Reduction of change initiative failures caused by employees' knowledge, skills and abilities in the year 2025

Author: Sandra Jenke
University of Twente
P.O. Box 217, 7500AE Enschede
The Netherlands
s.jenke@student.utwente.nl

Purpose – This study aims at analyzing which knowledge, skills and abilities (KSAs) employees currently possess that contribute to successful organizational change, which KSAs they need to possess in the year 2025 and how managers of large organizations can bridge this potential gap between as-is and to-be KSAs in order to reduce the failure of change initiatives.
Methodology – In order to reach this purpose firstly a literature review was conducted in order to understand how KSAs of employees affect the success of organizational change. Afterwards, a Delphi study, which included two questionnaire rounds, has been performed. This is because Delphi methods are used as forecasting technique and this research sought to find out the future requirements of employees' KSAs to reduce the failure of change initiatives as well as which methods to use in order to bridge these potential gaps.
Findings – With the help of the Delphi study it was found that there is a gap between the current possessed KSAs and the needed KSAs for the year 2025. Experts agreed on these KSAs and found out that these gaps can be bridged through training and development as well as through recruitment.
Limitations – There are limitations that one should have in mind when considering the results. The response rate was relatively low and therefore the whole Delphi study included only six respondents. Moreover, the time frame was very strict and limited and therefore just two rounds of questionnaires were possible.
Practical implications – Organizations should start to analyze the KSAs of their workforce, which are important for successful organizational change. Moreover, the companies should start investing in programs to develop and train their current workforce or hire new personnel who possess these KSAs.

Supervisors: Dr. Sjoerd van den Heuvel and Dr. Anna Bos-Nehles

Keywords
Change management; organizational change; AMO-Model; knowledge; skills; abilities; Delphi method;

5th IBA Bachelor Thesis Conference, July 2nd, 2015, Enschede, The Netherlands.

1. INTRODUCTION

"Every individual experiences change in a unique way." (Bouckenooghe, 2010, p.501)

Nowadays, the world in which an organization is embedded in will continuously change. Therefore, an organization can just survive when it is able to adapt to these changes (Cameron & Green, 2012; Gordon, Stewart, Sweo, & Luker, 2000). However, there is substantial evidence that around 70 percent of the change initiatives in organizations fail (Hughes, 2011; Burnes, 2011). With respect to this the question is raised – why do so many change initiatives fail?

Researchers often consider employees to have the key role in determining the success or failure of change initiatives (Bartunek, Rousseau, Rudolph & DePalma, 2006; Oreg, Vakola & Armenakis, 2011; Fugate, Prussia & Kinicki, 2012). A 60-year review of Oreg et al. (2011) implies that a main determinant of successful organizational change is how the individuals react on the change. With respect to this, employees' attitudes towards change are very important for every organization and can be key to competitive advantage (Cardy & Selvarajan, 2006). Therefore, most organizations value employees who are willing and able to respond positively to changes (Oreg, 2003). Hiatt and Creasey (2003) also emphasize that successful organizational change is dependent on the people in the organization. Some employees are able to change more quickly than others. Therefore, successful organizational change can be called an individual phenomenon, which means that the individuals in an organization influence if change is successful. Already since the 1940s scholars have been studying the reaction of employees towards change situations in organizations. Each employee experiences change situations differently (Bouckenooghe, 2010). For some employees change means advantages, benefits and joy but for others it is connected with disadvantages, stress and suffering (Bouckennooghe, 2010). Additionally to that Oreg (2003) emphasizes that specific reasons for resistance of change are often obvious. Employees may for example not understand the necessity of the change and do not like to change because they assume that change will make their situation worse. Nevertheless, Oreg (2003) also underlined that even when the change is in the employees' own interest some individuals seem to resist. Oreg (2003) found out that some characteristics of the employees have an influence on successful organizational change. He emphasizes that people are more likely to resist change when they possess six common characteristics a) reluctance to loose control, b) cognitive rigidity, c) lack of psychological resilience, d) intolerance to the adjustment period involved in change, e) preference for low levels of stimulation and novelty, and f) reluctance to give up old habits (Oreg, 2003). Therefore, successful change is to some extent dependent employees' abilities. However, successful organizational change is not just dependent on the abilities employees possess but also on their knowledge. Employees need to have specific business knowledge to be able to change successfully. There are a lot of people that did not grow up at a time when organizational change was common. Therefore, they are not that prepared for change situations and the risk is higher that change initiatives fail (Kotter, 1991). Holbeche (2009) also emphasizes the need for the right people in knowledge, which means that employees have to possess specific kind of knowledge in order to be valuable for an organization. Moreover, for successful organizational change employees need to have specific skills. Kotter (1991) underlines, for example, the need for good communication skills in order to facilitate two-way discussions. This is of high importance because it helps people to answer their questions during change situations and therefore make things during the change clearer. These three elements, namely KSAs, are part of the AMO Model (Appelbaum, Bailey, Berg and Kalleberg, 2000). This model underlines that people perform well in an organization when 1) they have the knowledge, skills and abilities (KSAs), 2) the motivation and 3) the opportunity to do so (Boselie, 2010). As aforementioned employees' KSAs influence the reaction of employees on organizational change. This paper will solely focus on this part of the AMO model in order to extensively study this because current literature has rather focused on the employees' motivation (Cameron & Green, 2012; McGregor, 1960; Herzberg, 1968) and opportunity to change successfully (Seo, Putnam & Bartunek, 2004; Cunningham, Woodward, Shannon, Maclntosh, Lendrum, Rosenbloom & Brown, 2002; Cameron & Green, 2012). Moreover, as researchers had only a look on the current state of KSAs employees need to possess (Oreg, 2003; Kotter, 1991; Appelbaum et al, 2000; Boselie, 2010) in order to successfully respond to organizational change situations, this paper will have a look into the future state. Nowadays, it is of high importance to foresee problems because environmental movements will increase which will lead to higher pressure on organizations to change over the next few decades (Kotter, 1996). Moreover, when having a look into the future inefficiencies as well as non-valuable situation can be detected before they actually occur (Firby, 1978) which saves time as well as money. In order to do so this paper will forecast the coming 10 years and will explore the KSAs that will be needed to change now and in 10 years from now. As organizations nowadays change continuously (Botha, Kurie, & Synman, 2014) this time frame seemed to be feasible.

Therefore, this paper aims at answering the following research question:

How can organizations reduce the failure of change initiatives caused by employees' knowledge, skills and abilities in the year 2025?

1) To what extent do employees currently possess these KSAs?

2) Which employees KSAs are needed in organizational change in 2025?

3) How to bridge the potential gap between as-is and to-be KSAs?

This paper aims at analyzing the current and future KSAs needed to successfully implement change initiatives as well as understanding the potential gap between as-is and to-be KSAs. After having analyzed these three sub questions one will be able to formulate answers for the research question.
With respect to this, this paper will focus on large organizations (MNEs). This is because they do not just have to operate in their national environments but also deal with the context of the whole enterprise, which makes change situations even more complex (Rosenzweig & Singh, 1991).

