

# **How does organizations improve IT competence?**

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# 1 Summary

Though a company must train its employees in the use of its business critical systems, it is naïve to consider such training as a one-time activity. How does this organization improve their employees IT competence? By covering both new and existing employees in my study of the organization, I found that the organization improve IT competence by user training, by having a user support and IT Department and using the departments' expert users as super users.

## 2 Introduction

As learning and training is a necessity to master and understand new skill and competence, training is no less important in both personal and work based situations. Organizations improve Information Technology (IT) competence in different ways, and to a different extent beyond basic computer understanding and IT competence depending on the organizations. In organizations where IT usage is a part of the daily routine and everyday task, user training is a necessary component in the work environment.

### 2.1 Problem statement

I wanted to investigate the organizations' efforts regarding improving IT competence. To fulfil this task I chose the following problem statement:

**How does organization ABC improve IT competence for new and existing users?**

### 2.2 Background

The organization I have chosen to study and evaluate is a financial institution. Organizations today are more and more digitized, and the financial organizations are no different. Making humans into more or less computer operators. This organization is no less digitized than others, but have a clear vision of being available in the form of being online and self-service. As a result of this, employees need to operate computers daily and both themselves and their customers rely on their IT competence.

The organizational structure has divided the organization into five sections. The sections are Administration, Service and Quality, IT and Development, Sale and Customer Service, and Economy. Each of these sections have their own underlying departmental structure, which is individual to the section. For example the section Service and Quality, consist of the departments Customer Service and Deposit and IT and Development is divided into two departments; Business Development and IT department.

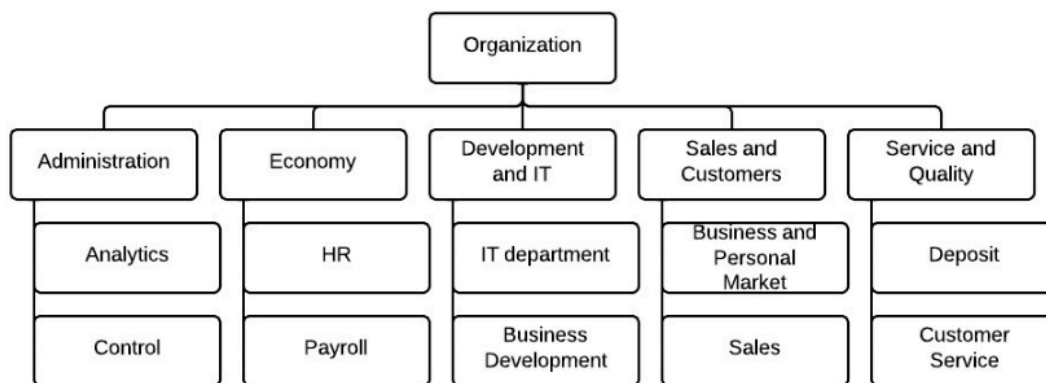


Figure 2-1 - Organizational structure

### 3 Theory

For existing literature I have worked with both the curriculum and the auxiliary literature, to extend my understanding of how to evaluate efforts to develop IT competence, and to compare my findings against the theoretical framework.

#### *Developing digital competence:*

In the book *Developing digital competence* by Jens Kaasbøll (2013) all areas of “*learning, teaching and supporting use of information technology*”, and *evaluation methods* (Kaasbøll, 2013) are covered in great detail. Both the book and the lecture notes and slides from this semester have been frequently used as theoretical framework for this assignment. In Part III - *Managing development of digital competence in organizations* Kaasbøll refers to *situated learning*; learning within the practice of where the learning was applied.

#### *Super Users Have Great Value in Your Organization:*

In the article *Super Users Have Great Value in Your Organization* by Jane E. McNeive (2009) the usage of Super Users in the healthcare system is described in terms of super user best practice. Covering the characteristics of super users, how to organize super users, tasks and purpose of super users, and how to motivate super users.

#### *Does Information Technology Training Really Matter?:*

In the research conducted by Gallivan, M. J., Spittler, V. K., and Koufaris, M., (2005) an “[...] *analysis of co-workers’ influence on IT Usage in the workplace*” (Gallivan et al., 2005) is covered in great detail. Their research hypotheses examine the relation of practice in communities, end user computing, information system usage, situated learning, social influence, and user training can impact the amount of IT usage. Their findings confirm a relationship between co-workers IT usage, their beliefs about training and the indirect effects of co-workers’ level of computer self-efficacy.

#### *Being Fluent with Information Technology:*

In the report *Being Fluent with Information Technology* by Committee on IT Literacy (1999) it is stated that individuals must understand IT in order to use it effectively. Motivation for understanding IT, Committee on IT Literacy (1999), mention personal, workforce, educational, and social factors for understanding and utilizing IT effectively and productively. I have focused on the workforce arguments from this report.

## **4 Methods**

### **4.1 Evaluation method**

Kirkpatrick's four-step model (1996, referred to in Johansen, 2012) is a framework for evaluating user training. The four-step model can be used independently or as a whole framework to evaluate training. The first level evaluates users reaction to training or their opinion of the course training. The second level evaluates learning, like what knowledge the users have learned during the course. The third level is behaviour evaluation, for evaluating the ability to apply what the users have learned in a workplace situation. The fourth level evaluates results and outcome, whether

the introductions of the IT tool fulfil its goals, and how the training has contributed to the results.

I wanted to conduct evaluation with all four steps from the Kirkpatrick's four-level evaluation model in a joint evaluation, as a combination of evaluations is normally better than a single evaluation, as pointed out by Kaasbøll (2013) in his book about developing digital competence.

#### **4.1.1 Planning and conducting**

I conducted evaluations according to Kirkpatrick's four-step model as described above.

In the first level of the Kirkpatrick model, reaction to training, I conducted observations in user training sessions. The goal was to collect statements from the users being trained, and to code the statement or behaviour into positive, neutral or negative, of user to evaluate their behaviour and reaction to training.

