and delivery of various IT delivery processes.

The basic introduction was mostly followed by the process flow which gave varying levels of understanding of the processes itself and its functionality within the team or across different departments. The E- learning modules were timed lessons with the possibility of using it several times and were web based (available only on intra net site of the organization). Process knowledge with purpose and objectives were described. It also provided opportunity to refer detailed work flow diagrams, responsibility and accountability matrix for each processes. The managers were responsible for implementation and monitoring of these E-learning among all co-workers. The E-learning modules were provided before implementation of changes that were implemented in different time frames.

E-learning modules were introduced approximately in September/ October 2012. The E-learning modules were published on the company's intranet site "IKEA Inside". In coming months before the roll out of the changes in different departments, E –learning modules were made available. Secondary analysis of the training modules shows the features of E -learning modules specifically related to new processes were designed to impart detailed IT process knowledge and about new Ways of Working.

Few characteristics worth mentioning are:

- It was interactive .Few of the processes had interactive guide.
- Purpose of the training was well defined and widely communicated. It provided information about how to work with IT process in daily work to enhance efficiency.
- Training was mandatory and was based on processes knowledge (approximately18) and on few tools, where changes were implemented.

- Well defined target group-The noteworthy characteristic was the sheer scale on which training was rolled out. It involved co workers of whole IT delivery, team managers.
- Contents were designed to facilitate knowledge of process and process flow in cross-functionality. Detail description of the purpose, their usability and role was given in each module.
- Pace could be varied, average suggestive time for each process E-learning varied between 30-45 minutes.
- At the end few(4/5) multiple choice questions were put to measure declarative knowledge about underlying concepts and procedural knowledge to evaluate the steps to perform in problem solving
- E- Learning was also supported by few workshops on upgraded tool, open Q and A sessions and availability of Subject Matter Experts (SME – Super Users) to handle queries of coworkers.

Few assumptions within the case taken into consideration before beginning the study:

It is reasonable to assume that "new method anxiety" was not there, as employees at all levels were aware and adept in the using computers and have well developed skills to use E-learning. Another major assumption is that considerable time lapse between the training programmes and actual working. It is considered appropriate to do a post training evaluation after 3 to 6 months once the training has been completed by the trainees.

Having an access inside the company gave the author not only an opportunity to enter in the field of the case, understand the relationships and technical terminology but also fulfilled the purpose of the study.

2 CHAPTER II - LITERATURE REVIEW

The post training events influence, whether trained knowledge/ skill transfer are used on the job. The purpose of this thesis encouraged to find the definition and meaning of learning transfer in E learning. Theoretical framework provided a guide to understand the post training work environment factor that affects E- learning transfer and motivated to understand the meanings of the data collected. Research by Baldwin & Ford,(1988) *and further other researchers have encouraged understanding of deeper meaning of learning transfer and the work environment factor in post training scenario. Further to understand how individual learning takes place regarding process knowledge in an organizational set up, it was rational to understand Confucius, Learning theory.*

Chapter guide – This chapter focuses on

- Defining Learning transfer.
- Understanding of the factors in the work environment that affect learning transfer in general and will take into consideration various research in reference to E- learning transfer.
- Confucius learning spiral as the fundamental approach regarding learning is used to understand the underlying concept of learning.

2.1 Base Framework- Towards defining E- Learning Transfer

The word *training* derived from '*trahere'* means to pull or to draw .The word transfer originates from Latin word '*trāns'* which means across or through and *ferō* or *ferre* which means bear or carry. Thus in literal sense, the word transfer means: to carry across from one situation/ place to another. So training transfer is to pull to cross from one situation to another.

"An adaptable and flexible workforce implies one, which can quickly and willingly apply existing knowledge and skill to new situation" (Tennant, 1999, p. 165). Training is considered positively transferred to the job context and can be said effective, as the degree to which trainees apply the knowledge, skill and behaviour gained during the training to the real job context (Baldwin & Ford, 1988). As a matter of fact it has also been pointed out that learning does transfer at the organizational level and can be seen with different learning

outcomes with changes in knowledge /behaviour, which can be subjective /objective. Particularly behavior outcome i.e. - transfer of knowledge, skills, and/or attitudes from training session to the job and its retention has been mostly cited as the fundamental outcome of the learning in the organization (Grossman & Salas, 2011). Further it is been stated that the goal of the training is to bring relative change in behaviour and cognition to enhance competencies on the job. Learning transfer is the desired and objective of the training program (Salas, et al., 2012) . It is emphasized that 'learning is a multidimensional construct'. (It Include affective, behavioural, and cognitive components) (Kraiger, et al., 1993) . Thus, the question of whether instructional objectives were achieved usually requires multiple measures of different types of outcomes, for example, measures of changes in declarative knowledge (whether trainees now know more), in skilled behaviour (whether trainees are doing things better), and in self-efficacy for transfer (whether there has been a positive affective change) (Tracey, et al., 2001). In the training effectiveness models learning has acquired the central position, learning out comes and retention as uni-dimensional constructs (Kraiger, et al., 1993). Learning alone cannot be sufficient for training effectiveness; the positive transfer of learning to the job actually leads to relevant change in performances (Grossman & Salas, 2011).

Learning transfer is defined as the extent to which learning during training is applied on the job, which can be measured by the concepts of generalisation and maintenance. Positive transfer of learning from a training programme can be ascertained as conditions in which training facilitates the acquisition of a new skill or knowledge and there is increase in ability to get the solution to new problems.

In this regard the conceptual model of transfer process can provide much clear picture of the concept of conditions of transfer and the input factors (Baldwin & Ford, 1988).

The below model (please refer Fig 1) helps to understand the transfer process. The figure 1 describes the transfer process in terms of training input factors, training outcome and conditions of transfer. The input factors broadly define characteristics of trainee, the training design and work –environment characteristics. Training outcomes are defined as the actual learning that occurs during the training program and the retention of that learning after the training programme is completed. The learning and retention has direct effect on conditions of transfer. The condition of transfer includes the concept of generalisation and maintenance (Baldwin & Ford, 1988).

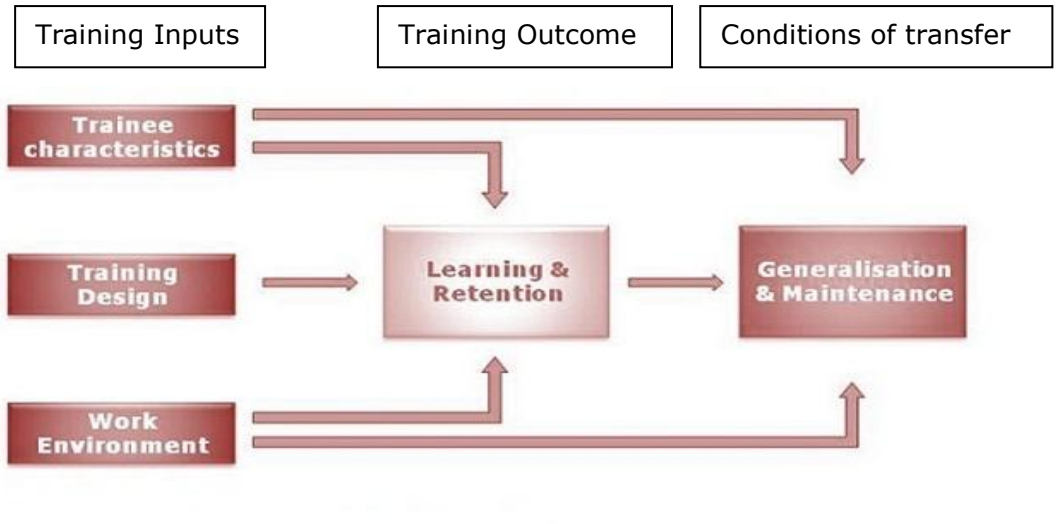

Fig-1 A Model of the Transfer Process: Source (Baldwin & Ford, 1988)

The transfer process model indicates that work environment has direct effect on conditions of transfer. The condition of transfer includes the generalization of learning to the job context and maintenance of learning for considerable time (Baldwin & Ford, 1988). The transfer measure of generalization is the identification of how often and in what situations a trainee could demonstrate the trained knowledge, behaviour and skills. Generalization is related to successful exhibition of desired knowledge, skill and attitude on the job. Successful generalisation of skill is to be based on training objectives and training evaluation criteria. Important component to understand generalization of knowledge, behaviour and skill is the explicit recognition of how often and in what situations a trainee could reasonably be expected to demonstrate the trained behaviour and skills.

Maintenance refers to the time length, for the trained skill and behaviours that continue to be used on the job (Baldwin & Ford, 1988) . The decrease in use of learning on the job could be the result of decrements over the time. It could also be due to decrease in motivation to use the skill owing to the constraints in the work environment. Maintenance can be measured from maintenance curve.

Maintenance curve shown in Figure 2 is a typical learning maintenance curve, that indicates the differential learning exhibited between post training level (A) and pre training level (B) over the period of time. Maintenance curve shown below indicates that there is slow 'tapering off' of a trained skill over the period of time towards the pre training baseline of identified Skill and behaviour outcome, this indicate that there is a positive transfer of training over the period of time but may need some booster session to prevent relapse of the learned skill or

behaviour. This is one of the types of learning maintenance curve. The maintenance curve can have many other variations (Baldwin & Ford, 1988). Both generalisation and Maintenance has been predictor of training transfer.

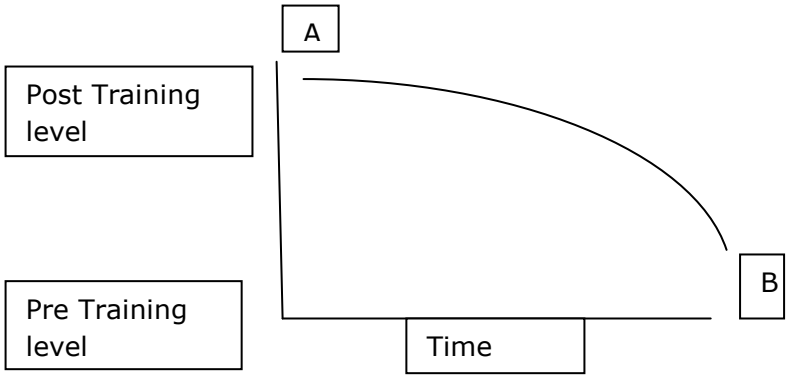

Fig-2 Type of Transfer Maintenance Curves Source – (Baldwin & Ford, 1988)

2.2 Defining Learning Transfer in Organizational E-learning

Computer based technology has laid down the path for a method of implementing organization wide training programmes with greater learner's control. Although if we see the learning outcome in E learning scenario, it is found that when comparing learner controlled computer-based training to non-learner-controlled computer-based training, trainees in the former condition tend to acquire more declarative and procedural knowledge. (Kraiger & Jerden, 2007) and (Granger & Levine, 2010) . Similar results were found for skill-based learning outcomes. Although learning outcome in the form of learning and retention can justify the preference for learner control method for work place learning but it seems to be complex issue promoting transfer of training (Awoniyi & Morgan, 2002)

Joo, et al.,(2011) in their structural model for E-learning transfer, has identified learning transfer as an outcome. Transfer of training is defined as the degree of effective application of knowledge, skill and attitude acquired from the learning (Joo, et al., 2011, p. 975) .