1.1 Academic and Practical Relevance

This research has both an academic as well as a practical relevance because it will give insight into KSAs of employees that are important in organizational change situations. Although there is literature available that looks at the current state of KSAs need in order to reduce the failure of change initiatives, these studies generally neglect the relationship between KSAs and the failure rate of organizational change as well as the future aspect (Oreg, 2003, Kotter, 1991, Goleman, 1998). Hence, research on KSAs employees need in order to reduce the failure of change initiatives in the future is non-existent. Therefore, this research will be a starting point to close the identified gap in the literature namely, which KSAs employees need in order to respond successfully to change initiatives in the year 2025.

From the side of a practitioner performing this research will be also highly valuable. Recruiting and selecting the right people possessing the relevant KSAs, which are needed in the year 2025, is getting more and more important because the demography is changing and therefore the war for talents is increasing (Michaels, Handfield-Jone & Axelrod, 2001). Companies nowadays need talented people because they are their competitive advantage in the market. However, this is not the only advantage for the practitioners. It is also highly valuable to know the KSAs employees need in the future in order to train and develop their current workforce and therefore prepare them for the future. Therefore, this research will support managers to get the right people (selective recruitment and selection) and/or develop their current employees through trainings (training and development) in order to facilitate successful organizational change.

2. THEORY

2.1 Organizational change initiatives

Organizational change initiatives can be defined as "any adjustment or alteration in the organization that has the potential to influence the organization's stakeholders' physical or psychological experience" (Oreg, Tondem By & Michel, 2012, p. 4) . This means that organizational change includes any alteration in the organization, for example changes in the organizational structure, changes in the employees' job description, mergers with another company, implementations of new practices as well as geographical relocations. These changes do not just affect the organizational performance but also and most notably its employees (Oreg et al., 2012). Nowadays the world is continuously changing and employees need to be able to adapt to these changes (Griffin et al., 2007). Therefore, the failure of change initiatives partly depends on the employees. Research also has found out that employees play a key role in determining the success or failure of change initiatives (Bartunek et al., 2006, Oreg et al., 2011). The KSAs that influence successful organizational change will be explained in the next section.

2.2 The KSAs domain influences the failure rate of organizational change initiatives

The AMO Model was first developed by Bailey (1993) and then extended by Appelbaum et al. (2000). It is one of the most frequently used theoretical frameworks in strategic human resource management. The AMO model underlines that employees perform well when 1) they have the knowledge, skills and abilities (KSAs) to do so, 2) they are motivated to do so, and 3) they have the opportunity to do so.

As aforementioned this paper focuses on the KSAs domain and aims to understand which KSAs employees currently possess, which KSAs employees need to possess in the future and how to bridge the gap between as-is and to-be KSAs. In order to do so the KSAs domain will be explained clearly in the following. Hereby Cheney, Hale and Kasper (1990) underline that specific KSAs are required from employees in order to effectively perform tasks and duties. With respect to this it can be said that organizations nowadays are in need of employees that have specific KSAs in order to perform effectively during organizational changes. Therefore, it is necessary to have a look on each component individually in order to understand what it exactly means in respect to organizational change.

At first this paper will elaborate on the first component, knowledge. Knowledge can be defined as an understanding of factors or principles related to a specific subject (Werner & DeSimone, 2009). Cheney et al. (1990) underline that knowledge refers to the content information that is needed to perform adequately in a job. In relation to organizational change situations this means that employees need to possess the required content information regarding the change in order to be able to successfully go through the change process. Kotter (1991) also emphasized this. He found out that employees' have to bring along basic knowledge about change situations. Possessing this basic knowledge about change enables employees to be more adaptive to changes. People that for example have grown up within a changing environment are therefore more likely to adapt different change situations (Kotter, 1991, Holbeche, 2009).

To go on this paper will go into detail on the next component, namely skills. Employees possessing specific skills are also more likely to respond positively to change situations (Kotter, 1991). Additionally to that Cunningham et al. (2002) emphasize that individual readiness for change and therefore their ability to respond positively to change situations is also dependent on employees' skills. Goleman (1998) identified that leaders need to have specific social skill like communication skills, teamwork and collaboration skills and influencing skills. These skills are interdependent because employees need to possess these skills too. When only leaders for example possess these specific skills to communicate highly important two-way discussions (Kotter, 1991) cannot be hold. These two-way discussions help employees to answer their questions and make things during the change clearer.

Abilities, the last component of the KSAs domain, can be defined as employees' current capacity to perform certain tasks or duties in the future (Boselie, 2012). Employees need to possess specific abilities that enable them to respond positively to organizational change. Oreg (2003) identified six common characteristics employees have when they resist organizational change. He emphasizes that employees are more likely to resist changes when they are 1) reluctant to loose control which means that they fear to loose control after the change. Moreover, 2) cognitive rigidity is another characteristic people possess when being resistant to change. These are employees that are close-minded and unwilling to think differently. Besides this employees who 3) lack psychological resilience have a low ability to cope with change situations in organizations and therefore resist organizational change more likely. In addition to that employees that are 4) intolerant to the adjustment period involved in the change have a low ability to adapt to new situations and are therefore more likely to resist changes. Furthermore employees who are able to perform well within a familiar and well defined context but have the tendency to perform poorly outside this given context possess the characteristic of having 5) preference for low levels of stimulation and novelty. These employees are more likely to resist change than those who are able to perform outside a given framework as well as inside this framework. The last characteristic Oreg (2003) identified is 6) reluctance to give up old habits. Employees possess these six characteristics when they are likely to resist change. Therefore this is based on negatively phrased conceptualizations namely on resistance to change. Thus, employees need to possess exactly the opposite characteristic in order to be able to adapt to change situations successfully. This means employees need to be able to accept insecurities, be open-minded to change as well as being flexible and willing to change. Goh, Cousins, and Elliott (2006) also underline that abilities like openness and flexibility are key for successful organizational change. Additionally Griffin, Neal, & Parker (2007) state that the ability to adapt to new situations is widely acknowledged to be a key quality of today's employee in order to reduce the failure change initiatives.

Employees possessing the required KSAs that are important for organizational change can be very beneficial for organizations and therefore can be key to competitive advantage (Cardy & Selvarajan, 2006). Hence, it is very valuable for organizations to

know which KSAs are needed in the year 2025 in order to be prepared.

3. METHODOLOGY

3.1 The Delphi Method process

A Delphi study is conducted in order to gain an understanding of the future state, namely in the year 2025, of employees characteristics that are important for successful organizational change. This is because this research method is a forecasting tool (Rowe & Wright, 1999) and can therefore help to find out more about the potential future requirements of employee characteristics to reduce the failure of change initiatives.

The Delphi method, which was firstly introduced by the Rand Corporation in 1950, can be described as a technique, which seeks to gather information through a series of questionnaires that are answered by experts (Powell, 2002). Hereby, controlled feedback is given by which one can gain the most reliable consensus of position of a group of experts (Okoli & Pawlowski, 2003). One of the main advantages of the Delphi method is that it has the ability to structure group communication and is able to achieve consensus in an area which is uncertain or lack empirical evidence (Powell, 2002). This technique is based on the assumption that group judgments are more reliable than individual judgments (Giannarou & Zervas, 2014).