At level two, evaluation of learning, evaluation of learning was conducted together with users during and after training courses. During training sessions evaluation of learning was done in the form of handing out tasks and assignments to the users. Those able to complete their tasks was rated as successful in the term of learning transference, those not able to complete their task would receive help in order to do so, or repetition of covered topics in the training course or session.

In level three, evaluation of behavioural change was conducted as a part of the sit in with users from different departments within the organization. By having sit ins and visiting the different departments I hoped to quickly get a feel regarding how behaviour towards the applications and training throughout the departments using the same applications in their day-to-day computer interaction to resolve their tasks.

In the last and fourth level results and outcome is evaluated. To evaluate whether the training has fulfilled its goal and contributed to results. I wanted to evaluate this level by measuring organizational goals and performance. The closest to evaluating this was using an existing questionnaire recently conducted within the organization with focus on end user satisfaction.

I was provided with data gathered for a questionnaire intended to measure the user satisfaction of training, information and applications provided by the IT department and Business Development department. IT and Development section conducted the questionnaire and it was directed on other departments in the organization. The following questions were asked about user support: When contacting the IT department I were met in a friendly manner; I received good information during my support inquiry/request; I received good information about maintenance on applications or systems; The IT department have sufficient IT competence; My requests were solved in a satisfying way; My requests was solved in a timely manner; Comments regarding the IT department.

The following questions was asked about the Business Development department: When contacting the Business Development department I were met in a friendly manner; I received good information before application changes the last quarter; I understand why the applications are delivered (or changed); I think deliverances are conduced in a satisfying way; Comments regarding the Business Development department.

All questions in the questionnaire was structured with a Likert scale from 1-6, except the last question per department asking for comments.

## **4.2 Observation method**

As observation is a useful data gathering technique both in controlled environments and in the field (Rogers, Y., Sharp, H., Preece, J., 2011), it was suitable for my assignment as direct observation in the field. As observations in the field can help to fill in details and provide context for tasks and important information (Rogers et al., 2011), there is large amount of data gathered, both qualitative and quantitative, and it is time consuming and can be difficult to analyse. Depending on the type of study, one can assume the role of an insider or an outsider (Rogers et al., 2011) I chose to be a passive observer, an outsider, to maintain my objective focus through the assignment. Being a truly passive observer is hard, because in the field it is difficult to avoid interacting within activities happening in the surroundings.

Structuring the observation can be done by a simple framework, like the practitioner's framework: Who, where, and what (Rogers et al., 2011). Suggested by Robson (Robson, 2002, referred to in Rogers et al., 2011) a more detailed framework can be used to pay greater attention to the context of the activity, by adding more to the framework like acts, events, time, goals, and feelings. I chose to only focus on who, where, what.

*Who* - The participants in the training courses and sessions were employees from different departments, and at different levels of IT competence, and at different levels within the organization.

*Where* - In the field, so the participants in the observation could go about with their day-to-day tasks in their natural setting.

*What* - The observations were of users in user training courses and during day-to-day tasks. Observation took place in sessions with new users, existing users learning new or changed software specific functionality, and to improve general IT competence in the organization.

#### **4.2.1 Planning and conducting**

I conducted observations in sit ins, with different departments within the organization, and in training sessions. I was allowed and had time to be in Business Development, IT department, Customer Service and Sales. When conducting observations of employees in the different departments, it normally would be with a super user as long as this was possible. These departments all use the same type of basic IT equipment, but use it all in different ways and to meet different goals. The time spent in the different departments varied from department to department, depending on the days structure. I spent at most 1 hour in the organization during a week for a four-week period, sometimes divided into shorter or longer visits depending on the week. Observations could last from 10-30 minutes depending on the task at hand, or training sessions to attend. One observation lasted for one hour, and was a longer training seminar. During observations I took notes when possible and suitable, wrote as much as possible after observation sessions, and reviewed my notes and quotes into spread sheets.



## **5 Empirical Findings**

As a part of the empirical study of this organization, I covered different user training sessions and one super user-meeting, user support on-site, and sit in with users from different departments.. For my data gathering method I chose to work with observations. As agreed with the organization, and with each user observed or interacted with, full anonymity is provided to the participants in the observations.

### **5.1 Improving IT competence**

As organized efforts within the organization could be chosen freely to evaluate, for this assignment I have observed and evaluated user support, organized super users and user training.

As a financial institution the organization is bound to act by certain government decided laws and regulations. As a process of this, an IT handbook has been developed and is to be followed by all employees within the organization. The IT handbook serves a role as a guideline for IT usage, along with an agreement and a manual for IT usage in the company. All new employees have to sign an agreement form before they can become an IT user. This agreement is both for usage of the technology the IT department have to offer, but also how information available within the systems is to be treated. Great care and responsibility is the underlying point here, hence the majority of the data is of a sensitive nature, for example customer information such as social security number, balance and credit cards.

#### **5.1.1 IT and user support department**

The section IT and Development is where the applications are being hosted, supported and developed. This is also the section where most of the training material is created, user training is held and the department where all employees direct their computer related questions. The departments within IT and Development also provide user training within their field of expertise, for example security or marketing tools.

The IT Department has main responsibility for IT competence training for all users in the organization. The level of training with new employees is conducted to meet a very basic understanding of systems, programs and users evolves to advanced

understanding and usage very quickly within their field of “expertise”, as further training is given within the users section or department.

*User support:* Three people, to serve all 80 users, staff the IT Department. They have their own responsibilities and application ownership and are covering all aspects of operational routines, user support and supplier contact. No priorities are pre-decided for the responsibility areas and user support requests are dealt with in the order of occurrence throughout the day.

During my observation of user support I was observing the IT Department team leader, and observed him both during training courses and user support work. The support can be over the phone, email, through a case handling system and/or by visiting the user in their respective department.