Learning transfer model and recent study in E- learning context has shown that post training work environment characteristics has significant impact on transfer outcome. Next section of theoretical framework discusses work environment characteristics.

2.3 Work environment Characteristics

The role of work environmental characteristics is either facilitating or inhibiting training transfer has been extensively discussed (Goldstein, 1986).The work environment following

training has a significant impact on transfer outcomes. According to Salas, et al., (2012) the effectiveness of any training program is largely dependent on the trainees' ability to use their newly acquired competencies on the job. Work environmental factors determine the trainees' ability to exhibit learned behaviours once they return to the work setting. Encouragement from work environment fosters the use of targeted behaviour (Grossman & Salas, 2011).

Meta analysis by Grossman & Salas, (2011) has not only broadly integrated the critical findings for the factors effecting transfer of learning in organizational setting but also strengthened the conceptual understanding of work environment and its components and future direction for the research in learning transfer. The below table-1 identifies that work environment following training has significant impact on learning transfer. (Grossman & Salas, 2011, p. 108)

Table 1: Continued

What	Comments	Citations
Work environment		
Transfer climate	Situational cues and consequences largely determine whether or not learned competencies are applied in the workplace.	Blume *et al.*, 2010; Burke *et al.*, 2008; Colquitt *et al.*, 2000; Gilpin-Jackson & Bushe, 2007; Kontoghiorghes, 2001; Rouiller & Goldstein, 1993; Salas *et al.*, 2006
Support	Both supervisor and peer support are critical for the transfer of training.	Awoniyi *et al.*, 2002; Blume *et al.*, 2010; Burke & Hutchins, 2007; Chiaburu & Marinova, 2005; Cromwell & Kolb, 2004; Gilpin-Jackson & Bushe, 2007; Hawley & Barnard, 2005; Kontoghiorghes, 2001; Saks & Belcourt, 2006; Salas & Stagl, 2009; Salas *et al.*, 2006; Taylor *et al.*, 2005
Opportunity to perform	For training to successfully transfer, trainees need the resources and opportunities to apply their new skills and abilities to the workplace.	Burke & Hutchins, 2007; Clarke, 2002; Cromwell & Kolb, 2004; Gilpin-Jackson & Bushe, 2007; Lim & Johnson, 2002; Salas *et al.*, 2006
Follow-up	To facilitate transfer, the formal training period should be followed by additional learning opportunities (e.g. after action reviews, feedback, job aids).	Baldwin *et al.*, 2009; Salas & Stagl, 2009; Salas *et al.*, 2006; Velada *et al.*, 2007

Table 1-Key factors for the transfer of training, Source: (Grossman & Salas, 2011)

The Meta analysis of the factors affecting learning transfer by Grossman & Salas, (2011), broadly defines the vastness of the research on the subject. Although above table cannot be

recognised as the updated and comprehensive, but it extends the previous researches on work environmental factors. The critical components of work environment include: Transfer climate, opportunity to perform, support and follow up. These factors which constitute broad environment of the organization are described in detail:

2.3.1 Transfer climate and opportunity to perform

Transfer climate can be defined as practices and procedures used in the organization that employees in the organization feels are important at the work place (Rouiller & Goldstein, 1993). When trainees perceive a positive transfer climate, they tend to apply learned competencies more readily on the job. Characteristics of a positive transfer climate include cues that prompt trainees to use new skills, consequences for the correct use of skills, remediation for the incorrect or lack of use and social support from supervisors and peers through the use of incentives and feedback (Rouiller & Goldstein, 1993).

Marler, et al., (2006) Identified that in technology training, perceived perception of available resources and time to practice new skill, affects learning transfer. Lack of expert help and lack of documentation impacts intention to use the learned skill. Presence of task cues, such as nature of task or job the demand of the jobs and task autonomy not only affects motivation to learn but also influence transfer of learning (Kontoghiorghes, 2001). Further has described the importance of having opportunity to apply new skills in post training work environment, which is a significant predictor of training transfer. Provision of sufficient system and structural support to perform those skills is an important determinant. Studies on transfer have also reviewed several characteristics of the post-training climate that can be paralleled to aspects necessary for the diffusion of innovation in organizations (Gilpin & Bushe, 2007).

2.3.2 Support

Support as one of the input factors is considered by many researchers that include Baldwin & Ford, (1988), Grossman & Salas,(2011), Tannenbaum & Yuki,(1992), Gilpin & Bushe, 2007and others. Further studies by Salas, et al., (2012) and Grossman & Salas, (2011) have taken into consideration the transfer climate, perceived opportunity to perform and follow up in addition to support. Recent body of literature on support, consist of supervisor support, peer support and organizational culture that affects E–learning transfer (Joo, et al., 2011).

2.3.2.1 Supervisor support

Supervisory support has been cited as one of the most critical work environment factor effecting transfer process. Baldwin & Ford, (1988) in his empirical research has cited various authors, who have identified supervisory role as sponsor of the new idea that has impact on

transfer attempts trainees. Supervisor motivates to attend, learn and transfer the skills on the job. Employees look forward to their supervisor's support in goal-setting, encouragement and recognition, reinforcing and modelling the behaviour and skill expected from the employees. Reinforcement, recognition refers to the provision of the reward system for using and demonstrating the desired knowledge and skill. Supervisors' participation in discussions of new learning, involvement in training and provision of positive feedback as forms of support is mostly recognized by trainees as positively influencing the transfer (Grossman & Salas, 2011). According to Locke & Latham,(2002) goal setting can facilitate transfer by directing attention, stimulating action, increasing persistence and prompting trainees to utilize newly acquired knowledge and abilities, however it can have differential effect on performance .To Quote "when people are asked to do their best, they do not do so. This is because do-your-best goals have no external referent, which allows for a wide range of acceptable performance levels, which is not the case when a goal level is specified" (Locke & Latham, 2002, p. 706). Although goal setting can have its own drawback, many authors consider it as detrimental to learning transfer, yet learning transfer can be achieved with understanding of goal setting (Grossman & Salas, 2011). Supervisor also supports learning by providing enough opportunity to use the learned skill. Lack of interest shown by supervisor has deeply impacted the perception about the learning context and contents and in turn has impacted the learning transfer (Gilpin & Bushe, 2007) . Manager's role is a multidimensional construct, which is observed in verbal and non-verbal cues. They can increase interests of subordinates by discussing the content, benefits and set specific goals related to learning and desired outcomes (Salas, et al., 2012).

2.3.2.2 Peer's Support

Support from peers has also shown consistent relationships with transfer (Chiaburu & Marinova, 2005). For instance, previous researches have reported that peer support showed a strong, direct relationship with transfer, as well as an indirect influence through its impact on trainee's motivation to attend a training programme. It was indicated that observing others using trained skills and being able to coach one another greatly facilitates training transfer. Transfer is facilitated when trainees network with peers and share ideas about course content (Gilpin & Bushe, 2007). Joo, et al., (2011) have shown strong relationship between colleagues' help in reinforcing and supporting the use of learning, giving assistance and feedback to E learning transfer. Organizational culture is a significant predictor of learning

satisfaction and transfer in E-learning context which is a key constituent of support in an organization. (Joo, et al., 2011)

2.3.3 Follow up

Grossman & Salas, (2011) noted that completion of one training programme does not mark the end of learning experience. It should be followed by an opportunity to enhance and maintain the learning. Provisions of an opportunity to reflect their learning that can act as debriefs and provide further education. Use of job aids which can be in the form of informational aids, procedural aids and further coaching opportunities. Presence of communities of practice can act as further reinforcement and support. Real world debriefs can uncover obstacles. Access to appropriate information sources and tools that can help in relapse of learned knowledge or skill can enhance, extend and supplement learning experience. Organizations must facilitate further learning opportunity following the completion of training to reinforce and maintenance of learned skill or knowledge.(Grossman & Salas, 2011) and (Baldwin & Ford, 1988).

2.4 Change management through Learning - underlying concept

"According to Argyris, Stata learning transfer issue brought here is to emphasise that "learning has not taken place until it is reflected in changed behaviour"- (1992:94) in (Park Dahlgaard, 2001, p. 253)

Park Dahlgaard, (2001) has cited that even though theoreticians have distinguished between cognitive or behavioural perspective of learning, focusing on change has agreed that whether learning brings cognitive change or behavioural change. Learning can be coupled with change, development and transformation (Park Dahlgaard, 2001, p. 251). Further stated that change can be conscious or unconscious, visible or invisible but certainly learning makes people (in general) creative, change in mental model, extend their capabilities, and they tend to become a part in the generative and adaptive process of life (Park Dahlgaard, 2001, p. 257). Learning makes people change their orientation and movement of mind, extend their creative side, re-perceive the world, and do the things that they have not been able to do previously. These concepts re-affirm that learning brings not only personal change in mental model, but also change behaviour in the context. (Park Dahlgaard, 2001)

Learning can be approached through the explanation and understanding of change\development\transformation\ transaction. They agree that whether there is cognitive or behavioural change, learning is coupled with change. Most of the theorist agrees that learning

in the organization (LO) or organizational Learning (OL) is only possible, when an individual learns (Dahlgaard-Park, 2001).

Learning theories and change has been widely discussed by various authors and theorists under various nomenclatures. Change, transformation and development are an important aspect of learning. The concept of learning or acquiring knowledge is a multi faceted phenomena e.g. people do not just passively receive knowledge but they try to actively fit their own understanding of the situation that has to be approached with wide perspective (Nonaka, 1991). Taking this viewpoint, concept of learning can be approached as: 1) An Individual and social process 2) It includes both concrete and abstract learning and 3) It is both situational and general. With this view point individual learning can be approached by understanding Confucius Learning Spiral as described below:

2.4.1 Confucius learning spiral

Confucius Learning model is based on the teachings and understanding of Confucius. Individual can develop and transform only through continuous learning, education and maintenance of the achieved learning. Therefore it lays emphasis on that, there is a need of sense of urgency in acquiring new knowledge because in knowledge economy, specific knowledge becomes obsolete in short time period. Furthermore apart from acquiring new knowledge it needs to be maintained through practice (Park Dahlgaard, 2001).

Another important aspect that can be regarded as the base of the learning spiral is the importance of combining the function of learning and function of thinking and reflection process. The model takes into account the four aspects that recognise the importance of an ongoing cycle of study –thinking-Reflection-Practice. Practicing aspect is considered as important as acquiring knowledge. It can be understood that learning is demonstrated only when it is practiced through action. This is shown in the figure 3. Confucius learning spiral takes holistic and dynamic view into account and gives high importance to study of both old and new knowledge, before reflection and thinking. It also lays emphasis on Learning and practicing. The four facets interact with each other to give a continuous cycle of learning. Studying, thinking, reflecting and doing practice interacts with each other and act as a component of a puzzle. It considers learning without thinking and thinking without reflection is a wasted effort (Park Dahlgaard, 2001).