In the beginning the panel size should be determined with respect to the given resources. At this time and money are important and influential. Current literature underlines that the number of participants can vary extremely from 10 to approximately 1600 (Powell, 2002). However, the technique is more focused on qualities of the expert panel than the number of experts in that panel. Therefore, this research will collect data from approximately ten experts. Okoli and Pawlowski (2003) also recommend a panel size of 10-18 experts. It is important that these experts have agreed to participate in this research will maintain in the process because this method is highly dependent on its sample. Since existing research has demonstrated that a certain amount of respondents decide to drop out of the Delphi survey after only a few questionnaire rounds, more than 10 experts will be asked to participate. This will ensure that sufficient data can be gathered. Regarding the sample it is also important that the individuals have specific knowledge of the topic and therefore can be called experts (Hasson, Kenney, & McKenna, 2000; Powell, 2002). This research will interview experts from large organizations from the area of change management as well as human resource experts and consultants in order to examine an extensive spectrum of views. Participants who have agreed to participate in this research will be informed about the entire process in detail, especially regarding what they will be asked to do, how much time they will have to answer and how their answers will be used in the research (Hasson et. al, 2000).

Delphi methods involve a number of rounds in which respondents offer information and then are able to reconsider and refine their views on defined issues (Green, Hughes, & William, 1998). A classic Delphi technique has four rounds but two or three rounds are usual (Hasson et al., 2000). This paper will deal with two rounds and therefore two questionnaires because this fits in the time period. The first questionnaire is unstructured and has open-ended questions to increase the richness of data. In order to analyze the first questionnaire one needs to code the received answers of the experts. This process will start by deductive coding, which means that codes will be made upfront based on current literature. Afterwards inductive coding will be performed in order to add codes, which are based on the given answers from the experts. By grouping similar responses together themes and categories across the answers can be identified because several terms might be used to express the same issue (Hasson et al., 2000). These themes and categories are "grounded" on the quotations of the experts. With the help of coding it is possible to create an overview of what was answered. Then it is easier to analyze the information given and to find similarities, differences, pattern and structures. This coding process can be either done by hand or with a computer program. After coding and the analysis of the first round one is able to build the second questionnaire, which is more specific and seeks for quantification of earlier findings through a ranking technique (Hasson et al., 2000, Luna-Reyes et al., 2003). This data is analyzed to identify convergence and change as well as consensus of the opinions. Hereby statistical tests will be performed to represent the group's views quantitatively (Dalkey, 1969).

3.2 First questionnaire development

The first questionnaire is an open-ended survey because it should not limit the experts mind to some given answers but rather lead to rich data (Hasson et al, 2000).

The first questionnaire consists of three different parts. The first part is about the current state of employees' characteristics in large organizations. Hereby three questions about KSAs employees currently possess in order to contribute successfully to organizational changes are raised. Each of these three questions focuses on one component of the KSAs domain. The second part is about the future state of employees' characteristics in respect to organizational change. In this part also three questions about the KSAs employees need in the year 2025 to contribute successfully to organizational changes are raised. The last part consists also of three questions, which are about the potential gap between as-is (currently) and to-be (2025) employees' characteristics. In this part also three questions are raised namely about how organizations can bridge the potential gaps between as-is and to-be KSAs.

3.3 Analysis and coding of the first questionnaire responses

The questionnaire has been sent out to 32 experts. This is because research has shown that not all people that have agreed to fill out the survey will actually do so (Gordon, 1994). Gordon (1994) underlines that in general a response rate of 35 to 75 percent is feasible but one also has to expect lower response rates. Moreover, this questionnaire has been sent to different kind of experts from different large companies such as "Post NL", and "ABN Amro" as well as to several consulting companies such as "Capgemini Consulting" and "Johnson and Johnson" in order to obtain a high range of different minds. After two weeks eleven experts have filled out the first questionnaire, which means a response rate of 34 percent.

This questionnaire was analyzed qualitatively. There are several ways to analyze qualitative data (Spencer, Ritchie & O'Connor, 2003). This questionnaire was analyzed in the following way. At first deductive coding will be performed. This is done by making a list of codes upfront, which are based on current literature of employees' characteristics. The codes for this questionnaire are based on the three categories namely knowledge, skills and abilities. These three categories build the foundation for the codes. The category knowledge contains the code basic knowledge about change (Kotter, 1991). The second category skills include communication skills (Kotter, 1991), team working and collaboration skills (Goleman, 1989), influencing skills

(Goleman, 1989) and social skills (Goleman, 1998). The last category, abilities, includes the codes accept insecurities (Oreg, 2003), open-minded (Oreg, 2003), willingness to change (Oreg, 2003) and being flexible (Oreg, 2003). After this inductive coding some given answers of the questionnaires had not been coded. Therefore, the deductive coding method also needed to be carried out. This means that codes had to be added in order to have all received answers coded. For the first category, knowledge, the codes specific business knowledge, knowledge about customer needs and knowledge about drivers for change were added. In the category skills - language skills, cultural and global skills, intellectual skills, professional business skills, data analysis skills and technical skills have also been considered as important for the experts. For the last category namely abilities the codes accountable and ability to motivate self and others were added.

After this coding process for the first two sections of the first questionnaire the coding for the third part of the questionnaire, which is about bridging the gap between as-is (current) and to-be (2025) employee characteristics has been performed. This also started with a deductive coding process. The categories that provide the foundation of this part are on the one hand development and on the other recruitment. The category development contains the categories training (Boselie, 2010) and personal development (Boselie, 2010). The category recruitment includes the code recruiting the right people (Boselie, 2010). Afterwards the inductive coding has been carried out in order to add codes that were mentioned in the answers and have also been considered as important from the experts. For the category development the codes create urgency and awareness and letting room for experimentation have been added.

Table 1: Overview of the codes

Knowledge:

a) Basic knowledge about change (Kotter, 1991)
b) Specific business knowledge
c) Customer needs

Skills:

a) Communication skills (Kotter, 1991)
b) Teamwork and collaboration skills (Goleman, 1998)
c) Influencing skills (Goleman, 1998)
d) Social skills (Goleman, 1998)
e) Language skills
f) Cultural and global skills
g) Intellectual / professional business skills
h) Data analysis skills
i) Technical skills

Abilities:

a) Accept insecurities (Oreg, 2003)
b) Open-minded (Oreg, 2003)
c) Willing to change (Oreg, 2003)
d) Flexible (Oreg, 2003)
e) Accountable
f) Ability to motivate self and others

Development:

a) Training (Boselie, 2010)
b) Personal development (Boselie, 2010)
c) Create urgency and awareness
d) Letting room for experimentation

Recruitment:

a) Recruiting the right people (Boselie, 2010)

3.4 Second questionnaire development

With the help of the deductive and inductive coding several codes have been identified. These codes build the foundation of the second questionnaire, which is a quantitative survey. This questionnaire also consists of three different parts. These three parts are based on the sub questions and therefore enable one to formulate answers for the sub questions as well as for the research question in the end.

The first part was about the current state of employee characteristics in large organizations. Hereby the previously constructed codes were listed for the different categories – knowledge, skills and abilities. Respondents were asked to distribute in total ten points among the codes of each category to the most appropriate ones. The second part of the questionnaire was about the future state, namely in the year 2025, of employee characteristics in large organizations. Here again respondents were asked to distribute in total ten points among the codes of each category to the most appropriate ones. The third and last section of the questionnaire was about the potential gap between as-is (current) and to-be (2025) employee characteristics in large organizations. For this part the previously constructed codes for the two categories – development and recruitment were listed and respondents were again asked to distribute in total ten points among the codes of each category to the most appropriate ones.