Reaction to support requests could vary from just telling the user "Ok, I will come over to your desk" (User 4.1) or “Can you explain that again? What happens?” (User 4.1) depending on the type of question problem stated by the user. This provides two different types of support, The former were the user can show and explain the problem to User 4.4, and the latter were the user have to explain in words during a phone call what is wrong.

*Seminar to improve IT competence:* This training seminar was to improve general IT competence related to IT security. I was allowed to join and observe this seminar. The agenda covered: how to counteract money laundering; identification papers and online identity theft; scamming; viruses; security threats online, in mobile phone and through emails; online behaviour and protection of sensitive information. It was over an hour-long session and was conducted by a member of the IT and Development department, who is in charge of the organizations’ security policies. It was an open session, and the users were invited to ask question throughout the session and if areas needed more clarification. For most users this might have been at a high level, but made the users aware of the dangers they would need to look out for in their daily tasks. A very high number of employees attended this seminar (counted 47), and the amount of questions asked during and after each point on the agenda was higher than I had anticipated. The feedback given to the trainer after the seminar, and the general small talk, gave me a general feeling that - more or

less - everyone was pleased with the training seminars content and what they learnt.

### **5.1.2 User training courses**

User training courses in this organization is usually held around the time introducing new software; hardware or major software updates/changes is done. User training when new employees are hired is conducted by the IT department and within the specific department. This is done to ensure a best practice transfer. When training courses are intended for all employees, training is scheduled, at a time to reach as many as possible, outside normal working hours. Topics for courses aimed at all employees can vary from specific topics concerning departments and organizational goals to be better at, like security or activity fit to help improve goals and values. (*Observation* of this is covered above in section)

*Training of new employees conducted by the IT department:* The training starts by reviewing the IT handbook and user agreement form for IT usage in the organization.

“Do I have to know this handbook by heart?” said User 1.1 during this review.

With a manual, a shortened version of the IT handbook, details regarding how logon credentials and how to log on; phone number and email for the user support; how to add and format signatures; how to lock your computer and useful shortcuts; printer details and physical locations. Training starts by providing the user with login credentials. User logs in and changes password for his or her account. User is asked to log off, and to log back in, to ensure user password change is successful. User is asked to open email application, to confirm all credentials are working. User is asked to change/add signature, as stated in the manual.

“Do I have to include my mobile number in my signature?” said User 1.2 during her training.

User is asked to open department specific applications to ensure all permissions are in place, and correct.

“Do I have to start all these application every morning?” said User 1.1 during his training.

User is asked to lock, and unlock computer, as instructed in manual. User is handed a mobile phone, as stated in users contract of employment. How to use organizational specific applications are introduced to the user. User is instructed by the trainer in how to set a lock code for the mobile phone, as this is a security requirement for having synchronization of work related email on the phone. After this, a set of instructions is provided on how to enable synchronization of emails, by changing settings on the phone. I was only observing the interaction between the trainer and the trainee, and not the material used in this training session.

Tasks to be completed of users during training of new employees: Log in to the system, change password, log off, log into email account and set email signature, open different applications, lock computer, set lock key on mobile phone, change settings for email synchronization on mobile phone.

*Further training of new employees:* The new user is placed with another employee within his or her department. I did not have the time to observe this type of training, but had it described to my by a super user in the Sales department. As described to me by User 4.5:

*New users would be observing a designated co-worker throughout the next few days. Training like this is in place in all departments in the organizations, providing new users with learning by imitation, followed by learning by doing where the roles switch from new user observing to new user doing work while being observed. New users observation of other, and being observed is gradually less for each day. (User 4.5, Observation from Sales department.)*

*Training of users with new IT equipment conducted by the IT department:* In this case the user training courses was one-to-one, with a member of the IT department, and users that requested home office equipment. I observed four users during this kind of training course. The home office equipment is a laptop, configured by the IT

department with customizations' and software preinstalled. Training consists of a walkthrough of how the laptop works. The walkthrough includes explaining buttons and connections available on the laptop.

"Is that all?" said User 2.1 with a smirk, as this was no different from any other laptop.

Training in how to log on the laptop, how to log on to the secure connection and office applications is done by first showing the user step by step and then giving the user tasks to complete the same steps as was just shown to them.

"So it's like my computer at home, until I connect here?" said User 2.3 while pointing at secure connection icon. Users were provided with further instructions per task if needed.

Some users requested further information in regards to other functionality than had been included in the initial walkthrough. "Do I have my shared drives on this laptop?" said User 2.4 wanting information about accessing the departmental and organizational network drives from his home office.

Tasks to be completed by user during this training course: Log on to laptop, access secure connection and connect to office applications.

*User training with new equipment conducted by the IT department:* For user training course the topic was new printer. Each department had received printer this same day. As the new printers were connected and tested to work properly by a printer technician, a training course was conducted. This course was divided into two parts. In the first part the users were instructed to follow the new printer manual, found on the intranet. The manual covered information on where the new printers locations, how to connect to the printer and how to set the printer as default printer.

Tasks to be conducted by the users during part one: Add new printer, set as default printer and print to new queue.

The manual also covered part two of the training course with step-by-step instructions with pictures on how to connect personal access card to the printer, access print queue and print files from queue.

Tasks to be completed during part two: Verify access card on new printer, log in with username/password and print from queue.

During the training course, a member from the IT department was present in the department, helping users understand the manual and the new printers. Questions were asked directly to the member from the IT department, but also to other members in the department who had already understood and completed the tasks.

### **5.1.3 Super users**

Super users serve a vital role in any organization and there is no difference here in this organization. Each department in the organizations have their own super user, at a total number of 10 (both super users and departments). Super users have been chosen by factors as being a competent worker, respected by others and being willing to use new technology and be an “expert” in the department that other users would ask for help. Focus of the super users is to be frontiers when changes, updates or new software or hardware is presented to the end users. Organizing super users are dependent on the type of super users, as there are both department and application specific super users. Super users within departments, other than being a frontier and functioning as a 1st line support for the other users, there is no super user group or meetings for these super users.