The factors that are considered as an important aspect for individual development in the Confucius Learning Model are: Considering learning as life philosophy. Need of balancing

the learning by acquiring emotional, spiritual, cognitive and practical competencies, and balanced interaction between learning, thinking / reflection and practice.

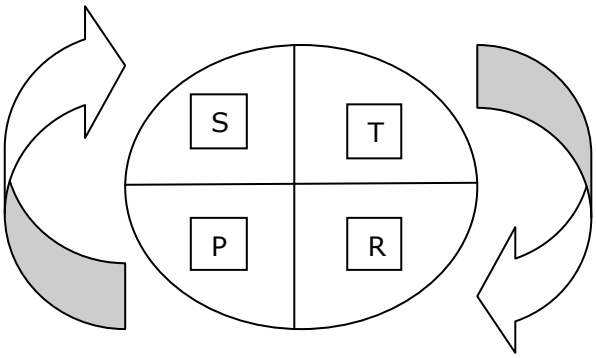

Figure 3: Confucius Learning spiral where, S: Study, T: Thinking, R: Reflection, P: Practice Source: (Park Dahlgaard, 2001, p. 270)

2.5 Summary of the Literature Review

The reason of choosing various theoretical framework and research studies was that though there is wealth of information available regarding post training transfer particularly in behavioural and skill development , yet in the context of major process changes in IT and particular use of E –learning to support new learning is not discussed. The purpose of this thesis is to explore answers to - how post training working environment affect E-learning, does learning transfer at work place and further to explore how trainees learn. Baldwin & Ford, (1988) model is the basis to understand learning transfer in post E- learning environment. The research takes into account one of the input factor that affects learning transfer on the job .The transfer takes into account the generalisation of the learned skill or behaviour and maintenance of the skill over the period of time. Hence the post training evaluation of transfer plays significant role in various context and level.

Several researches on post training work environmental factors provided sound background to study learning transfer. Studies by Grossman & Salas, (2011), Gilpin & Bushe,(2007) and Tannenbaum & Yuki, (1992) provides great insight into work environment factors postulated as the transfer climate related broadly to provision of appropriate condition within work environment, support, perceived opportunities to perform and follow up.

Support from managers comes in the form of reward, recognition and motivation to learn. Application of post training goals and feedbacks plays equally important role in transfer. Peers have been touted as support in, not only providing motivation but also additional knowledge and encouragement .In context of E-learning researches by (Joo, et al., 2011) provides support to this aspect. Follow up is a way of relapse prevention method, where a

learner revert back/regress to the pre training learning if not provided with support. In post training situations, follow up plays important role in maintaining the knowledge or skill learned. Inherent in the transfer model lies learning: there can be no transfer without learning. Learning to change encompasses an iterative cycle of continuous learning. Confucius Learning cycle can help to understand the concept how employees learn particularly in knowledge industry.

3 CHAPTER III - RESEARCH METHOD

To achieve the aim of the research and seek answers to the pertaining research questions, it is important to build a framework, within which thesis could be conducted. Qualitative method in case study design could help fulfil the aim. This chapter will describe the research design, data collection method, qualitative semi-structured interview, the participants and the role theory in the research.

Chapter guide: This chapter focuses on

- The broad framework and approach taken in the research.
- Research design –Reason of adopting case study design
- Relevance of qualitative research approach
- Methods of data collection, analysis approach and their details
- How theories were used in research of present phenomena

3.1 Methodological Framework

Social science research is about development of coherent thoughts based on scientific approach rather than personal opinions or speculations (May, 2011). The research questions in social research not only encourages the author to consider the issue one wants to find out but also guide the fundamental approach to develop methodological framework (Bryman, 2012).

This thesis takes exploratory approach for the research. The exploratory research begins with an intention to understand the E-learning transfer, factors affecting learning transfer in E-learning context and seek answers on how individual learning of IT process knowledge takes place. Exploratory studies are effective to understand the reality of the social world. Exploratory studies are also suitable, when one tries to explore a phenomenon that has in it an element of uncertainty about the ideas that one might discover in the process of research (Singleton & Straits, 2005) .

The author uses in-depth qualitative research strategy to understand the social reality. The methodology takes hermeneutical stance, where author understands that there is variable and personal nature of social construction (Guba & Lincoln, 1994). The reason of choosing in depth qualitative strategy can be explained by the understanding that "Individual

constructions can be elicited and refined only through interaction between and among investigator and respondents" (Guba & Lincoln, 1994, p. 111) .

3.2 Research Design

The case study design is considered for the research by the author. Case Study refers to study of a single case. A case can be a single location, family, an organization, community or a nation, thus can vary in terms of its setting (Bryman, 2012) . The case study design is considered suitable to understand the social reality. According to Stake, it is appropriate to conduct single case study with its particularity and complexity of the context, which means the case represents particular trait or problem and therefore generates interests to probe (Stake, 1978). "Cases are chosen for the extent to which they illuminate and extend understanding of the relationships between constructs" (May, 2011, p. 228).

The case in the thesis represent functional group that used corporate E –learning to impart new knowledge about IT processes in entire division of the group, in order to embrace strategic changes. To understand the complexity, in terms of learning transfer and work environment factors in post training scenario, it was appropriate to choose case study design. So one can say it was interesting and challenging to understand how transfer takes place after recent changes in the organization.

Moreover, the case of IKEA IT was chosen because of various reasons:

a) The organization has long history of using E-learning as a training method across various functional divisions and levels. E-learning was widely used as prime support to impart new IT process knowledge.
b) The E-learning to support change implementation in processes was provided in October 2012.
c) It was appropriate to study post training learning transfer after approximately 3/ 6 months of training (Baldwin & Ford, 1988).
d) Availability of informant to access the case- site and author's own knowledge of ITIL processes prompted to choose the case.

3.3 Qualitative research method

Qualitative method relies mostly on words rather than on numbers in collection and analysis of data, which means it has elements of constructivism and is interpretive. Realities are built through verbal, non verbal or written communication which depends much on sensory and cognitive ability of the author (Guba & Lincoln, 1994). Qualitative research begins by

detailed data collection through approaching the relevant site and subjects. Data was collected by conducting in depth semi –structured interviews. Importance of sampling is not denied in case study design. In present study sample consisted of line managers and their subordinates in line organization referred to as "co-workers" in the department of IT delivery. Next sections describe more in detail about the sampling and process of semi –structured interview in this thesis.

3.3.1 The interviewees

The sample chosen for the interviews was through purposive sampling. The interviewees represented most of the processes for which extensive E-learning support was provided. The interviewees represented two categories- the co-workers and the line managers. Each employee worked on different process in the IT delivery, had worked with organization for more than a year, and had taken E-learning. Both line managers and co workers were chosen irrespective of age, gender or educational background. Line managers and co workers from each department were selected on the basis of suggestions of informant and their representativeness of various departments (application processes) where minor to major changes were introduced. Sample size consisted of four managers and six co-workers, who accepted the interview invitation. No biases regarding age, gender or positions were kept in mind. The sample was representatives of various processes (and departments in IT Delivery) that are followed in IKEA IT delivery and have undertaken the mandatory E-learning. They were contacted through e-mail and were informed about the purpose and context of the study. With their approved day and time interviewees were conducted in the meeting room of the office. Except one interview which was conducted via conference call (Interviewee was located at Dortmund- Germany), all other interviews were conducted in the meeting rooms of Helsingborg and Almhult office. Interviews were taken from 2nd May, 2013 to 22nd May, 2013.

3.3.2 Semi-Structured Interviews

Semi-structured interviews were conducted to collect data. Interview requests were sent individually through e-mails to eighteen employees, from the list of employees working on various processes, which was provided by informant. These employees had undertaken E-learning and represented various departments. After one week, follow up mail was sent. On their requested date and time, interviews were scheduled within the office hours and in the office location. In all ten interviews were conducted, with 55.5 % acceptance rate. Each interview lasted for about 45minutes-1 hour (Detail of Interviews is followed in next section).

In semi-structured interviews though questions are well defined, interviewees are allowed to express but interviewer can take the direction to the level of standardisation and comparability (May, 2011). Before starting the interviews, interviewees were made comfortable and well informed about the purpose and motivation behind the study. Questions were asked with the help of interview guide and responses were electronically recorded. An interview guide was used, to cover the broad topics. Questions were asked on the topic of change, learning transfer, factors within post training environment that helped or hindered and how have they acquired the understanding of new 'Ways of Working'. A little detail is given here: For an example: **"**Please tell, Organization has undergone lot of structural and ways of working changes, In your role or position (title), how this change environment affected your Efficiency, Delivery and creativity". The aim was to understand do they use new knowledge in the change situation. More questions on learning transfer were asked such as – "How did E-learning help you". "Did you find it useful in understanding process changes and use it in your work. Few questions were formed during the course of interview were also taken into consideration to form next question in interview guide. These questions were formed on the basis of cues related to the technical environment that were raised by the interviewees during the interview. Thus overall flow was maintained during the interview. Questions were asked depending upon the kind of departments, roles and nature of work, and by keeping in mind the need of key information related to the research question. Managers were further asked about "How do you encourage your co-workers in using new knowledge". Overall the guide included introducing questions and probing questions to elicit an in –depth and diverse information from the interviews.

Detailed Interview guide is attached in Annexure-1. Interviewees were recorded electronically, on mobile audio recorder and video recorder .Hand written notes were also taken in between hence, it was imperative to transcribe it fully.

3.3.3 Analysis of Qualitative data

As earlier stated, the purpose of this research was to develop deep understanding on how post training working environment affect E-learning and further to explore how trainees learn by qualitative interviews. After gathering rich empirical data, analysis of the data was conducted. Data in qualitative interview consists of various descriptions of experiences, expressions, metaphors and analogies.

Analysis of comprehensive data was based on thematic analysis. After reading the transcribed data thoroughly and deeply, data were analysed by forming certain codes. An index of central theme and sub themes was created. Theme can be described as an identified category that relates to the research questions and are built on code identified in transcripts (Bryman, 2012). Recommendations of Ryan & Bernard, (2003) were taken into consideration while searching for themes during analysis. To analyse transcribed data by looking for repetitions, similarities and differences, metaphors, analogies, a sense of continuity and linkages between different codes while analysing the responses of interviewees (Ryan & Bernard, 2003). Codes were formulated during initial analysis of transcribed data.

3.4 Secondary Data

Secondary data from company's intranet website (IKEA Inside) was studied to understand the processes followed in the organisation. The content and design of E-learning modules were also studied. Newsletter and other communications by the training department related to process change were deeply analysed and further discussed with informant to build deeper understanding. Secondary data was used as background information about the case.

3.5 Role of Theory in the research

Theory in this inductive research is treated both as an input as well as an output. Prior research base developed by earlier researchers that focused on various perspectives in post training transfer , helped to develop new understanding in E-learning context. Previous research formed a strong secondary source of information on the areas of evaluation and post training work environment in general. Limited knowledge available in post training evaluation of corporate E-Learning and work environment particularly related to IT industry called for a discussion on grounded theory. Author decided to develop further theoretical understanding, on the basis of pre-understanding of certain factors. This research will provide deeper understanding of E-learning transfer in large organization where purpose of training is to provide knowledge about processes approach.