3.5 Analysis of the second questionnaire

The second questionnaire has been sent to the eleven respondents that also have answered the first questionnaire. This is because the main goal of the Delphi method is to obtain the most reliable consensus of opinion of a group of experts (Dalkey & Helmer, 1963). Six respondents have replied to this second questionnaire, which means a response rate of 55 percent (for having a close look into the answers and statistical analysis of the second questionnaire, see section 8.1).

The second questionnaire is a quantitative questionnaire and therefore needs to be analyzed differently than the qualitative questionnaire before. Although the aim of the Delphi study is to reach consensus among the experts there is still no common practice to measure consensus (Giannarou & Zervas, 2014). So there are several ways to analyze the second quantitative questionnaire and therefore to find out which items the experts consider as most important and if there is consensus between the experts in the group. Several studies recommend using the calculation of central tendencies like mean, median and mode because these are used to describe the middle and most typical response and therefore representing the central tendency (Binning, Cochran, & Donateli, 1972; Kittell-Limerick, 2005). Moreover, levels of dispersion as the standard deviation and the inter-quartile range are used frequently to provide participants with information about the collected opinions (Hasson, Keeney & McKenna, 2000). These two levels of dispersion led the participants see where their response stands in relation to the whole group. Additionally, the coefficient of variation, which is the division of the standard deviation with the mean, is an important statistical measurement because one can detect whether there is consensus between the given answers from the experts (Saunders, Lewis & Thornhill, 2009; Gupta & Waymire, 2008). Calculating this value and presenting it as percentage is especially important for Delphi studies because it is a standardized measure of dispersion and useful for comparing distributions. Various studies have used this measurement of consensus. When the coefficient of variation (V) is between zero and 50 percent it can be said that there is a good degree of consensus and there is no need for an additional round. If the

coefficient variation is between 50 and 80 percent this is less than satisfactory for a degree of consensus and there is possibly a need for an additional round. When V is higher than 80 percent there is a need for an additional round (van der Gracht, 2012). With respect to this measurement the percentage of people that have mentioned the specific item should also be calculated because this prevents drawing wrong conclusions from the variation coefficient. This is because there can be a low variation coefficient which normally means a high level of consensus and no need for another round. However, if the percentage of people that have mentioned this item as important one is also very low, for example just 30 percent, this means that there is just consensus between the 30 percent of experts that have mentioned this items. Therefore, one needs to be very critical in drawing conclusions from just a few statistical measurements.

In relation to these aforementioned statistical tests one needs to be cautious because they depend on the level of measurement (Hasson, Keeney & McKenna, 2000). There are different levels of measurement, namely nominal, ordinal, interval and ratio measurement. The collected data from this survey is a ratio measurement level, which means that the data scale has a zero point, can be ranked and one is able to determine the degree of difference between them the scale. Therefore, one is able to use each of the aforementioned statistical tests.

With respect to this analysis the three central tendencies mean, mode and median, the standard deviation, the variation coefficient and the percentage of people mentioned the specific item have been calculated to make the results as transparent as possible (see appendix section 8.1).

4. RESULTS

When analyzing the statistical tests (see appendix section 8.1) differences between the KSAs employees need to possess in order to successfully contribute to organizational change in the year 2025 and the KSAs that these employees currently possess can be identified. Moreover, experts have agreed on different possibilities to bridge this potential gap between as-is (current) KSAs and to-be (in the year 2025) KSAs.

4.1 Skills for successful change initiatives

The three most important skills for today that employees currently already possess are good team working and collaboration skills, professional business skills and good communication skills whereas the top three most important skills for the year 2025, that experts have agreed on, are high social skills, good team working and collaboration skills and cultural and global business skills.

One can see that employees currently already possess good team working and collaboration skills (mean of 2,00), which are important for today as well as in the year 2025 (mean of 2,00). The degree of consensus between the experts is in both states high, which can be identified by the variation coefficient of 35,36% in the current state and 35,36% in the future state. Moreover, 83,33 % of the experts have mentioned that employees currently possess this skill and that it will also be important for the future. This is an indicator that this skill can be seen as important for both states. When having a look at the professional business skills employees need in order to successfully contribute to organizational change experts ranked this skill as a skill, which some employees currently already possess in the organization (mean of 1,83). 100% of the experts have mentioned it as relevant today. It can also be said that the experts agreed (variation coefficient of 22,27%) that this skill enables employees today to contribute successfully to organizational change. However, the importance of professional business skills in the year 2025 will decrease (mean of 1,50). Only 33,33% of the experts even mentioned this skill as an important skill that employees need to possess in the future. To go on good communication skills are also seen from the experts as important skill, which employees currently possess in order to contribute successfully to organizational change (mean of 1,80). 83,33% of the experts agreed (variation coefficient of 24,85) that this skill is important for today. For the year 2025 the experts agreed (variation coefficient of 38,73) that other skills are of higher importance but that good communication skills are still significant in respect to the future (mean of 1,33). High social skills are getting more and more importance in the future (mean of 2,20) whereas they are not under the top three of the skills that are employees currently possess (mean of 1,50). Almost 85 % of the experts have agreed that this skill is the most important skill employees need to have in order to contribute successfully to organizational change in the year 2025 (variation coefficient of 38,03). Additionally to that one can see from the statistical analysis that good data analysis skills are currently possessed by some of the employees which helps them to successfully contribute to organizational changes (mean of 1,50). This skill is not significantly getting more relevance in the future (mean of 1,40). Moreover good language skills are getting more importance in the future, which can be seen from the percentage of experts that have mentioned this item as important. Today just 50% of the experts have agreed that employees are possessing good language skills, which help them to successfully contribute to organizational changes. Regarding the future state 83,33% of the experts have mentioned language skills as one important skill for the year 2025. Additionally, experts agreed that it does not help employees currently to possess intellectual business skills. This skill does not help employees today to successfully contribute to organizational changes (mean of 1,33). This can also be seen by the percentage of experts that have mentioned this skill (50%). This is the same for the future – just 33,33% of the experts have given intellectual business skills points. The lowest influence on employees' ability to contribute successfully to organizational change does the technical skills have (mean of 1,20 in the current state and of 1,33 in the future state). One main difference between current state and future state can be seen in respect to cultural and global business skills. Currently not a lot of employees do possess these skills (mean of 1,33) but they are increasingly important for employees in the year 2025 (mean of 1,66). This skill is under the top three most important skills for the future, which experts have agreed on (coefficient variation of 34,23%). Hereby, nearly 85% of the experts have mentioned this skill as getting important in the year 2025.

It can be said that the top three skills that employees currently possess in order to be able to successfully contribute to organizational changes are good team working and collaboration skills, professional business skills and good communication skills. The importance of professional business skills, which employees need to possess, decreases in the future. While the importance of high social skills and cultural and global business skills will increase in the year 2025.