When I started my observation for this assignment I was given a list over all super users in the organization divided by department, and tried to locate and talk to each one to arrange settings for observations. What I found out was that not all normal super users, from the total of 10, is longer with the organization as employees or in that department as a result of reorganization. I was able to find 3 still active super users after some footwork in the different departments.

There are super user groups per the organizations majorly or mainly used applications. The application super users are chosen in the same way as the normal super users. As a precaution to not overload the initial super users with more tasks

and responsibility, new super users have been selected. Application super user groups are structured to be 9 per group. The idea behind application super user groups is to serve as super users throughout in both the pre-implementation and the implementation stages, designing customization for screens, workflows and processes of several applications. A member of the IT and Development department is present as a committee leader, chosen due to their field of expertise as an IT specialist.

*Super user meeting:* As a part of my sit in and observation of the department Business Development, I attended one super user-meeting. The meeting was between a group of super users working with the application MS Dynamics CRM, a tool for Customer Relationship Management and members of the Business and Development department. I wanted to observe how the group was structured, both formally and informally, how the super users interacted and how the super users used the group members and the IT specialist to their advantage. The meeting had a short agenda consisting of: status for updates from the CRM-department, news, Q&A and a status update per section presented by each super user. After the super user meeting an abstract of the meeting was sent out to all super-users and their leaders for orientation. In this meeting it was difficult to grasp a goal for my observation framework, but all members displayed a small joy to be in a super user meeting again, as it had been some time since the last group meeting.

## **5.2 Results**

In this section I will present my findings from my evaluation. By conducting observations and evaluating my findings based on, qualitative data as comments and statements collected during observations, in user training courses or when conducting a sit in with departments and on quantitative data as the number of completed tasks or responses on questionnaires.

### **5.2.1 Evaluation level one**

In the first level evaluate their behaviour and reaction to training. I have coded statements and comments said by trained users during training into three categories, negative, neutral and positive. The data is displayed in the graphs below.

### 5.2.1.1 User training – new employee

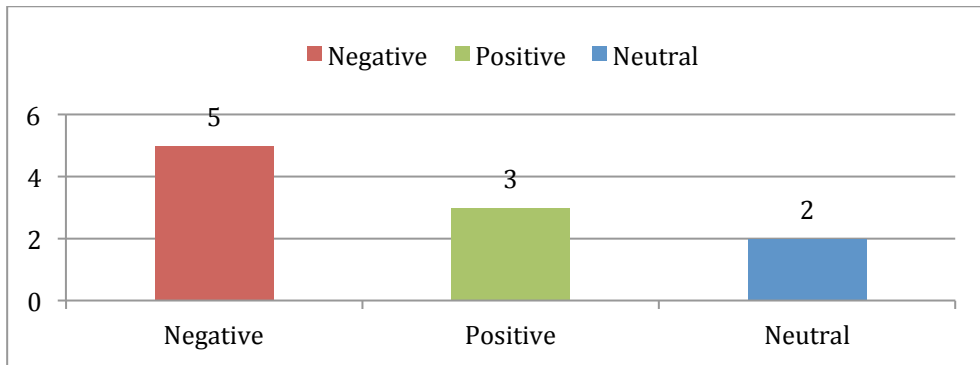


Figure 5-1 - User training - New employees

The users stated 5 negative, 3 positive and 2 neutral comments and remarks during initial training courses for new employees.

Examples of statements coded as negative during the user training: “Do I have to know this handbook by heart?” (User 1.1), “Can you do it for me?”(User 1.1) and “Do I have to include my mobile number in my signature?” (User 1.2).

Statements coded as positive: “Can I change the lock code?” (User 1.1), and “Can I install apps on my phone?” (User 1.1).

Examples of statements coded as neutral during the user training: “How often to I receive email?” (User 1.1) and “Is there any routines for password changes?” (User 1.2).

### 5.2.1.2 User training – Home office

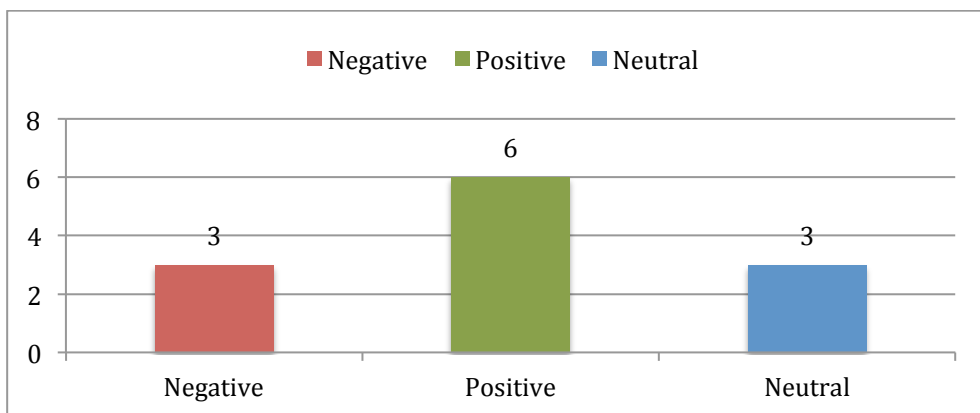


Figure 5-2 - User training - Home office



The users stated 3 negative, 6 positive and 3 neutral comments and remarks during initial training courses for new employees.

Examples of statements coded as negative during the user training: “D Why is it not the same as my other password?” (User 2.1), “Why do I need another password?” (User 2.2) and “I can’t find my documents” (User 2.2).

Statements coded as positive: “Is that all?” (User 2.1), and “Can I use it like the computer at the office when connected?” (User 2.4).

Examples of statements coded as neutral during the user training: “Can I download software and music? (User 2.3).