The methodology of the thesis has certain limitations- A qualitative research can be evaluated on the basis of trustworthiness and authenticity (Bryman, 2012). Author considers external reliability as foremost limitation of this study as circumstances, context and author's own role makes the study difficult to replicate. Qualitative method of data collection limits the possibility of generalisation of the results. The single case study lacks in its ability of grand generalization and reliability but can be useful in refining and providing some tangent that can be investigated further (Bryman, 2012). Case study design though lacks grand generalisation,

but author tries to bring in 'analytic generalisation' or theoretical elaborations by in-depth analysis and findings. (Yin, 2009). Also author tried to achieve authenticity, as the research results are shared with organisation and informant.

3.6 Summary of Methodology

The exploratory research is based on case study design. Single case study of IKEA IT delivery is studied. Qualitative strategy takes into account the context and emphasizes on words and expressions, thus has encouraged author to collect data through in depth semi-structured interview. Each interview lasted for about 45-60 minutes. Sampling method to collect data was a purposive one. Sampling decision was taken to satisfy the need to achieve aim of the study. Author ensured great deal of variety in resulting sample; hence no bias of age, education, sex and position in organisation was kept. The considerations taken into account were –they should have joined organisation at least a year before the change in the organisation, taken up mandatory E-learning and represented the departments where changes were brought in.

In total ten interviews were conducted during the period of 2-05-13 to 22-05 -13 at office locations of Helsingborg and Almhult. Except one interview all interviews were face to face, one interviewee was located at Dortmund and was contacted through conference call.

4 CHAPTER IV EMPIRICAL STUDY: RESULTS AND ANALYSIS OF RESULTS

This chapter includes empirical finding from ten interviews expressed in the form of various expressions and information related to three research questions, in order to fulfil the aim of the study i.e. To study and achieve deeper understanding on how post training work environment affect E-learning transfer and further to explore how trainees learn IT process knowledge. Findings are divided into various categories broadly describing the themes.

Chapter guide: This chapter focuses on

- Results from qualitative Interview
- Analysis of results

4.1 Qualitative Results- Semi structured Interview

Qualitative interview was conducted to seek answers to the research questions- "*does E learning transfer at work place", "what are the critical organizational factors in post-training that affects the learning transfer*" and "*how individual learning takes place in E-learning context".* For this purpose semi structured interviews were conducted. Ten interviews were conducted; employees were working in IKEA IT delivery for more than one year, working as managers and co-workers. All the interviewees have taken up mandatory E-Learning module related to Ways of Working (ref to WOW).They were located at Helsingborg, Almhult and Dortmund (Germany) offices. Additional information about their work areas is given in (Appendix 2). The results from semi structured interview were an overwhelming rich data input, which were coded according to upcoming concepts and themes. These concepts/ themes were then grouped into various categories.

4.1.1 Result: Does E-learning transfer at the work place?

In response to the first research questions, interviewees expressed their views on how they use the knowledge at work place. One theme that appears is expressed as: Use of knowledge in execution of process, co operation and coordination among various departments. Another contrasting theme that could be generated from the responses of the interviewees is: Process knowledge is hard to execute in daily work. The concept of learning transfer generated the responses are analysed with interpretive understanding of the author.

Use of knowledge: In execution of process, Co-operation and coordination

Almost (9 out of 10) all the interviewees responded that E- learning in present content, structure and context has helped them understand the process and they can use the knowledge while working with new process approach named as 'Ways of Working'(WOW) in the IT Delivery. It has helped them to use it in initial stage of working. Interviewee expressed that E learning to an extent have helped them to know, how can the new 'Ways of Working' be executed within their teams and with cross functional teams. Four co- workers expressed that they use the knowledge gained to certain extent, but not up to the level related to the operational nuances and detailing of their respective functions. Two managers have indicated that they use knowledge to understand, coordinate and communicate at various interacting situations with the outsourced partners, with their co workers and IT demand. (which is an interaction point to asses need of IT solutions for the organization.)

This can be exemplified from the response received from the co workers. Use of knowledge in daily operations can be seen as generalisation of the knowledge gained during training. When asked about how E-learning has helped in bringing efficiency in daily work?

Interviewee 1- "I think..(Pause) E learning was there as screen shots and snapshots and so…on, of the tools. I think that's what I use. That's my experience. Visuals help a lot, especially when it comes to everyday operational thing. Where I (have to) click and where I (have to) enter so on at higher level, I definitely think that's helpful".

Interviewee is a coworker who remembers what he has learned in E-Learning related to the process on which he works. In daily delivery of work related to specific tool which interviewee use, finds E-learning useful, screen display of the actual work in IT helps a lot. By saying 'Higher level' interviewee could mean here that knowledge was useful at broad conceptual level and can be implemented further at macro level of described processes. A transfer of learning from training takes place when knowledge or remembering is gained by the knowledge of how one has solved the problem (situation). It may transfer to the solving of another problem in another context at work place.

Interviewee 9- "I mean very straight forward… I mean without E-Learning it would have created more confusion and few more mistakes for changes. Here they have created quick guides (within E learning modules) which said "This is exactly you should do", that was most helpful to me working with other processes in new 'Ways of Working'.

Interviewee is a co- worker, who meant that without knowledge from E-learning there could have been more delivery and performance issues in new changed process scenario. Knowledge gained from quick guides in the E-Learning modules helped him in executing daily work. It can be interpreted that knowledge gained from E-learning was displayed at the work place, understanding of deep level relationships of cause and effect in one learning situation that can be transferred to another (work place) and generalized while working with other processes. Interviewee uses the knowledge on operational level and finds that knowledge helped him to understand change and helped in effective performance.

In contrast, another theme that appeared was **knowledge gained is hard to put into daily work**

Interviewee 10: "In some senses yes (I do), some of those lessons are still not like [Process Name] that one we use. I have not seen that way, we can work in reality because requirement from [Process Name], different people come to us and I do not see if that way we can work always with what I have learned in E -learning(Thinking) that knowledge we cannot use much from the E-Learning".

Interviewee is a co-worker and asserted that in his role he feels that, for certain processes, knowledge acquired from E-learning is less useful as compared to others; particular reference is to the maturity of the process. For certain processes the knowledge that the co-worker gained about process does not find easy to use in real situation. This is expressed in the phrase 'I have not seen that way we work in reality'. In his role he finds difficult to co-ordinate with another process and people from different departments. Two Co-workers have also strongly asserted that learning acquired from E-learning though gave them 'overview', but in their processes area, they could not use the knowledge effectively. The declarative knowledge (as described in literature review) is not much useful in bringing out procedural knowledge, which can be simply said as, transfer occurs when learning about something (process knowledge) helps in actually doing that thing (applying).

The early definition of positive transfer of learning by Wexley, (1984) and its further development by Baldwin & Ford, (1988), built an understanding that transfer refers to the knowledge and skill acquired in the training courses are applied in the job context. Looking at the responses received from various interviewees in E-Learning context it became evident and two distinct themes appeared as described in previous section. Most of the coworkers and

their managers found that they are able to apply the knowledge in the present job context. This finding can be analyzed with the understanding of learning transfer, defined in previous researches Baldwin & Ford, (1988), Tannenbaum & Yuki, (1992) and Grossman & Salas, (2011). The interviewees response related to the process knowledge to a greater extent supports Joo, et al., (2011) view that learning transfer does take place in E-Learning environment.

The other theme indicates that in certain process areas they could not find knowledge gain as much useful and was difficult to generalize the use in enhancing the performance, efficiency and delivery within the new process approach. In IT organization, operationalization of process knowledge is highly important.

Most of the co-workers asserted that process knowledge was helpful in their daily interaction with their team, their outsourced partners and other cross functional teams but they could not find the knowledge much useful in, in-depth implementation. Few managers have also found the usability of the knowledge acquired in daily coordination, cooperation and broad communication with not only inter departmental interactions but also with external vendors.

4.1.2 **Result :What are the critical organisational factors in post training that affects E learning transfer.**

To understand post-training work environment author identified three constituents' categories namely- Acceptance climate, Support and Post training follow up. Various recurring themes were developed on the basis of responses to questions put forth regarding the broad categories that were identified in the theoretical framework. The themes are discussed and analysed in detail on the basis of interviewees' responses.

4.1.2.1 Acceptance Climate

Acceptance climate in this research connoted to the prevailing situations, practices and procedures used in an organization, particularly during the investigation.

In the post training environment of IT delivery, following themes emerged which describes the readiness of the climate for transfer of learned knowledge or skill, generated themes such as- *Process mapping, performance of the tool and presence of opportunity to perform, goal setting as cue and presence of feedback to enhance transfer.* These themes emerged in response to the questions related to acceptance climate .One of the question for an example-

which factor in the work environment they find hindering their efficiency in using "new Ways of Working"? More questions on this category are given in Interview guide Please refer (Annexure 1).

First theme that appears is:

4.1.2.1.1 Process Mapping (The term is described in the Case Description):

This can be exemplified in the response of one of the co-workers, who asserted that:

Interviewee 1 "Some processes we had for several years (they are) quite formalized other processes we never had before. (So) totally new it does not mean we never worked with it because [process name] it's a new process but of course we have worked with Knowledge in some way or another but never in formalized common way (present process approach) hmm. (Thinking) So the question depends a bit….if it's a mature process or immature process because if I compare may be these are two extreme. I think, there are lot of things to do ahead of us….new process needs to stabilize."

Interviewee is disappointed that new process was not well defined at operational level. Maturity is the term that is connected to the life cycle of a process in IT. Of course interviewee accepts that in his role he had been working with the process and had knowledge, but in less mature (new)process there is a need for improvements and the environment (particular processes) was really not ready or stabilized.

On asking managers, about which factors in the work environment they find as hindrance to efficient working with "new Ways of Working". For an example, one of the manager views that process are not defined well in reality.

Interviewee 5 "work today is one part and now (have to) bridge the gap and to find where we want to be, we need to be at some maturity [6] (maturity of the process), whatever it should be but I see there is no clear role mapping in a way, I do not see it in Clarity[Tool name] . Of course tool comes in that too but I still believe in the process and there is a lot of gap to fill" (Pause… long)

Another interviewee (Manager) also asserts about process maturity that some of the processes have to be more formally aligned to business objectives and strategies. The hesitant view can

[6] Maturity refers to: A measure of the reliability, efficiency and effectiveness of a process, function and organization etc. The most mature processes and functions are formally aligned to business objectives and strategies, and are supported by a framework for continual improvement

be interpreted as manager is not very convinced with the way processes are available to work with. Many processes that have undergone change were not mapped to the roles - what and who to contact while executing the work was not available. Four co- workers working extensively on certain processes, which have undergone change, have expressed that lack of mapping in the processes has led to inefficiencies in their performance. At the time of research other managers, have expressed that processes that has undergone change were not ready enough to bring out efficient performance.