4.2 Abilities for successful change initiatives

The three most important abilities for today, that employees currently already possess, are the ability to motivate themselves and others, the ability of being open-minded and the ability of being flexible. Experts have agreed that employees currently are able to motivate themselves and others and that this enables them to contribute to successful organizational change (mean of 2,33 and coefficient variation of 44,26%). This ability will also be important in the future (mean 2,17) even when experts see other abilities as more important. The degree of consensus with respect

to this ability is not given (53,96%), which means that the experts have different opinions about the importance of this ability onto successful organizational change. Moreover, the ability of being open-minded is important with respect to organizational changes (mean of 2,33). Currently some employees already possess this ability which helps them to change successfully within the organization. This ability will also be important for the future (mean of 2,66). 100% of the employees have mentioned this ability as important for the future and there is high consensus in respect to this item (variation coefficient of 19,36%). Additionally experts agreed that the ability of being flexible is currently possessed by employees and enables them to contribute to successful organizational change (mean of 2,33 and variation coefficient of 22,13%). Experts did not agree that this ability is an important ability for the future (coefficient variance of 51,23%) but it can be seen as one because 100% of the experts have mentioned it. Employees also possessing the ability of being accountable to some extent, which is also important for successful organizational change (mean of 2,00), which experts agreed on (variation coefficient of 35,36). However, experts had different viewpoints of the importance of the ability of being accountable as support for organizational change (variation coefficient of 70,71%) even though just 33,33% of the experts have even mentioned this ability as important for the year 2025. To go on, the ability to accept insecurities is not seen as widely possessed by employees currently (mean of 1,60) but experts have agreed that this ability will be under the top three abilities employees need to possess in order to successfully contribute to organizational changes in the year 2025 (variation coefficient of 33,33).

It can be said that the top three abilities that employees currently possess in order to successfully contribute to organizational change are the ability to motivate themselves and others, the ability of being open-mined and the ability of being flexible. For the future employees need to be able to accept insecurities more than today, they need to be more flexible and open-minded to be able to successfully contribute to organizational changes.

4.1 Knowledge for successful change initiatives

Employees currently possess specific business knowledge, which enable them to contribute successfully to organizational changes (mean of 4,33). Experts have agreed, that this specific business knowledge is currently possessed by employees in organizations (variation coefficient of 18,84%). This knowledge will not be that important for the future (mean of 2,33), on which experts have agreed (variation coefficient of 22,13). Employees currently also possess the knowledge about customer needs which helps them to manage organizational change successfully (mean of 3,50). The consensus in respect to this is high (coefficient variation of 15,64) and 100% of the experts have mentioned it. Experts agree that currently the employees do not have a lot of knowledge about the drivers for change (mean of 1,66), which is getting more important in the future (mean of 2,50). Experts have agreed that knowledge about drivers for change will enable employees to successfully contribute to organizational change in the year 2025. Moreover, employees do not currently possess the basic knowledge about change management (mean of 1,33) on which experts have agreed (variation coefficient of 38,73%). The importance of knowing the basic things about change management will also increase in the future (mean of 2,00).

It can be said that the top three of the knowledge category that employees currently possess in order to successfully contribute to organizational change are specific business knowledge, knowledge about customer needs and knowledge about drivers for change. Employees in the year 2025 need to possess more knowledge about drivers for change. Moreover, the importance of knowledge about customer needs and basic knowledge about change management will increase. Employees that will possess the relevant knowledge for the year 2025 will be able to successfully contribute to organizational change.

4.4 Possibilities to bridge the gap of as-is KSAs and to-be KSAs

As aforementioned gaps between as-is KSAs (current) and to-be KSAs (2025) have been identified. So one needs to bridge these gaps. In the following the experts' views on how to bridge these gaps will be analyzed.

Firstly, experts ranked several ways to develop and train or recruit the right people in skills for the year 2025. The need for high social skills and cultural and global business skills for example will increase in the year 2025 and is not yet adequately possessed by employees in organizations. These gaps between as-is skills and to-be skills can be best bridged through training (mean of 2,66). Even when the experts did not have the same opinion on this (coefficient variance 69,83%) it is mentioned by 100% of the experts as possibility to bridge the gap. Moreover, when having a deeper look into the data one can see an outlier, which is the reason for this high coefficient variance. So it can be said that training is one of the most important ways to develop the current workforce in the organization. Moreover, experts agreed that this gap could be bridged through letting room for experimentation, which is seen as second most important method to close the gap (mean of 2,40). The experts agreed that the gap in skills could also be bridged through personal development (mean of 2,16 and variation coefficient of 34,74%) or through recruiting the right people (mean of 2,16 and variation coefficient of 34,74%). The experts did not think that the gap could be bridged trough creating urgency and awareness, which can be seen from the low rate of experts that have mentioned this as an important method (33,33%).

Secondly, experts were asked to rank several possibilities to develop and train or recruit the right people in respect to abilities. The need for organizations to have employees who possess the ability to accept insecurities will be of high importance in the future and is not yet possessed by a lot of employees in the organization. This gap could be closed through letting room for experimentation (mean of 3,60). Even though the variation coefficient of 69,72 shows that experts did not agree upon this aspect when having a deeper look into the data one can see that this disagreement was just caused by one respondent who gave eight of ten points to this method. The other experts rather gave two or three points to this way to bridge the gap between as-is and to-be abilities. This means when one would exclude the outlier consensus would exist. Consequently one can conclude that the method to bridge the gap in abilities could be reached through letting room for experimentation. Moreover, experts agreed that personal development could also be seen as one method that is important in closing the gap between as-is and to-be KSAs (mean of 2,83). Additionally training as well as recruiting the right people are two important ways in order to bridge the gap and to get the right people for the organization. As also seen from the skills part before experts here also agree that abilities cannot be developed through creating urgency and awareness. Only 33,33% of the experts mentioned it as possibility to bridge the gap in respect to as-is abilities and to-be abilities.

Lastly, experts were asked to rank several possibilities to develop and train or recruit the right people in respect to knowledge. Experts agreed that the gap between as-is knowledge and to-be knowledge could be best developed through training (mean of

3,4). Additionally they agreed that knowledge could be easier recruited than for example skills or abilities (mean of 2,50 and variation coefficient of 41,95%). Additional knowledge could be developed through creating urgency and awareness among employees that it is important to develop them in respect to knowledge (mean of 2,33). Moreover, experts agreed that other possibilities could be letting employees room for experimentation (mean of 2,20 and variation coefficient of 0,447214). 88,33% of the experts mentioned that the gap between as-is knowledge and to-be knowledge could also be bridged through personal development (mean of 2,00). However, they did not agree on this aspect.

5. DISCUSSION

5.1 Conclusion

This research was conducted in order to answer the research question, namely "How can organizations reduce the failure of change initiatives caused by employees' knowledge, skills and abilities in the year 2025?".

With the help of the two questionnaire rounds of the Delphi study the KSAs that employees in general currently possess in order to contribute to successful organizational change were identified. The top three skills employees currently possess are good team working and collaboration skills, professional business skills and good communication skills. Moreover, employees currently have the abilities to motivate themselves and others, to be open-minded as well as flexible. They have specific business knowledge and are aware of their customers needs.

However, employees in the year 2025 need to have some different KSAs as they currently possess. Hereby this research has found out that the need for high social skills will increase as well as the need for cultural and global business skills. Moreover, employees possessing the ability to accept insecurities will be more and more valuable for organizations because changes will increase and the employees to accept those situations. Additionally, employees should have knowledge about drivers for change in order to understand changes better and therefore be better able to contribute successfully to organizational change.