### 5.2.1.3 User training – Printer

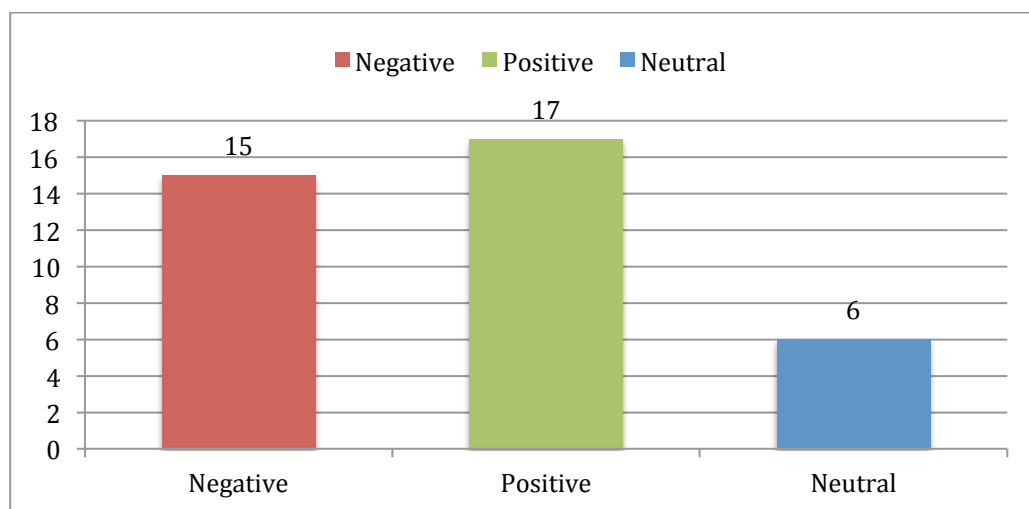


Figure 5-3 - User training - Printer

The users stated 15 negative, 17 positive and 6 neutral comments and remarks during initial training courses for new employees.

“Where did the old printer go?”(User 3.1), “Why do I need to do this?”(User 3.3) and “I didn’t understand this step from the manual (points at default printer)”(User 3.8) are examples of negative reactions or behaviour to training.

Positive statements and comments during the training: “Can I keep this for days in my print queue?”(User 3.8), “Am I able to print colour?”(User 3.6) and “How do I print on both sides?” (User 3.5).

Statements coded as neutral is for example: “Is the printer faster than the old printer?”(User 3.6), “Look away, I type my password now”(User 3.6), “Is this a replacement?” (User 3.4)

### 5.2.1.3.1 Overview of evaluation level one

Statements regarding change the user did not initially understand, or complete tasks without difficulty lead to negative reaction to training. Having the training at a basic level lead some users to ask for more information regarding features they would like to use or have a better understanding about.

## 5.2.2 Evaluation level two

At level two, evaluation of learning, evaluation of learning was conducted together with users during and after training courses. Data gathered for evaluation in level two was of those: able to complete, who attempted but was not able to complete without receiving help, and not attempting to solve tasks, but demanded more help.

### 5.2.2.1 User training – new employee

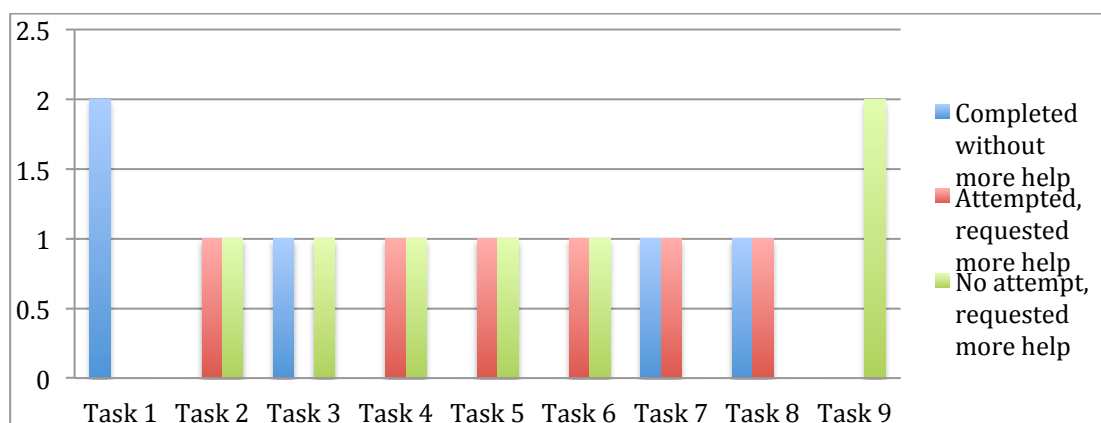


Figure 5-4 - User training - New employee

Tasks to be completed of users during training of new employees: Log in to the system, change password, log off, log into email account and set email signature,

open different applications, lock computer, set lock key on mobile phone, change settings for email synchronization on mobile phone.

### 5.2.2.2 User training – Home Office

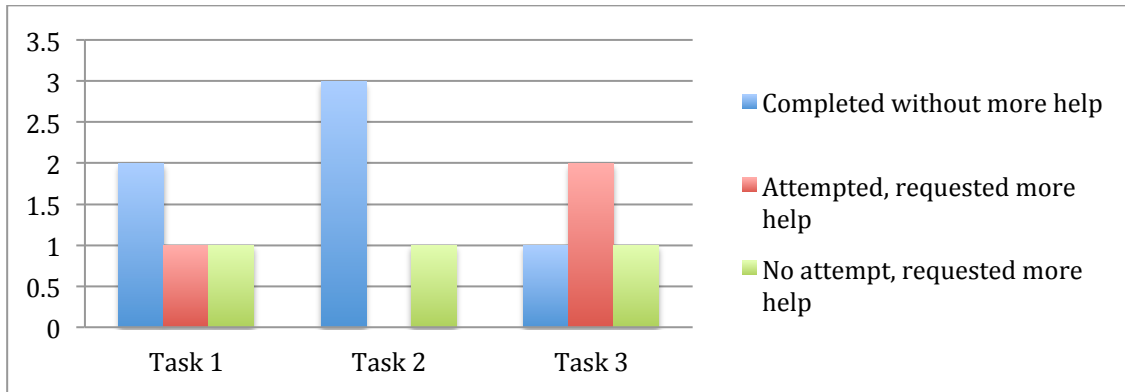


Figure 5-5 - User training - Home Office

Tasks to be completed by user during this training course: Log on to laptop, access secure connection and connect to office applications.