4.1.2.1.2 Slow performing tool (The term is described earlier in the Case Description)

During first interview the need and subject of the propriety tool came as an important element of work process. So all other interviewees were asked additional question that – *'did you find the tool/tools helpful to work on processes'?* In response to it further interviewees also said that availability of the particular tool and performance was not so good, even though process has not undergone major change the performance of the enabling tool was also not effective. Eight of ten interviewees, both managers and co-workers across various departments have expressed their dependency on the tool. They expressed the slow performing/ sub optimal functioning of the tool. This resulted in frustration and inability to use the knowledge. Line managers though not directly working, but have expressed the "slowness" of the tool as one major factor hindering their co workers to work with new ways of working. Two Co workers have also expressed that roles/ processes in their department were not mapped according to the tool. So there were couple of different expressions and problems faced by the respondents in their work area related to the performance of the tool which led to hindrance in using the new learned knowledge efficiently.

To elaborate it in more detail through an example, Author describes the views expressed by one of the co-worker:

Interviewe 9 "I mean the E learning was great, process in my field was not that big change. The big change was actual tool, I think it did not work the way it is supposed to or how we can say, the tool is not working great so it's the tool part, which is the big problem".

Co worker, working within the process where major change was not brought, finds difficult to work with the specific enabling tool.

Another Co-worker gives the example of the technical difficulty that he/ she face while working with the specific tool:

Interviewee 6 "*Simple example when we created the change request* ([7]A change request is a formal proposal for an alteration to some product or system to the agreed-upon deliverables for a project) in the tool and if saved at wrong point the entire change request will freeze [Interviewee has elaborated about the operational problem within the tool]. The tool will freeze no one can release it again task which made it difficult but we learn one thing, the tool did not support. We never learned about it, anywhere earlier"

The co- worker also expresses the frustration over the kind of technical problem, he/ she faces while working with the specific tool within the processes. It is understood that within acceptance climate, changes of varying magnitude were implemented. There were different problems in relation to tool. The tool along with process itself is an important constituent of the technical environment where a trainee would be performing.

Another problem cited by one of the co workers concerning their deliverability by exhibiting acquired knowledge was:

Interviewee 10 "We learn about one process but comeback to work after the E learning ,on so on so date and you cannot use the tool until another date so I learn about [process name] it. But I need to prove them and ….(smiles) so far good, no problem but the tool will be ready by the 28th of January , so there was mismatch, we learned we forgot and then later tool came and we were stuck again"

It can be interpreted from the response from one of the co –worker the disappointment because of not been able to use the knowledge acquired in E-learning, where interviewee described about the tool that was not ready for performance. Two co-workers have also expressed that since tool was not available they could not work with new knowledge and over the period of time they forgot and had to refresh it.

In case of technology training/ procedure training/ process training, technical situations in acceptance climate becomes very important factor that may inhibit or facilitate the use of learned knowledge or skill. As seen in the responses of the interviewees, acceptance climate in the case where trainee would have exhibited new knowledge through job performances are highly influenced by issues related to process mapping and tool performances. The inhibiting situations in processes, slow performance of tool and similar perceived or observed unsupportive situations within the acceptance climate, brought dissatisfaction to the interviewees.

[7] Change Request is a formal proposal for an alteration to some product or system to the agreed-upon deliverables for a project as described in ITIL dictionary.

The important factor within work environment is the transfer climate (Rouiller & Goldstein, 1993), which can be paralleled to acceptance climate in the case. This finding further supports the researches of Rouiller & Goldstein, (1993), Marler, et al., (2006) and Gilpin & Bushe, (2007). They have regarded that transfer climate that is an observed or perceived situation in organization which inhibits and facilitates the transfer of learned knowledge. Particularly in technology training, it has been identified that availability of resources and opportunity to practice after training affects transfer of learning. (Marler, et al., 2006). Perceived availability of resources enhances the transfer and acts as one of the situational cues to transfer learning at work place (Rouiller & Goldstein, 1993)

4.1.2.1.3 Opportunity to perform

All the managers and co workers, along with informant have asserted that after change implementation, they all started working with new system (new Way of Working). Since old system was not available after the change all the interviewee had to work with their newly learned knowledge in most of the processes. There is lot of work-pressure/ dynamicity in the nature of work. The dynamic environment such as IT, one needs to perform and use new knowledge to work under changed conditions. It can be understood that due to dynamic nature at, IT delivery within the case organization ensured that co –workers do have the opportunity to work in new process management approach. All the interviewees have asserted that they were put to work with new system approach, ever since the change was implemented. There were changes in their roles and job design to facilitate and support new process approach.

Previous study has put forth task cues, which concerns the design and nature of job itself (Rouiller & Goldstein, 1993) .Post change in the case, jobs were redesigned to maximise the opportunity to use the new Way of Working. Task cues that prompt the use of new skill and knowledge have high influence on transfer of learning this view is supported in previous studies (Kontoghiorghes, 2001)

4.1.2.1.4 Flexible Goal as a cue

Answering to the question, if manager set some post training goal for their team .One of the manger asserts that:

Interviewee 10 "Yes what we have set for all co workers, the goals per person is most important what is next, each bi monthly they are rated on a scale so they can see how they performed so they do have continuous goals which can change"

The interviewee is a manager who uses a flexible approach to goal setting, to not only encourage learning but also use it as a cue to remind the trained coworker what is to be achieved and delivered as per personal capability. Fixing the goal after learning can be seen more as a motivation towards result orientation. Measuring goal can be interpreted as part of development of the employee and acts as a reminder for continuous application of knowledge on the job. Four interviewees have not directly mentioned the goal setting, however in the perspective as said by managers contract bound agreements and deliveries to be achieved acts as goal cue and a reminder to the application of the learned knowledge about process approach.

One of the managers says that as post training goal is embedded into early development (appraisal) and further defines what they are expected to do. Goal as a cue is used distinctively, but as seen here it is left up to the line manager's discretion to use, which is used flexibly.

Rouiller & Goldstein, (1993) asserts that goals setting acts as a cue to remind the use of the training when they return back to the work. Yet, it is recommended that managers should use goals as cues with caution (Grossman & Salas, 2011). Most of the coworkers said that they do not have any fixed performance goal after learning. Ordóñez, et al.,(2009) have also recommended using goals setting as a cue with caution because it can narrow once focus, shift attitude and can bring in psychological cost. Researchers have called for an optimal goal setting to facilitate learning transfer. But a cautious approach has been suggested by them. Flexible goal setting can be seen as a reminder, a motivation without creating the negative impacts as discussed by the author.

4.1.2.1.5 Feedback to enhance transfer

Managers have ensured that mandatory E-learning was undertaken by the co workers. This can be seen from the excerpts of one of the co worker.

Interviewee 10"I think manager role in this was to facilitate to make sure his resources have taken the education. So he gets this excel sheet,… you should do this, this training and then he followed up that, we have {x}mark that we have performed this and this training. I think it was more like did you do this training yes or no. So not really like did you understand the situations, how should we do it, did it work, have you met the goals? so it was not really deep down".

In response it can be seen that mangers have focused in ensuring that coworkers have taken up mandatory E-learning, but it can be interpreted that co worker feels that it was just a 'formality' . They feel that their managers have not tried to understand what they have learnt, what is more needed. Three other co-workers have also expressed this view about feedback that, managers were given an excel sheet to ensure that co workers have undertaken the E-learning. Co -workers perceive feedback as not just yes and no but desired more than that. Interviewee could not find the use of feedback as consequences of the behavior.

Rouiller & Goldstein,(1993) have described feedback, whether positive or negative acts as a consequence that affect further application of the knowledge. Providing positive information about the goal achievement and use of trained learning or describing negative repercussion of not applying the learned knowledge acts a consequence cue to the application of the behavior or learning

Interview 3 "No (disappointment)it was more did you perform the E learning "yes or no" then it was no more followed up and if we had questions we send to him that we need support[]. That we do not understand the procedures or something but then we never got the answer back".

Co workers asserted that managers have ensured that mandatory training had been taken, but beyond that there was no information about the consequence of the application of the knowledge. Manager had no view to understand that co- worker has understood and he or she can apply it. Further "no response" by the manager is taken as lack of feedback. Two other co-workers have also expressed that no response to the query of co-workers by the manager, also affected further usage of the new knowledge.

Researches of Goldstein, (1986), Grossman & Salas, (2011) and Rouiller & Goldstein, (1993) have also emphasised that feedback acts as a consequence to the applied behaviour or understanding of knowledge and they have emphasised that "No feedback" can be treated as negative consequence, which affects transfer of learned behaviour.

4.1.2.2 Support

The categories include multi faceted Manager Support) and Cooperation among Colleagues.

4.1.2.2.1 Multi- Faceted Manager's support

In the case manager's role in supporting learning transfer has been observed at various situations. Manager have participated in training programme and later supported by taking

feedback and organising within team workshops to support learning related to that particular process. One such response was received, when *asked to give example to the kind of support as a manager they provided to the team...*

One of the interviewees' views can be exemplified here:

Interviewee 2 "I had a workshop after E-learning with my own team first, I showed - here is the process, this is what is needed to implement (so defined for co workers), now you service owner you do this for the payment area, you (another) have to talk with your demand organization, you (one more co worker) have to talk to supplier, talk to production and helpdesk and educate them in this area"

It can be understood that manager has proactively organised workshop and also elaborated within his team how to work with each role in the process approach. Manager has also extended support by helping the team to work with other teams as well. Open encouragement and support to the process approach and further supporting the learning from training by organising workshop indicates positive support in enhancing transfer. Similar view is expressed by another manager. In the above expression, Author interprets that manager not only believed in the process approach, but also acted as a coach to further support the learning transfer of the co –workers. Manager has also empowered co workers to work in process approach by designating resources (ex: 'have to talk to supplier')

The above mentioned aspects of manager's support can be observed in the researches of Baldwin & Ford, (1988) who has strongly suggested about the critical role of managerial support as an essential requirement that has direct effect on learning transfer. The mandatory training both for managers and co-workers ensured greater believability in the approach and training. Gilpin & Bushe, (2007) have supported the view that if the manager have also taken training and believe in the process it affects the learning transfer positively. The finding also supports Salas, et al., (2012) and Awoniyi & Morgan,(2002) views about information sharing, provision of resources and discussion with them how to maximise learning affects on learning transfer.

But when asked to one of the co workers to give an example how he/ she received support from the manager, he/ she asserted:

Interviewee 1 "You know it's open sessions where people have to sign up,[process training name] that day and that time, I can come (go) . But that does not mean that everyone in the

organization was going to those sessions because they were busy with the tasks as well, do not have time to go. 'I need to go in that meeting or I need to work on that task instead', so even though we had those opportunities I could not use it"

Two of the co- workers have also mentioned that they could not attend open sessions, which were complementary as a support to boost E-learning effectiveness. Due to demand of the job, three of the managers have also expressed the need to work and deliver was the necessity post change in the organization and the dynamicity of the work itself exerts pressure to perform than to practice. Here manager could not arrange to provide time to attend complementary training program either due to on time delivery (task completion) pressure or the kind of job workload. Manager plays very important role in the dynamic nature of the work and "business as usual" / "Move back to work" need, do not give enough opportunity to practice to enhance learning. It is essential to redesign workload to ensure greater transfer of learning at the work place (Grossman & Salas, 2011).