As it was shown in the results and can be seen from the statistical analysis gaps between as-is and to-be KSAs have been identified. These gaps need to be closed by organizations in order to make sure that organizational change can be performed successfully in the year 2025. Hereby different techniques and methods were mentioned that support managers to help employees to prepare themselves for the year 2025. In respect to this it can be said that the analysis was not detailed enough in order to give a lot of insights into the real process. However, it can be said that managers need to train and develop their current workforce with the help of trainings, letting their employees room for experimentation, or helping them to develop themselves. Besides training and developing their current workforce, it is essential that human resource managers are aware of the KSAs that employees need to possess in the year 2025 in order to recruit the right people. In order do so organizations can reduce the failure of change initiatives caused by employees' knowledge, skills and abilities in the year 2025.

5.2 Limitations

Limitations of this Delphi study should be taken into account when having a look onto the results. The first limitation is that the response rate for the first (34,5%) as well as for the second questionnaire (54,55%) has been relatively low. As Delphi studies are dependent on the experts that have agreed to participate in the surveys that is one major limitation of the study. Additionally, Dajani, Sincoff and Talley (1997) have found out that group stability is very important for Delphi studies and that this needs to be reached beforehand. In respect to this it would be wise to analyze why so many experts have not participated even if they said in the beginning they would like to be part of this Delphi study. Reasons for this are that they do not had enough time to answer because they were too busy and that the questionnaire was too long in their opinion. Moreover, other reasons could be that they were not really interested in the topic anymore or that they were not able to answer the questions in the questionnaire. There are more reasons why experts might have stopped that should be taken into account for further studies.

Another limitation of this research is that the time frame was very limited and therefore just two rounds of questionnaires were possible to conduct. Even though it could also have been that consensus would have not been reached after the second round. Moreover, experts had few time to respond, namely two weeks for each questionnaire, because the analysis was structured very strictly. With respect to this Delphi study it would have been better to include another questionnaire in order to see if there is consensus between the answers given in the second and in the third quantitative questionnaire. Several studies are doing this in order to see if there is consensus between the rounds (Geist, 2010). Moreover, when having two or three quantitative questionnaire rounds one would also be able to calculate higher statistical measurement levels like for example Kendall's W which was mentioned in several studies as good measurement level for analyzing consensus between the rounds (Giannarou et al., 2014).

Besides this the ranking technique for the second questionnaire should have been done differently. Mostly the experts gave each knowledge, skill and ability two or three points of ten. This could have been improved by giving experts the instruction to distribute the ten points to the three most important KSAs as well as to the three most important ways of how to bridge the gaps. Then it would have been easier to analyze which are the most important KSAs for the year 2025 will be.

5.3 Implications

5.3.1 Practical Implications

As current research had already found out, human resources are one of the key elements in the organization that affect if organizational change will be successful (Bartunek et al., 2006, Fugate et al., 2012). This research has studied which KSAs employees need in order to be able to change successfully as well as which KSAs they currently possess and how managers in large organizations could bridge the gap between as-is and to-be KSAs. Therefore, this paper refers as starting point to help managers of large organizations because it gives them input of which KSAs will be needed in the year 2025. When having this essential information in mind human resource departments could start analyzing which KSAs their current workforce already possess in order to see where their potential gaps between as-is and to-be KSAs are. Due to the fact that the current KSAs employees possess in order to contribute successfully to organizational changes will differ from organization to organization and this research has just found out the general assumption of which KSAs employees currently possess. Once having analyzed this, organizations would be able to start developing training and development programs for their current workforce.

5.3.2 Theoretical implications

As this research focuses on the future state instead of the current state of KSAs employees need to possess in order to change successfully it is, as aforementioned, a starting point to close this gap in the literature. Therefore, it provides researchers with a general idea of which KSAs will be important in the future, which KSAs are possessed by employees currently as well as how to bridge this gap in order to make employees able to change successfully.

In respect to future research it would be interesting to focus on the techniques and methods of how to develop and train the current workforce to get the specific KSAs that are needed by employees to change successfully as well as how to recruit people possessing these KSAs. This could be done through another Delphi study including experts from the field of training and development and from the recruitment department. With the help of this one could get for example more insight of what kind of different training methods there are, how to let people room for experimentation and how personal development could happen in relation to organizational changes.

6. ACKNOWLEDGEMENTS

First of all I would like to say thank you to my first supervisor, Dr. Sjoerd van den Heuvel for his constructive feedback, his positive and motivating attitude and his helpfulness. Additionally, I would like to say thank you to my second supervisor, Mrs. Anna Bos-Nehles, for her feedback and to the respondents for taking their time to fill out the two questionnaires. Last but not least, thanks to my family and friends for supporting me each and every day.

7. REFERENCES

1. Appelbaum, E., Bailey, T., Berg, P. & Kalleberg, A. (2000). Manufacturing advantage: Why high performance work systems pay off. New York: Cornell.

2. Baley, T. (1993). Organizational innovation in the apparel industry, *Industrial Relations*, 32, 30-48.

3. Barnett, G. A. (1988). *Communication and Organizational Culture*, Ablex, New Jersey.

4. Bartunek, J.M., Kinicki, Rudolph, J.W., & DePalma, J.A. (2006). On the receiving end: Sensemaking, emotion, and assessment of an organizational change initiated by others. *Journal of Applied Behavioral Science*, 42(2), 182-206.

5. Binning, D., Cochran, S., & Donatelli, B. (1972). Delphi panel to explore post-secondary educational needs in the state of New Hampshire. Manchester, NH: Decision Research.

6. Boselie, P. (2010). Strategic Human Resource Management: A balanced Approach. Tata McGraw-Hill Education

7. Botha, A., Kourie, D., & Snyman, R. (2008). Coping with continuous change in the business environment: Knowledge management and knowledge management technology. Chandos Publishing Limited, Oxford.

8. Bouckenooghe, D. (2010). Positioning Change Recipients' Attitudes Toward Change in the Organizational Change Literature. *Journal of Applied Behavioral Science, 46*(4), 500– 531.

9. Boxall, P. & Purcell, J. (2003). Strategy and Human Resource Management. New York: Palgrave Macmillan.

10. Burnes, B. (2011). Introduction: Why Does Change Fail, and What Can We Do About It?. *Journal of Change Management*, 11 (4), 445-450.

11. Bridges, W. (1991). *Managing transitions: Making the most of change*. Reading, MA: Addison Wesley.

12. Cameron, E., & Green, M. (2012). Making sense of change management: A complete guide to the models, tools and techniques of organizational change, Kogan Page Publishers, London.

13. Cardy, R.L., & Selvarajan, T.T. (2006). Competencies: Alternative frameworks for competitive advantage. *Business Horizons*, 49, 235—245.

14. Cheney, P.H., Hale, D.P., Kasper, G.M., (1990). Knowledge, skills and abilities of information systems professionals: past, present and future. *Information & Management,* 19, 237-247.

15. Cunningham, C.E., Woodward, C.A., Shannon, H.S., Maclntosh J., Lendrum, B., Rosenbloom, D., & Brown, J. (2002). Readiness for organizational change: A longitudinal study of workplace, psychological and behavioral correlates. *Journal of Occupational and Organizational Psychology*, 75, 377-392.

16. Dajani, J.S., Sincoff, M.Z., Talley, W.K (1997). Stability and agreement criteria for the termination of Delphi studies. *Technological Forecasting and Social Change,* 13 (1), 83-90.