### 5.2.2.3 User training – printer

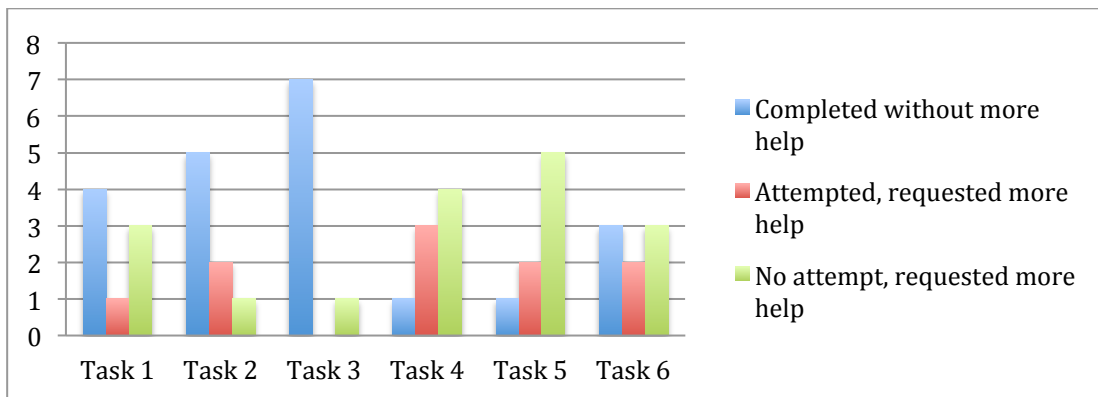


Figure 5-6 - User training - Printer

Tasks to be conducted by the users during part one: Add new printer, Set as default printer, Print to new queue, Verify access card on new printer, log in with username/password and print from queue.

#### 5.2.2.3.1 Overview of evaluation level two

Tasks presented to the users with similarity to their everyday tasks have been completed in a higher level than the newly introduced. Building IT competence on

already existing knowledge provides the users with a better understanding of the changes, and how to complete tasks in a changed environment.

### **5.2.3 Evaluation level three**

For my evaluation of level three, behavioural change I conducted observations in the sales department. During this observation an interesting event occurred. I was to observe his daily routine, and today this was to be “queue leader”. This is supposed to be only handling the incoming cases from customer. If anything related to other members of the teams cases appeared he was to direct this over to that team members’ personal queue. While doing this, User 4.4 came across cases from customers requesting to talk to User A. User A had called in sick last Friday (this being the following Tuesday). User 4.4 is also a CRM super user, and knew his way around the CRM system used for handling customer dialog. User 4.4 tried to find the existing cases that were referred by the users, without luck. User 4.4 consulted his boss with what they should do. These cases had to be dealt with today, and could not wait until User A returned to work. User 4.4’s boss called User A, to double check if User A could recall what had happened to these cases. User A recalled every single case and customer, even what he would suggest as resolutions, but he had not used the CRM system as he was supposed to. He had corresponded with these users through his work email address, and made personal notes on Post-it notes placed on his computer screen, making it impossible to retrieve information related to these cases without waiting for User A to return to work. That is impossible without his consent. User A informed his boss that he was deeply sorry for not using the CRM application as he was instructed, thought and trained to do.

#### **5.2.3.1.1 Overview of evaluation level three**

This was an accidental finding, but showed perfectly how behavioural change is not immediate or a given result to training, and might not happen at all if there is no follow up or goals set by trainers or leaders.

### 5.2.4 Evaluation level four

For my evaluation level four, evaluation of results and outcome I measured a questionnaire conducted by the Development and IT Department.

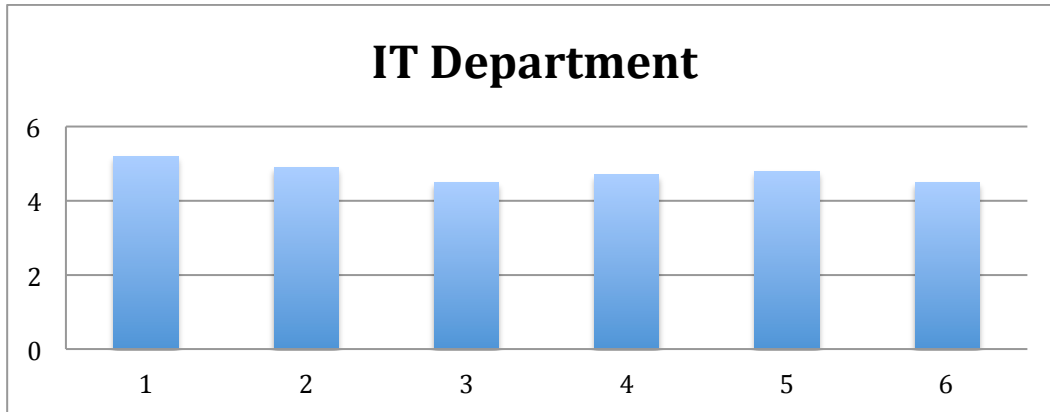


Figure 5-7 - Questionnaire - IT Department

The IT department got a total score of 4.75 and a large number of comments relevant to both support case handling, IT operational and suggestions for further improvements.