Further to understand support from the managers, interviewees were asked what kind motivation they received by their manager. Managers were also asked how do they motivate their team members .Most common theme was by encouragement by giving them opportunity to share their views (in their team), recognising their effort "pat at the back" was the most common expression. To support the above finding Author put forth excerpts from the interviews:

Interviewee 4 "Motivation is more about personal satisfaction that you actually reach with development goals, its more how we bank, if you do good job you get personal recognition, people are motivated by just getting a pat at the backside"

Manager perceives that meaning of motivation for their team member is about their own personal satisfaction and achievement of development goals.

One of the co workers gives high importance of internal recognition received by the manager. Co- worker and cites the reason for it

Interviewee 1 "You must also remember that this internal recognition is also a stepping stones because at [Company's name] you can change jobs 2, 3 or 4 yrs with reasonable pay I mean after 2,3 or 4 yrs you are welcome to do so and where people shift and of course internal recognition gives opportunity I mean that's incentive "..

This is supported by two co workers, that managers recognise their application of knowledge by positive expressions such as 'pat at the back' in use of knowledge to work. It can be understood that recognition gives them (co-worker) an opportunity to develop further, by job rotation in the organization.

Providing recognition in the job as support is one major determinant in manager's role that influence learning transfer is explained by researchers such as Grossman & Salas, (2011), Baldwin & Ford, (1988) and Tannenbaum & Yuki,(1992) and others. Encouragement and recognition by managers can also be observed in the opportunity to train others. To elaborate, below excerpt is exemplified

Interviewee 5 "I had one member in my team, who did quick E –learning and taught others process bit more .Had session with my team so he could speak from our point of view, how would the new process impact our work and that was really good actually because he translated the information put it into some more practical working tool connected to it."

Above views expressed by manager indicates that the manager himself was involved in understanding and discussing with his team member, what more is needed. Managers from other departments have also expressed that they participated in discussion of new modules. Manager considers that by giving opportunity to train other he/she encourages not only to use but to train others and get recognition among team members. It can be observed in above excerpt, that manager views encouragement as a way to recognise co worker. Ability to train the team members is considered as recognition by the co workers.

Supervisor's participation in discussion of new learning involvement, affects learning transfer. Grossman & Salas,(2011) and Gilpin & Bushe, (2007) In certain instances few co workers have expressed that their manager have discussed about use of learning in present job context, the difficulties that they face in their daily operation with them. It is also observed that managerial support is a multi dimensional construct which is supported by researchers (Baldwin & Ford, 1988). Reward (monetary/non monetary) has not been significantly expressed by either manager or by co-workers. However recognising effort of co workers by giving them opportunity to discuss in the session and knowledge sharing amongst team is a form of recognition. Job enrichment/enlargement and opportunity to rotate job within the organization was expressed as encouragement by both co workers and the managers. Both reward and recognition has been expressed as support that can affect transfer.

(Grossman & Salas, 2011) Manager views empowerment as a way to recognise co worker. Ability to train the team members is considered as recognition by the co workers.

4.1.2.2.2 Co-operation among Colleagues/ Peers

Cooperation among colleagues or peer is considered as solving in team and finding solution together: All the co-worker asserted that they helped each other particularly in the team by debriefing, discussing and solving together. Though they all had certain hesitant view as they perceive that due to changes, lot of information was not available. When asked to give an example how the interviewees helped each other:

One of the co-workers asserted that-

Interviewee 6 "Yes, hmm(pause) I mean we were all just waiting and once we were handed over the tool, we then started helping each other, so before this tool we did not interact in between with each other, once we had the tool we helped each other"

The co worker asserted that after E-learning interviewee received help from colleagues, once the tool was ready for performance. It can be interpreted as once the actual work requirement came, interviewee received help from other team members to understand and perform. In post training scenario, peer support in discussing issues and co-operation in solving the issues have shown strong relation with transfer ,which is also visible in the responses of interviewees.

Chiaburu & Marinova,(2005), Grossman & Salas, (2011) and Gilpin & Bushe, (2007) have shown, peer support has strong and direct relationship with learning transfer. To further support this understanding author exemplifies the excerpts as expressed by another co-worker

Interviewee 9 "Idea was given by the manager we had list for each to learn Ways of Working and discuss. Some of the processes were explained and discussed…(smile) we helped each other".

Co worker here means that understanding and using the knowledge at the work place was facilitated by learning and performing as a team. Though the initial idea was given by the manager, yet colleagues helped each other by discussing and coaching. Three other co workers have also expressed that doing well together and taking self responsibility is very much present in their teams, one can also observe in the above mentioned excerpt. During the interview two managers have also come up with similar views with expression such as

‘everybody wants to do well and take self responsibility’ Co-operation through peer support has been cited as the most consistent factor in responses from co-workers. They have discussed and tried to solve the issues that come up by providing guidance and coaching each other. Few of the colleagues have worked together to form quick guide, to help other colleagues. Managers have also encouraged peer discussion and sharing of ideas.

It has been revealed that, organizational support (both manager support and peer support) has strong and direct affect on E-learning transfer. (Joo, et al., 2011)

Previous study has supported that coaching by peers and observing each other performing facilitate learning transfer. (Gilpin & Bushe, 2007)

Another way of peer support in formal setting was observed by the presence of Subject Matter experts. It was mentioned by most of the interviewees during interview that presences of subject matter experts have helped in bringing effectiveness in application of process knowledge.

One of the interviewee says:

Interviewee 1 “When we were stuck with some query in tool or processes, we had a chance to contact and refer our issues to Super users, (SMEs) who were available most of the time to support and provide solution to it. So, to say it was helpful during actual working with tool. ”

It can be interpreted that co-worker expresses here that presence of super users – (Those co-workers/ colleagues who, have in depth knowledge or experience and are expert in the particular technology area), were of immense support when the interviewee observed difficulty applying knowledge on the job.

Marler et al, (2006) has described that perceived presence of expert helps in learning transfer. However not much was found in the theoretical frame work in particular reference to E-learning. Presence of super user concept particularly in IT industry and specifically observed in the case supports learning transfer.

4.1.2.3 Post Training Follow-up

All the co worker have expressed strong need for workshops, more open question and answer(Q & As) session, practice sessions to support E learning.

Most of the (Five out of Six co-workers) have expressed that in their departments, no follow up activity was arranged, though they mentioned the presence of reference material and quick guides'. This has been supported by the managers as well.

Interviewee 3 "I do not think they were there for all the processes if we have missed, then I would say missed that opportunity(laugh) but, I cannot really remember, I think it was for the processes that are connected to[particular tool] like [Process Names] that were able to dig more deeper around. But, I have not seen any workshop to support the [Process Name]".

Co –worker asserts that there was need for more workshops after E-learning, though there were few workshops to support learning for some processes, particularly connected to the specific tool. But not all other departments had follow up workshop after E –learning.

Grossman & Salas, (2011) have supported the need of follow –up support because the completion of formal training should not mark the end of learning process. It is observed that there is strong need of follow up efforts after training to help in retention of learning and maintenance of learned knowledge and skill (Salas, et al., 2012)

Views expressed by another interviewee, supports the previous expression of the interviewee:

Interviewee 5 "I think you need more, you need to go to Open session if it has some kind of basis, then you can bring questions to open session, bring up some kind of scenarios, FAQ s and similar to that , they are useful. Here we can have sessions where people find connected to process reality. You can have driving license but you never drove, you never become confident in driving that works with tool also".

Interviewee has also asserted that, support in the form of open session or some kind of reality based training, where there can be possibility of replicating real scenario, may be more helpful. It can be perceived that in Information Technology, interviewee believe that having more practical experience, after learning can enhance performance. However lesser number of follow up activities made interviewees disappointed. This view is expressed by a four other co-worker and two managers.

Other interviewees, both managers and co-workers have expressed that though availability of some quick guides and work flow charts as job aids were helpful.

(Grossman & Salas, 2011), have cited that follow up is an important factor in enhancing and maintaining the desired performance after acquiring knowledge or skill. Availability of

workflow charts, quick user guide and other reference material can decreases mental workload (Salas, et al., 2012) and (Baldwin & Ford, 1988) have asserted that observed job skills learned over the period of time takes downward approach and there is decline in usage of the learned skill or behaviour unless supported by follow- up. Feedback is not only seen as reinforcement but can also be used as a measure to maintain the learning in the training.

One of the Managers has also asserted that:

Interviewee 2 "I get the feedback from them-the team member in the way – hmm (pause) have they taken E-learning related to WOW, if they say yes… I have, I ask control questions take necessary steps, tell him further what I understood from my other co-workers."

Two other managers have also asserted that apart from taking mandatory feedback they have provided support to their team members by debriefing. Debriefing, here can be seen as one way to ensure that, co workers have applied or maintained the trained knowledge, through control questions line managers can show interest, understand the practical problem faced by the coworker. It can be useful in understanding whether co worker have understood the purpose and use the knowledge accordingly. Feedback along with debriefs not only motivates but also acts as reminder of the knowledge or skill Salas, et al., (2012) and Tannenbaum & Yuki, (1992) have recommended the use of feedback and debriefs as a way to ensure follow up .

4.1.3 Results - How individual learning takes place in E-learning context?

To probe further how employees have embraced change, it became pertinent to know how they learn in the context. To receive various views interviewee were asked questions during interview related to the learning.

4.1.3.1 Learning by doing

The major theme that was derived from analysis of interviewees brought forward some commonality of views, expression and learning experience particularly related to new Ways of Working (WOW) in the case.

To seek answer to the research question, Author asked interviewees '*what approach you took to learn about new processes' and were further asked to 'describe it in little detail'*

In response to the question most of the co-workers responded that they learnt by reading about the processes and since E-learning was available so that was the starting step they took. Further after reading and studying processes, the next step they took was to find out the

difference between old and new process, their purpose and implications of the changes in the new process. But they do not feel that learning is complete unless, it is proven practically. Practically trying means, unless they worked with process and tool, they consider that learning is not sufficiently achieved. When asked further *'if you find some problem working practically, what do they do'.* In response to this most of them said that they try to find out the reason(think)and try to find out the solution to the problem by either trying themselves or discussing with others in their team .To illustrate their learning approach, below excerpts depicts their response:

Interviewee 3 "You need to find out before you can do something with these processes, I do not really would like to just jump to conclusion and start working and later find out which will be problematic. I want to know (study) from the beginning, how am I supposed to do things, what this process for, I should follow it or not. I also needed to print the process description to have the paper in front of me and to read the details and what I was then missing to be able to learn completely in detail, even more detail. Also one needs to have practical hands on knowledge to efficiently deliver one time, right time. It's possible to capture the business requirement or IT requirement but how should I deliver"

It can be interpreted from the response of the interviewee, who is a co-worker that learning contains an essential element of studying/ reading, which can be interpreted as acquisition of knowledge, which further extends to thinking that is an inquiry to understand the reason and an attempt to seek answer to questions of why, what and how of the new learning and the reason behind it. Interviewee finds that acquiring knowledge and practically working on it gives the full meaning to the learning. But interviewee also views that re- thinking and re-understanding of the problems encountered during practical application becomes the requirement to take corrective actions to the problems during work.