17. Dalkey, N. (1969). The Delphi method: An experimental study of group opinion. Santa Monica, CA: Rand Corporation.

18. Dalkey, N., Helmer, O., (1963). An Experimental Application of the Delphi Method to the Use of Experts. Management Science, 9 (3), 458-467.

19. Firby, R.J. (1978). An investigation into reactive planning in complex domains.

20. Geist, M. R. (2010). Using the Delphi method to engage stakeholders: A comparison of two studies. Evaluation and Program Planning, 33(2), 147-154.

21. Giannarou, L., Zervas, E. (2014). Using Delphi technique to build consensus in practice. Int. Journal of Business Science and Applied Management, 9 (2).

22. Goh, S. C., Cousins, J. B., & Elliott, C. (2006). Organizational learning capacity, evaluative inquiry and readiness for change in schools: Views and perceptions of educators. *Journal of Educational Change, 7*, 289-318.

23. Gordon, T. J. (1994). The delphi method. *Futures research methodology*, *2*.

24. Gordon, S. S., Stewart, W. H., Sweo, R., & Luker, W. A. (2000). Convergence versus strategic reorientation: The antecedents of fast-paced organizational change. *Journal of Management,* 26, 911-945.

25. Green, B., Jones, M., Hughes, D., & William, A. (1998). Applying the Delphi technique in a study of GP's information requirements. *Health and social care in the community*, 7 (3), 198-205.

26. Griffin, M.A., Neal, A., & Parker, S.K. (2007). A new model of work role performance: Positive behavior in uncertain and interdependent contexts. *Academy of Management Journal*, 50, 215-224.

27. Gupta, V. K., & Waymire, E. C. (2008). Spatial variability and scale invariance in hydrologic regionalization. In S. Garrison (Ed.), Scale dependence and scale invariance in hydrology (pp. 88-135). New York: Cambridge University Press.

28. Hasson, F., Kenney, S., & McKenna, H. (2000). Research guidelines for the Delphi survey technique. *Journal of Advanced Nursing*, 32(4), 1008-1015.

29. Herzberg, F. (1968). One more time: how to motivate employees? *Havard Business Review.*

30. Hiart, J., Creasey, T.J. (2003). Change Management: the people side of change. 53-62.

31. Holbeche, L. (2009). Managing change in difficult times. Legal Information Management, 9, 253-256.

32. Hughes, M. (2011). Do 70 Per Cent of All Organizational Change Initiatives Really Fail?. *Journal of Change Management*, 11(4), 451-464.

33. Huselid, M.A. (1995). The impact of human resource management practices on turnover, productivity, and corporate financial performance, Academy of Management Journal, 38(3), 635-672.

34. Huselid, M. A., Becker, B. E., & Beatty, R. W. (2005). The workforce scorecard: Managing human capital to execute strategy. Boston, MA: Harvard Business School Press.

35. Kittell-Limerick, P. (2005). Perceived barriers to completion of the academic doctorate: A Delphi study. Texas:Texas A&M University-Commerce.

36. Lepak, D. P., Liao, H., Chung, Y., & Harden, E. E. (2006). A conceptual review of human resource management systems in strategic human resource management research. *Research in personnel and human resource management*, 217–271.

37. Luna-Arcas, R. & Camps, J. (2008). A model of high performance work practices and turnover intentions, Personnel Review, 37(1), 26-46.

38. Luna-Reyes, L.,F., Andersen, D.L., (2003). Collecting and analyzing qualitative data for system dynamics: methods and models. *Syst. Dyn. Rev.* 19, 271–296.

39. McGregor, D., (1960). The Human Side of Enterprise. McGraw-Hill, Maidenhead.

40. Michaels, E., Handfield-Jone, H. & Axelrod, I., (2001). The War for Talent.

41. Okoli, C., & Pawlowski, S. D. (2003). The Delphi method as a research tool: an example, design considerations and applications. *Information & Management,* 42, 15–29.

42. Oreg, S., Michel, A., Tondem By, R. (2013). The psychology of organizational change Viewing change from the Employee's Perspective. Cambridge University Press, New York.

43. Oreg, S., Vakola, M., & Armenakis, A. (2011). Change Recipients' Reactions to Organizational Change: A 60-Year Review of Quantitative Studies. *Journal of Applied Behavioral Science, online version*, 1–6.

44. Powell, C. (2002). The Delphi technique: myths and realities. *Journal of advanced nursing*, 41(4), 376–382.

45. Rosenzweig, P.M., & Singh, J.V. (1991). Organizational environment and the multinational enterprise. Academy of Management Review, 16(2), 340-361.

46. Rowe, G., & Wright, G. (1999). The Delphi technique as a forecasting tool: issues and analysis. *International journal of forecasting*, *15*(4), 353-375.

47. Saunders, M., Lewis, P., & Thornhill, A. (2009). Research methods for business students (5th ed.). Harlow, Essex: Pearson Education Limited.

48. Seo, M. F., Putnam, L. L., & Bartunek, J. M. (2004). Dualities and tensions of planned organizational change. In M. S. Poole & A. H. Van de Ven (Eds.), *Handbook of organizational change and innovation* (pp. 73-107). Oxford, England: Oxford University Press.

49. Werner, J., DeSimone, R. (2009). Human Resource Development.

50. Wood, W. (2000). Attitude change: Persuation and social influence. Annual Review of Psychology, 51, 539-570.

8. Appendix

8.1 Answers and statistical analysis of the second questionnaire

Current state: Skills	Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7	Respondent 8	Respondent 9	Respondent 10	Respondent 11	Mean	Median	Mode
Good team working and collaboration skills		2		1			2		2	3		2,00	2	2
Professional business skills		1	2	2			2		2	2		1,83	2	2
Good communication skills		2		2			2		2	1		1,80	2	2
High social skills		1		1			2			2		1,50	1,5	1,2
Good data analysis skills		1	2				2			1		1,50	1,5	1,2
Good language skills			2	1					1			1,33	1	1
Cultural and global business skills		1		1					2			1,33	1	1
Intellectual business skills		1	2	1								1,33	1	1
Good technical skills		1	2	1					1	1		1,20	1	1
Current state: Abilities	Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7	Respondent 8	Respondent 9	Respondent 10	Respondent 11	Mean	Median	Mode
The ability to motivate themselves and others		2	2	3			1		2	4		2,33	2	2
The ability of being open-minded		2	2	2			3		3	2		2,33	2	2
The ability of being flexible		2	3	3			2		2	2		2,33	2	2
The ability of being accountable		2	1	2			3		2			2,00	2	2
The ability to accept insecurities		2	2				1		1	2		1,60	2	2
Current state: Knowledge	Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7	Respondent 8	Respondent 9	Respondent 10	Respondent 11	Mean	Median	Mode
Specific business knowledge		3	5	4			5		4	5		4,33	4,5	5
Knowledge about customer needs		3	4	3			4		3	4		3,50	3,5	3,4