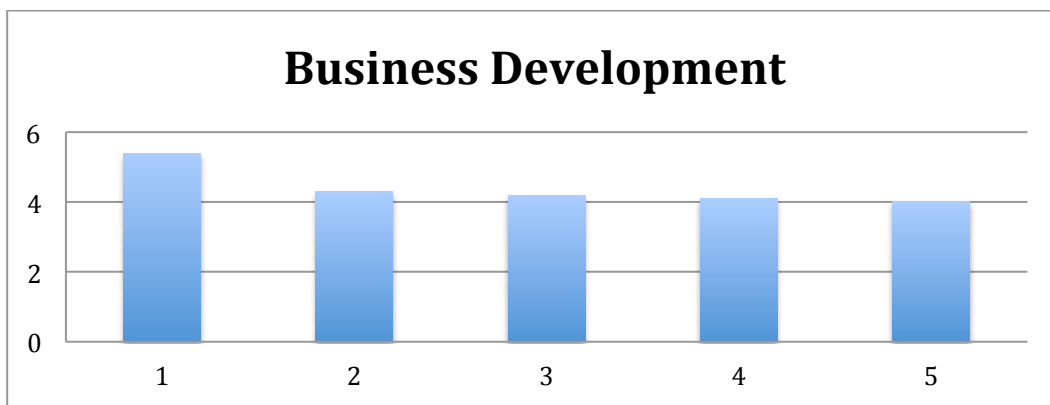


Figure 5-8 - Questionnaire - Business Development

Business Development department got a total score of 4.4 and a number of comments regarding changes or suggestions for improvements intended for business specific applications.

For a greater value to this assignment, another set of questions would be more applicable. I am not permitted to reproduce the data from the comment section to this assignment, but I am allowed to use my coding of the qualitative data from the results, along with the statistics.

I coded the comments provided by the respondents to the questionnaire into three main topics, Overall, Training, and Support, for both the IT Department and Business Development. Under these topics I coded comments that regarded the topics into comments what I felt suited under the categories Pleased, Dissatisfied, Improvements, and Change request.

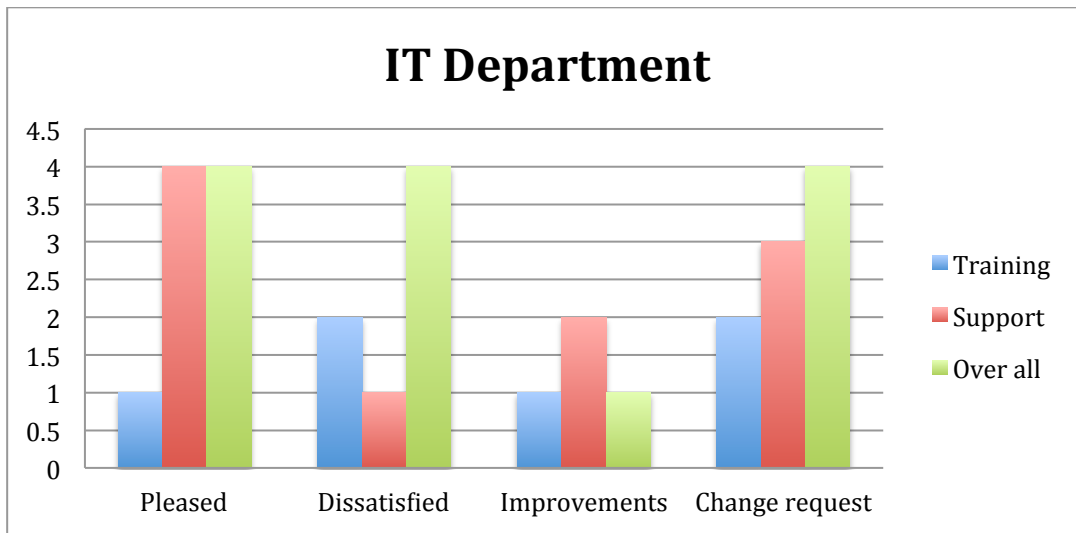


Figure 5-9 - Comments - IT Department

For example the IT Department, 1 comment was regarding pleased with provided training, while 3 comments regarded dissatisfied with provided training.

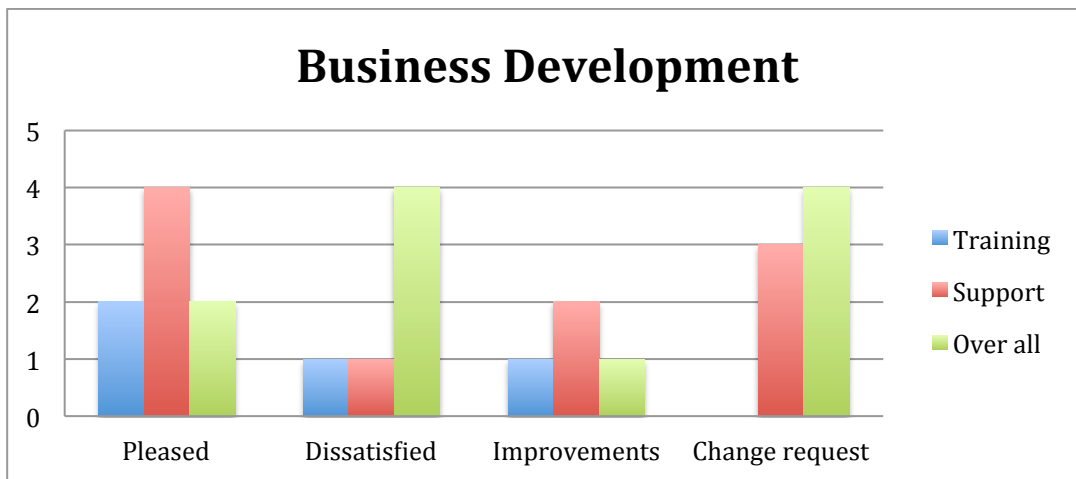


Figure 5-10 - Comments - Business Development

For example 0 comments regarded Change requests towards training, but 4 comments regarded Change requests in general towards the department.