The observation supports the Confucius' learning spiral. It is described in Confucius' Learning Spiral, where each element of learning: study-thinking-reflection and practice plays significant role. There is an interaction between studying, thinking, reflection and practice. Ideal learning is a combination of all the four elements, which takes a continuous approach. The spiral which is based on Confucius advice, takes into account the holistic view of learning (Park Dahlgaard, 2001).

Another interviewee expressed that he / she does not like to go into detail of understanding the purpose of the process, rather believes that quick guide that just describes the main steps

to perform an action. Below excerpt from the interviewee of one of the co-worker expresses it as:

Interviewee 6 "Yeah for me since I have hard time learning theory, I need hands on. For me like I said a quick guide is very helpful. So quick guide is something for me that I believe which does not necessary tell why you do things but I benefited from it at least in my work as it was straight forward and guided what needs to be done quickly "

And when further asked *if you find some problem working practically, what do you do'.*To this the interviewee added:

Interviewee 2"Then I try to find solution myself, had to go back to the processes detail or talk about this with my manager and other co-workers, so I know I will get the solution"

It can be interpreted that interviewee believes that lo learn new knowledge about process, the approach could be to do practical on the basis of initial understanding of set of instructions (quick guide). Here it can be interpreted as interviewee does not attempt to go into why, how and purpose of the process (Thinking and reflection is not evident). This indicates adaptive nature of the learning. However Author found that upon facing a problem in practical application of knowledge, interviewee certainly makes effort to think the casual reason, corrective action as well as attempts to acquire more knowledge by studying ('find solution myself ') or by consulting others(manager and other co-workers). Desire to learn can be felt in the approach of the interviewee which has brought an approach towards generative nature of learning. Here interviewee not only attempts 'himself' also tries to find 'detail'

Park Dahlgaard, (2001) has asserted that in Confucius' Learning spiral, there has to be balance between each components of learning. It is important to study, think and do practice. "Study without thinking/ reflection is a waste of time and thinking without study is dangerous" ((Park Dahlgaard, 2001)). In the learning model, it is suggested that for balanced learning, an individual must focus on all the aspects of learning. Taking corrective actions and continuous approach to learning is the basis of the Spiral. It is also understood that in Knowledge industry (such as IT) continuous approach to learning is required; it is very much evident in responses of the interviewees. Continuous learning and taking corrective action in the process of learning is observed in responses of interviewees. It includes both the components of learning i.e. studying and practical application.

5 CHAPTER V- FINDINGS & DISCUSSIONS

In this thesis, investigation of E-learning transfer and the work environment factors affecting learning transfer was discussed. Author also discussed how employees learn in the context. Literature review on learning transfer, post training work environment factors and learning process and it's nature provided a sound base to build understanding on the aspects in E-learning context . Through qualitative exploratory study various views and experiences were gathered and analysed. This chapter contributes the deeper discussion regarding empirical data shared and analysed in the previous chapter. The aim or purpose of this thesis was to study and achieve deeper understanding on how post training work environment affect E-learning transfer and further to explore how trainees learn. In order to achieve the purpose, author explored the investigation through three research questions - Does E learning transfer at work place, what are the critical organizational factors for post training environment that affects E learning transfer and further to understand how individual learning takes place in context.

Chapter guide: This chapter focuses on:

- Main findings
- Discussion

Upon analysis of ten interviews with the employees of the organization which has undergone change in their ways of working and taken E-learning as a support to learn about the changes in the processes in IT delivery services of the organization, the main findings in relation to learning transfer are:

Employees are able to generalize learning at the job and training does transfer at work place greater or to lesser extent. E-learning has helped them to understand and execute work in new process approach .In this context it is found that employees are able to co-ordinate well with various stakeholders and partners (cross –function teams and outsourced partners) in process approach. Employees learn and use the learning in their daily operations also. Learning is generalised in delivery of the IT services and performance efficiency within process approach.

For certain process, it was difficult to assess present E-learning has contributed to new learning at job especially if, the previous process knowledge base is strong(maturity level).

As seen in the case, interviewees had an exposure to the certain process before. What is considered as knowledge gain, they had their own meanings thus there was an expression that it worked at 'higher level'.

In technical process knowledge trainings to line organization, instructional details are often desired. The ability to apply the knowledge gained during the training programme indicates the generalisation of learning in other context than the context in which learning takes place. Baldwin & Ford, (1988), Tannenbaum & Yuki, (1992) and Grossman & Salas, (2011) views describe generalisation as a condition of transfer. The interviewees response related to the process knowledge to a greater extent supports Joo, et al., (2011) view that learning transfer does take place in E-Learning environment. The transfer measure of generalization is the identification of how often and in what situations a trainee could demonstrate the trained knowledge, behaviour and skills. Generalization is related to successful exhibition of desired knowledge, skill and attitude on the job. Successful generalisation of skill is to be based on training objectives and training evaluation criteria. When looking at the objective of E-learning is stated as –Increase in knowledge to be applied in daily operations reflected through performance, delivery and efficiency. To a great extent it is expressed that trainees use that knowledge in daily work.

In post training scenario, author has explored the factors which have affected the generalisation and maintenance of the learned knowledge.

There are certain factors that can be seen as constraining factors and others as encouraging factors, which will be discussed here There were many indicators that were salient. Author has categorised it into three broad categories: Acceptance climate, organizational support (Both are multi dimensional construct) and follow up. Dissatisfactions with various components in transfer climate, different support roles that managers played and lack of desired follow –up, support in the form of workshops and more practical trainings were the experiences shared that might have affected learning transfer.

A discussion will follow why these factors become important in learning transfer in the context of adaption of new ways of working. Additionally, author will discuss how employees learn in the context. The main findings are as follow:

5.1 Acceptance climate

It is very important factor, process effectiveness and efficiency of tools on which a process runs becomes key concern amongst IT co workers and line managers. Incomplete or inefficient mapping of processes causes lot of problem while working in daily routine, all the interviewee expressed the dissatisfaction with the level of readiness of the work processes (maturity level). The processes, where greater changes were made needed more stabilization to minimise gap.

Organization can-not maximise the benefits of the training programme, such as an E –learning programme, which provides great opportunity to learner in term of time, place and adaptability to their learning needs. In all means greater learner control to the trainee.

Rouiller & Goldstein, (1993) and (Grossman & Salas, 2011)have asserted the need of positive transfer climate. Even though all the interviewees had opportunity to use the knowledge, as their jobs were re-designed to suite the process approach.

Presence of underperforming tool that large number of the processes depended upon added to the dissatisfaction amongst interviewees that otherwise could have allowed learning transfer to be put into much concerted and effective action. The availability of the tool related to the requirement of the job and inefficient performance raises doubt about the futility of the applied knowledge on the job. In the case, even though organization provided enough opportunity to use the knowledge, the displayed or observed dissatisfaction with the process and tool contributed to the state of dismay in the co-workers and managers. Lack of preparedness on the part of processes (mapping/role) and readiness of tool can be corroborated with the finding of Marler, et al., (2006), where in the case of technical training perception of resource (here tool can be compared with resource) availability affects learning transfer. Task cues were great supporter of learning transfer, post change jobs were redesigned to work within process approach and task autonomy within process framework was available, this to a greater extent supports the findings of Kontoghiorghes(2001).

Flexible goal setting as seen in this case, can promote ongoing learning which can rather prompt than dither co-workers from learning continuously. Author asserts that in the situation such as in the case, where changes of different magnitudes were made to bring process approach in the organization, setting up post training flexible goals as per individual capability can encourage further learning and enhance internal motivation to approach the performance and delivery goal. This is to a great extent may lower the psychological pressure of fear of failure or the risk aversion attitude. Understanding the dynamic nature of industry, author perceives that high psychological pressure, risk aversion and continuous learning incapability can limit individual's professional growth. Use of flexible goal setting in post training environment is also recommended by (Ordóñez, et al., 2009)This finding corroborates and support them and (Grossman & Salas, 2011) recommendation regarding goal setting.

Author finds that task design also contributed the need to work together within their own team and with various cross functions. Study of (Kontoghiorghes, 2001) to a great extent support the finding in this research, task cues which prompt the use of skill or knowledge supports learning

transfer. Process approach in IT scenario requires changes in the task design, these changes ensure that there are opportunities available to the trainee to use and display knowledge gained from a training programme.

Presence of feedback to the performance acts as consequence cue that encourages or discourages the use of skill or learning. In this case, feedback was used discretely as a monitoring tool to ascertain if employees have taken the training. Managers had differential approach of taking feedback which was reflected in the varied views of managers. Debriefing, asking control questions and morning discussion not only shows manager's involvement but also ascertain co workers to apply those learning and clarify the doubts. No response to trainee's doubts and queries may discourage the trainee to apply the learning. Hence feedback positive/ negative is much important than no feedback. This finding is supported (Salas, et al., 2012), (Tannenbaum & Yuki, 1992) and (Rouiller & Goldstein, 1993).

5.2 Organizational Support

In wake of doubt or uncertainties, employees look forward towards the organizational social support, consisting of manager, peer and broad cultural values. Trainee after taking the training need the opportunity to apply new knowledge gained, manager's support by providing the opportunity to practice in the test environment, before start actually working in real live environment, arranging workshop within team to facilitate further learning. Feed back is another way of supporting the trainee. Author believes that on the basis of the objective of the training one need to provide adequate support to practice which is key determinant. This finding finds support in the previous studies (Rouiller & Goldstein, 1993). In the case, process training needs more practical experience to really 'effectively' apply the process knowledge.

Involvement of manager by believing in learning, discussing the content and telling about the purpose of the training and providing opportunity to enhance learning to the co worker can be seen as factors that may help co-workers to apply learning. Amongst all the factors, this factor has been consistently announced in responses. Studies by Gilpin & Bushe,(2007) have found that learning transfer is affected when manager also participates in the training orogramme along with sub-ordinates. Awoniyi & Morgan, (2002) has shown that along with feedback, discussion and information sharing also influence training transfer. Responses of co-workers have shown that they felt encouraged when managers discussed and shared information with them apart from taking mandatory feedback.

Author ascertains that involvement by manager in various dimensions matters a lot. In flat organizational structure, with diverse teams working together manager can act as a catalyst to crystallize the learning. This finding supports and corroborates views of (Baldwin & Ford, 1988). Author understands that, proactive involvement during the training and afterwards, increases motivation to learn and there by learning transfer.

Another dimension of support can be seen, where managers act as coaches, they not only prepare the ground as a facilitator but also act as a coach by explaining the utility, debriefing and explaining doubts. In the case where major changes were introduced in the ways of working, coaching becomes important factor in abating concerns and doubts that arise in post training climate. This finding finds support in the studies of Salas, et al.,(2012), however this research indicates that the role as a coach and facilitator played by manager supports Elearning transfer. Amidst change in the organisation's way of working,extended support from managers encouraged co-workers to work with new knowledge.

Encouragement or reinforcement in this case was more limited to personal recognition. Recognition is valued by co worker, because it opens up further opportunities. Organizational culture that supports and appreciate co workers who are able to transfer the learning into work nurtures a climate of motivated employees that are ready to learn. Observed and desired recognition as a means of encouragement is consistently observed in the response. Reward / Incentive (monetary/ non monetary) for performance is not at all expressed, perhaps it is due to the organizational culture.