Knowledge about drivers for change		2		1					2			1,33	1	1
Basic knowledge about change management		2	1	2			1		1	1		1,33	1	1
Future state: Skills	Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7	Respondent 8	Respondent 9	Respondent 10	Respondent 11	Mean	Median	Mode
High social skills			3	1			2		2	3		2,20	2	3,2
Good team working and collaboration skills			3	1			2		2	2		2,00	2	2
Cultural and global business skills		2	2	1					1	2		1,60	2	2
Good language skills		2		1			2		1			1,50	1,5	1
Intellectual business skills				1			2					1,50	1,5	2,1
Professional business skills				2					1			1,50	1,5	2,1
Good data analysis skills		2		1			1		1	2		1,40	1	1
Good communication skills		2	2	1			1		1	1		1,33	1	1
Good technical skills		2		1					1			1,33	1	1
Future state: Abilities	Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7	Respondent 8	Respondent 9	Respondent 10	Respondent 11	Mean	Median	Mode
The ability of being open-minded		3	3	2			2		3	3		2,66	3	3
The ability of being flexible		3	1	1			4		4	3		2,66	3	1,3,4
The ability to accept insecurities		3	3	2			1		2			2,20	2	3,2
The ability to motivate themselves and others		1	3	2			2		1	4		2,17	2	1,2
The ability of being accountable				3			1					2,00	2	1,3
Future state: Knowledge	Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7	Respondent 8	Respondent 9	Respondent 10	Respondent 11	Mean	Median	Mode
Knowledge about customer needs		2	2	3			4		4	4		3,16	3,5	4
Knowledge about drivers for change		3	4	2			2		2	2		2,50	2	2
Specific business knowledge		2	2	3			2		3	2		2,33	2	2

Basic knowledge about change management		3	2	2			2		1	2		2,00	2	2
Bridge the gap: Skills	Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7	Respondent 8	Respondent 9	Respondent 10	Respondent 11	Mean	Median	Mode
Through training		1	3	2			6		3	1		2,66	2,5	1,3
Through letting room for experimentation.		2	3	2					2	3		2,4	2	2
Through personal development		2	3	2			2		3	1		2,16	2	2
Through recruiting the right people		3	1	2			2		2	3		2,16	2	2
Through creating urgency and awareness.		2		2						2		2	2	2
Bridge the gap: Abilities	Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7	Respondent 8	Respondent 9	Respondent 10	Respondent 11	Mean	Median	Mode
Through letting room for experimentation.		2	3				8		3	2		3,6	3	2, 3
Through personal development		2	3	4			2		3	3		2,83	3	3
Through training		2	3						2			2,33	2	2
Through recruiting the right people		2	1	4					1	3		2,2	2	1
Through creating urgency and awareness.		2		2					1	2		1,75	2	2
Bridge the gap: Knowledge	Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7	Respondent 8	Respondent 9	Respondent 10	Respondent 11	Mean	Median	Mode
Through training		3	3	2			4		5			3,4	3	3
Through recruiting the right people		3	1	2			4		2	3		2,5	2,5	2, 3
Through creating urgency and awareness.		2		2						3		2,33	2	2
Through letting room for experimentation.			3	2			2		2	2		2,2	2	2
Through personal development		2	3	2					1	2		2	2	2

Results of the second questionnaire				
Current state: Skills	Mean	Standard deviation	Variation coefficient (Mean/standard deviation*100) in %	Percentage of people having mentioned this item
Good team working and collaboration skills	2,00	0,707107	35,36	83,33
Professional business skills	1,83	0,408248	22,27	100,00
Good communication skills	1,80	0,447214	24,85	83,33
High social skills	1,50	0,577350	38,49	66,67
Good data analysis skills	1,50	0,577350	38,49	66,67
Good language skills	1,33	0,577350	43,30	50,00
Cultural and global business skills	1,33	0,577350	43,3013	50,00
Intellectual business skills	1,33	0,577350	43,30	50,00
Good technical skills	1,20	0,447214	37,27	83,33
Current state: Abilities	Mean	Standard deviation	Variation coefficient	Percentage of people having mentioned this item
The ability to motivate themselves and others	2,33	1,032796	44,26	100,00
The ability of being open-minded	2,33	0,516398	22,13	100,00
The ability of being flexible	2,33	0,516398	22,13	100,00
The ability of being accountable	2,00	0,707107	35,36	83,33
The ability to accept insecurities	1,60	0,547723	34,23	83,33
Current state: Knowledge	Mean	Standard deviation	Variation coefficient	Percentage of people having mentioned this item
Specific business knowledge	4,33	0,816497	18,84	100,00
Knowledge about customer needs	3,50	0,547723	15,65	100,00
Knowledge about drivers for change	1,66	0,577350	34,64	66,67
Basic knowledge about change management	1,33	0,516398	38,73	100,00

Future state: Skills	Mean	Standard deviation	Variation coefficient	Percentage of people having mentioned this item
High social skills	2,20	0,836660	38,03	83,33
Good team working and collaboration skills	2,00	0,707107	35,36	83,33
Cultural and global business skills	1,60	0,547723	34,23	83,33
Good language skills	1,50	0,577350	38,49	83,33
Intellectual business skills	1,50	0,707107	47,14	33,33
Professional business skills	1,50	0,707107	47,14	33,33
Good data analysis skills	1,40	0,547723	39,12	83,33
Good communication skills	1,33	0,516398	38,73	100,00
Good technical skills	1,33	0,577350	43,30	50,00
Future state: Abilities	Mean	Standard deviation	Variation coefficient	Percentage of people having mentioned this item
The ability of being open-minded	2,66	0,516398	19,36	100,00
The ability of being flexible	2,66	1,366260	51,23	100,00
The ability to accept insecurities	2,20	0,836660	38,03	83,33
The ability to motivate themselves and others	2,17	1,169045	53,96	100,00
The ability of being accountable	2,00	1,414214	70,71	33,33
Future state: Knowledge	Mean	Standard deviation	Variation coefficient	Percentage of people having mentioned this item
Knowledge about customer needs	3,16	0,983192	31,05	100,00
Knowledge about drivers for change	2,50	0,836660	33,47	100,00
Specific business knowledge	2,33	0,516398	22,13	100,00
Basic knowledge about change management	2,00	0,632456	31,62	100,00

Bridge the gap: Skills	Mean	Standard deviation	Variation coefficient	Percentage of people having mentioned this item
Through training	2,66	1,861899	69,83	100,00
Through letting room for experimentation.	2,40	0,547723	22,82	83,33
Through personal development	2,16	0,752773	34,74	100,00
Through recruiting the right people	2,16	0,752773	34,74	100,00
Through creating urgency and awareness.	2,00	0,00000	0,00	33,33
Bridge the gap: Abilities	Mean	Standard deviation	Variation coefficient	Percentage of people having mentioned this item
Through letting room for experimentation.	3,60	2,509980	69,72	100,00
Through personal development	2,83	0,752773	26,57	83,33
Through training	2,33	0,577350	34,74	100,00
Through recruiting the right people	2,20	1,303840	34,74	100,00
Through creating urgency and awareness.	1,75	0,500000	0,00	33,33
Bridge the gap: Knowledge	Mean	Standard deviation	Variation coefficient	Percentage of people having mentioned this item
Through training	3,4	1,140175	33,53	83,33
Through recruiting the right people	2,50	1,048809	41,95	100,00
Through creating urgency and awareness.	2,33	0,577350	24,74	50,00
Through letting room for experimentation.	2,2	0,447214	20,33	83,33
Through personal development	2,00	0,707107	35,36	83,33