#### 5.2.4.1.1 Overview of evaluation level four

This being a difficult level to evaluate due to the limitations in the data, but show that the users care about how they are being trained and what thoughts they have regarding improvements and changes the users would like to have done to their training courses and generally related to IT in the organization.

## **6 Analysis and discussion**

How the organization improve IT competence is in the form of user training, and maintaining a certain level of IT competence is by providing training when needed, by having a user support and IT Department and using the departments' expert users as super users.

### **6.1 User support**

Since the IT department is structured the way it is in this organization, it also serves as the user support department. Bruton (2002) claim that a true help desk and user supporters have to deal with people for the function of a help desk (user support department) to have any meaning. In the IT Department user support is equally done as all other responsibilities and to some extent done according to the users own priorities. Without the users to serve or help, there would be no need for a user support or IT Department, and their requests and problems should be dealt with accordingly.

As stated by Kaasbøll "support is normally a boundary interaction between an IT specialist [...] and a user" (Kaasbøll, 2013). Users initiate support sessions and the support targets specific and current problems experienced by users (Kaasbøll, 2013). There is no difference here in this organization compared to what Kaasbøll states in his book. Providing on-site support when the user initiates it.

As user support occurred when the user requests it, the support given is also through that same communication channel as the user made the request through. As the requests can be made over the phone, by email, through a case handling system or by visiting the IT department for help, it is not always the users will use the most appropriate or best suited for the particular kind of request.

## 6.2 Super Users

“Almost every organization has individuals who are known to be “experts” or “lead users” in a particular system”(Shen, Y., Gallivan, M.J., 2004, referred to in Gallivan et al., 2005), and putting this in system you have organized super users.

The number of super users needed depends on size and structure of the organization. McNeive (2009) states that one super user per department is sufficient. In the organization, on paper, the number of super users is 10, which equals to one in each department.

Due to what I perceive as lack of attention given to the super users within the organization and by forming new application super user groups on top of the existing super users, the attention has shifted. Super users are no longer replaced when leaving the organization and they are less and less active in the department. To use the super users to its maximum potential a revised focus for the super users should be created. As McNeive (2009) states:

*[...] Super users are users with training and knowledge beyond the regular end users and the super users play a vital role in any system implementation, upgrade, issue reporting, problem solving and day-to-day optimization of [...] applications.*

Gallivan et al. (2005) concluded that their findings confirmed a relationship between co-workers' level of IT usage and training quality, as they are indirectly affected of co-workers' level of IT competence. These findings indicate that super users can be powerful tools within the organization, and should be used to a greater extent than it already is. Nelson and Cheney (1987, referred to by Gallivan et al., 2005) found that experts with in a work group were perceived to be the highest-quality and most frequently used source of knowledge to end users in learning IT. Super users should be included in on-going staff education in how to use IT to improve workflows (McNeive, 2009), IT competence and provide best possible training. Having super users as trainers with the ability to empathize with the changes in processes in use and with new users of IT creates a better bond (McNeive, 2009)



than having IT specialists conducting training, which is the training practice in the organization to this date.

McNeive (2009) states

*A good super users' characteristics is a combination between willingness to use, learn and work with new or updated technology, and act as frontiers and teachers to other end users.*

Super users will also provide end users with a first-line support. By having competent super users who are respected in their department or office, super users ensure you that the end users have ownership of an application or process. Their intended role to function as a 1st line support and to be that person end user prefers to ask for help is not as present and clear in the organization today.

Application super user groups is a good supplement, but should not replace the existing super users. Having application super users will create ownership between the application and the end users. I strongly suggest this is continued in the future for other larger software or hardware projects within this organization due to some lack of ownership amongst the users.

## **7 Conclusion**

As my problem statement "How does organization ABC improve IT competence for new and existing users?"

The organization improve IT competence is in the form of user training, and maintaining a certain level of IT competence by providing training when needed, by having a user support and IT Department and using the departments' expert users as super users.

As it is increasingly common with Information Technology (IT) in today's workplaces, employees' productivity is directly affected by their knowledge of IT. Being aware of users activity fit and their level of IT competence is vital. There is no formal testing or assessing of IT competence of the users in the organization during staff hiring, before or after training courses has been conducted.

Without knowing the users IT competence level or in detail how users interact with systems, one would need to cover all aspects and levels of competence when planning and conducting user training. This is how it is done in this organization for the time being, and I see a great potential in how user training could be conducted in the future by having IT personnel train super users and having super users training users.

The importance of super users, especially in this kind and size of an organization, where there is no sole user support department, is a vital part of developing IT competence. The organization should start involving super users to maintain and develop IT competence throughout the organization. Having application super user groups is a good supplement. Having super users in general will create ownership between the application in question and the users.

I have found that user training, beyond a very basic level, is mostly non-existent in this organization. The only example of training to improve IT competence I found to observe was when introducing new technology or equipment, and even during these training courses the end users acted pro-actively and request more knowledge and training during training courses.

## **8 Limitations**

Being the only group member writing this assignment, conducting the evaluation and observations might have limited me to some extent, both in the possibilities to what I have managed to complete and participate in, and discussing my findings with only myself.

As I am not an employee and signed an agreement form to what information I would be allowed to use and reproduce in the assignment, certain limitations is a given. During my observations and time spent in different departments and my level of attendance in the organization, like staff meetings and or other business critical meeting, was limited. As correspondence between my contact in the organization and myself went over email, some planning was difficult to fulfil. The user training I

observed was directed at learning the users new competence, and little to improving the users' competence with existing software or hardware. If the organization had training like this, but not included me it not been a topic for discussing. Meetings and training courses held at hours I was not present could obviously not be included in this study. The total number of participants makes the sample size not as large as the full number of employees within the organization. Having an observation over a longer period of time would have made the sample size larger, but also created a larger amount of data to be analysed and discussed.

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## **10 Appendices**

Appendix 0.