Apart from manager, significant support comes from colleagues, team members and expert group (Subject Matter Experts). Formal and Informal discussion about learning's, solving doubts within teams makes another support system, which is both formal and informal. It can also abate anxiety, apprehensions and discomfort related to acceptance of new knowledge. Though in the case, author found that subject matter experts (colleagues, who are knowledgeable in the area of their expertise) were available for help, but fewer in number, also interviewees asserted that they could not provide sufficient time to answer all the questions. Peer's support in both formal and informal setting to a greater extent supports the study of (Chiaburu & Marinova, 2005). It cannot be ascertained that among all the organizational support factors, which one is more effective than the other, it depends much on situation, context and personal value.

5.3 Follow up

Completion of training program should not mark the end of the learning opportunities that an organization can provide. The period after the training programme, is useful in enhancing learning from the training and in maintenance of the learned knowledge and behaviour (Baldwin & Ford, 1988). In this case interviewees perceived that there was lack of practical understanding. By providing job aids such as work documents, flow charts and open session it did help in maintaining learned knowledge. Since fewer number of supportive practical trainings such as workshops and fewer issue based question / answers (open session) were organised, this might have created dissatisfaction amongst trainees.

Author believes that in IT organizations, training related to process/ operational functions – day to day work if possible, should be supported by an opportunity to learn in simulative or in test environment. (Practice session). Working in a test environment or simulative environment not only gives the learner an opportunity to strengthen the knowledge but also, maintain it for long time. An opportunity to further 'learning by doing' will decrease the mental work- load and help in applying new knowledge. This also supports the findings of (Grossman & Salas, 2011)

5.4 Way of Learning

The learning for interviewees is a continuous need and approach. Obsolescence of technology process in IT demands continuous learning effort by employees. As observed in the responses of interviewees .There is an effort to study new processes, which is accompanied by thinking and followed by practicing it, but one phenomenon that was found in the response of interviewee was that just applying the knowledge does not end their learning responsibility, recognising problem areas and working on corrective action themselves or reaching out to others 'experts' or colleagues, keeps the learning cycle going. However this way of learning is not evident in all the responses. Some do not feel the need to go for in depth study, rather they resort to quick learning often accompanied by doing than thinking about the need and purpose of it. But after applying knowledge, when facing problems, they resort back to in- depth studying and thinking to take corrective action. Though maintaining continuous learning, still it cannot be called as ideal learning. Ideal learning as described by (Park Dahlgaard, 2001)should include the functions of learning with functions of thinking, reflection and practice. Exclusion of any of the function from Confucius' Learning spiral stops the continuous learning approach. It can be found in the case that most of the interviewees have a balanced learning which includes understanding of what to learn, how to learn and why (Park Dahlgaard, 2001, p. 272)

6 CHAPTER VI- CONCLUSION AND REFLECTION: Beginning of an end?

The conclusions are drawn by keeping the research aim in focus and the findings obtained in the previous chapter. The reflection consists of the limitations and the shortcomings. In later section, author also suggests future direction for further research.

Chapter focuses on:

- Conclusion and practical implication of study for the organization
- Limitations and future research recommendations

The aim of this research has been *to study and achieve deeper understanding on how post training working environment affect E-learning transfer and further to explore how trainees learn IT process knowledge.* The leading questions i.e. *Does E-learning transfer at work place, what are the critical organizational factors for post training environment that affects E-learning transfer and further to understand how individual learning takes place in context* have been thoroughly investigated by conducting in depth qualitative interviews within the case study design; It can be concluded that:

Process knowledge acquired through E-learning is used in co-ordination, co-operation and communication with various stakeholders at cross-functional level. At operational level, process knowledge acquired from E-learning could only be used to certain extent.

Several factors in work environment were identified that affected learning transfer:

Perceived lack of preparedness of acceptance climate (process and tool performance) was the biggest cause of dissatisfaction.

Post change task redesign gave enough opportunity to use the process knowledge, within new process approach. Flexible goals were set by managers as per individual capability to minimise anxiety of learning and using new knowledge or skill.

Multifaceted manager support was observed, though mandatory feedback was taken but in many responses different ways of manager's support was observed. Participation in discussion, facilitator to in team coaching, providing debriefs and participating in training programme were few distinct ways of support that were observed. However co-workers also experienced no responses to the questions asked post training and any such above mentioned involvement by the manager was also observed.

Peer's support in the form of post training learning discussions, solving problems together was also observed. Super users (Subject Matter Experts) availability ensured that there is extended 'expert' peer support available.

There was perceived need of more follow –up activities, in IT process knowledge use, practical experience matters the most, as it was expressed during interviews. Perceived need of more 'hands on' experience through workshops, more agenda based open session(question –Answer session, to answer practical problems faced) were few follow up activities required by the interviewees .Follow –up is an essential requirement ,particularly in process knowledge use. Plethora of previous research work was corroborated.

Trainees expressed that learning is a continuous need a process in itself, changes and dynamicity in IT engage them in learning in order to adapt change. Most of them like to study –think reflectively, by understanding differences and the purpose but learning for them is essentially about practicing it. This has found corroboration in Confucius Learning cycle.

In case of changes, organization needs to focus on acceptance climate, support and follow up activities, which otherwise cause dissatisfaction and lead to frustration. Previous researches on E-learning have focused of personal characteristics of trainee (self efficacy, motivation), training design (assessing cognitive load, broad design) and organizational support affecting learning transfer.

This research takes a broad look at organizational factors, that affect learning transfer and the ways individual learn in the organization .The findings as discussed in this chapter leads to certain intents: Author concludes that E- learning transfer does not practically hatch as a 'golden egg' that comes out, no matter what conditions prevail. As seen in the case, author recommends that E learning transfer issue in post training evaluation can be understood with system approach. The post training environment can be considered with system thinking. The three profound categories - the acceptance climate, organizational support and follow up can be seen as three subsystems integrated and encapsulated within the boundaries of work environment. Systems are bounded by time thus an integrated system approach may lead to better focus to all the three subsystems in the context of training. Author also thinks that in order to implement organization wide training programme on a large scale, extent of engagements and commitment by line managers (immediate supervisor) should not be left to their (manager's)disposition.

Issue of learning transfer has come a long way already. Extensive research have paved way to understand that in E- learning context , importance of work environment cannot be ignored. Author also concludes that in post training environment, encouragements by highlighting small effort of achievements can make lot of difference.

One of the ways organization can bring effective learning transfer of IT process knowledge is by implementing carefully blended learning programme. E-learning in conflation with some agenda based workshops.

Author also recommends that following E-learning, for strengthening conceptual clarity organization can develop more test environment. In this way employees can adapt well with new knowledge.

Limitations of the research: There are couples of limitation of this study.

Limited access in the organization and time limitation for the research posed one of the constraints to begin with. The case is focused on a large IT organization , getting access to interviewee and finding E-Learning documents was a time consuming activity , more over there are some sample biases as not as not all departments of IT delivery are represented. Interviewee could not agree due to time limitation within which the study was to be conducted. Author wanted to corroborate findings from interview to be researched further by conducting survey for all the parameters found during interview , however as put forward by the training department of organization this was not possible,

Findings and limitations of the present thesis may set direction for future research: Process training through E-Learning method is not been widely discussed, particularly in IT organization where trainees are adept and accustomed to technology usage. Process training and E-Learning transfer can open a new door to understand corporate E-Learning transfer. Transfer issue can be studied with particular attention to design and scale of E-training programme. Further evaluation can be done on the basis of views from multiple sources –e.g. not only trainees but also higher management, training department and other functional departments. Future research opportunities lie in evaluation of learning, beyond 6/ 12 months period. Further attention can also be focused to establish relationships of organizational work environment self accountability in case of E-learning transfer. Combining both qualitative and quantitative results can provide much holistic picture to the work environment factor.

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8 Appendix

Annexure I

Interview Guide For Semi-Structured Interview

Duration of the interview 45-60 Minutes (max)

DISCUSSION GUIDE

Note: This guide is intended as a „checklist" for the interviewer. It could be treated as an inventory from which to select areas and guide the general flow of discussion. The guide is an initiation point for discussion; participants" responses may often lead the discussion in new directions or change the order of topics.)

Self Introduction:

Thank respondent(s) for participating in this research. Assure respondent of confidentiality
Explain the objective of the research –learning transfer and work environment factors affecting transfer in E-learning environment and understand how trainees learn.
Explain to them that there's no right or wrong opinions, and everyone is likely to have different opinions so it doesn't matter if their opinion differs from anyone. **(3 Min.)**

Please tell about yourself, education and processes you are working on. Number of years of association with IKEA IT

- ***About E- Learning Transfer (15 min)***

- Please tell me, Organization has undergone lot of structural and ways of working changes, In your role or title ,
- How has E learning helped you to work in your area?
- In creativity
- Delivery
- And Efficiency
- *Now, what do you think what kind of responsibility and actions you, yourself took to learn new ways of working, or*
- *What was your approach to learn new Ways of Woking*
- **About Learning transfer and Work Environment (20 min)**

- Are you aware of extensively developed E-learning about processes in your area
- Did you find it useful in understanding process changes anduse it in your work?Learning Transfer.
- In present context, you have sufficient opportunity to use knowledge gained through E-learning.
  - Have you gone through all documents and tools related to your working?
- *How....*
- And if yes, what are your expectations, what could have been done more to bring better learning. (Follow up)

- ***<u>For Co-Workers about Manager's support Peer's Support and cultural support (15Minutes)</u>***

- *What were you encouraged to learn from new changes in your performance areas.*
- *What feedback you received on your learning outcomes*
- *What kind of .....*
- *Did you receive any help from your peers in understanding ways of working if required, what kind of help?*
- Could you please tell little more about it.....

  - **<u>For Managers*(10 min)</u>**

  - How do you promote learning in your department?
  - What kind of feedback you take?
  - What more you would like to share?
  - How do you encourage your co-workers in taking up e-learning.?

  * For Managers these are the additional questions

  - **<u>About learning:</u>**

- what approach you took to learn about new processes' and were further asked to
- Please describe it in little detail

Extending thanking note for providing their valuable time and thoughts

Thank You!

Annexure II – Interviewee details and their organizational role

Date	Interviewee	Gender	Education	Years of Experience in IKEA	Work Speciality	Role in IKEA
02-05-2013	1	Male	Degree- Informatics	13+ years	Lead Process SME	Co worker
03-05-2013	2	Male	High School, IPMA certified Sr. PM	3+ years	Project Management	Manager
06-05-2013	3	Female	Degree	14+ years	solution Analyst	Co worker
07-05-2013	4	Male	Master degree Electronics	12+ years	Project Management	Manager
10-05-2013	5	Female	Bachelor Degree	8+ years	LAN - networks	Manager
13-05-2013	6	Male	Bachelor Degree	6+ years	HP-Ux/Open VMS	Co worker
14-05-2013	7	Male	High School and certifications	25+ years	Analyst	Co worker
14-05-2013	8	Female	Bachelor Degree	14+ years	Helpdesk	Manager
15-05-2013	9	Male	Degree	6+ years	Analyst	Co worker
22-05-2013	10	Female	IT certification	15+ years	Analyst	Co worker