Job training in multinational companies
- The case of Carl Zeiss in China

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ABSTRACT

Title: Job training in multinational companies -- The case of Carl Zeiss in China

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Aim: Job training has been treated as the most popular approach to help with improving employees’ performance as well as company’s performance. However, some studies argue that there is some ineffectiveness in job training. This study aims to investigate employees’ needs for job training, the effectiveness and ineffectiveness of job training.

Method: This study used both qualitative method and quantitative method through questionnaire and interviews. The findings were reported by analysis of mean method and standard deviation method.

Result & Conclusions: This study shows that the more job training employees receive the better performance they have. Another result of this study is that technology department employees have higher turnover intention than other departments after they receive job training.

Suggestions for future research: The limitation of this study is that it did not show much about the financial benefit of job training. Future research could done focusing more on this aspect. In addition, the transfer from training to application is also needed to be investigated later.

Contribution of the thesis: For human resource managers, this study can give them some suggestions to plan their job training program, in order to be more effective. For other researchers, it can provide a vivid understanding on the effects of job training in multinational companies.

Key words: Job training, effectiveness, risk, evaluation, retention
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1. Introduction

This chapter has four sections. Firstly, we gave a general background of our thesis to lead to the main purpose. Subsequently, based on the aim of our study, we raised up our research questions. Next, the limitation of our study was given. Then we post the disposition of this study at the end of this chapter.

1.1 Background

The training of adults’ job can date back to pre-historic times and taught to children in order to give a good understanding for their adulthood (Deborah, 1993). Throughout several thousands of years, societies change a lot, Job training has become even more complex and comprehensive (Priti, 1999). Priti (1999) explained that as diverse jobs emerged the skills and tools needed to do the work have changed as well. Blanchard and Thacker (2005) pointed out that training provided an opportunity for employees to learn the new knowledge and obtain new skills, so that they can have a better performance for current and future work. They also suggested that employees who want to reach a higher level, training is a useful method.

Deborah (1993) believed that training should be regarded different from education, since teachers providing trainings just have proficient ability in one specific area and teach this skill to others. Job training has been the most popular training within a company. As Dumas and Hanchane (2010) confirmed that the job training indeed has a positive effect on company’ development and should be included in its strategy planning, so the job training has become more and more important to human resource managers. King (1964) said that the advantage of this kind of training is getting instant feedback from learners and making trainers know if they get the skills or not.
However, Hardman (1963) argued that during the World Wars, job training became systematic, with the needs of the development of industry; a systematic Job training method developed at that time is called Job Instruction Training (JIT). He concluded that JIT work into four steps, first, explain the importance of this job; second, show each part of this job and teach learners and let learners demonstrate it after they have got this job; third, supervise job performance; fourth, regular checking.

From 1970s, computers began to be commonly used in companies, as job training facilitators. Computer-based training (CBT) can be characterized as an interaction between learners and computers, learners should react after computers provide stimulus, and then computers will give feedback to learners after analyzing their response (Gery, 1987). Jorgensen (1991) stated that CBT based on web-based instruction can be widely used on teaching most kinds of tasks, as long as the instruction can be heard, and any type of computer can use web-based instruction through the Internet.

In the 21st century, job support training became a popular training method which focuses on learners to find information they need in order to follow the step-by-step instructions to get the new skills of different tasks (Newstrom & Davis, 1993). Jain (1999) said that no matter when job training is provided, it is closely related to evolution of jobs and development of employees, employees always are seen as the potential resources in a company.

1.2 Aim of the study and Research Questions

Human resource management (HRM) has risen up more and more attention towards job training (Longenecker & Fink, 2011), and companies also have widely realized the importance of gaining constant advantages from HRM innovation (Human Resource Management International Digest, 2004). Training and development is a vital part of Human Resource planning (Priti, 1999). Job training is the foremost tool
for companies to provide their employees with its show the effectiveness of Job training on helping with the staffs’ performance opportunities to obtain new skills and knowledge (Paillé et al., 2011), lots of studies (Priti, 1999). However, some critical researchers believe that there is a lack of data to confirm this effectiveness of Job training (Marcel & Jan, 2002). What is more, there is also a study argued that some employees were compelled to take the Job training program which is against their will and causes the problem to be inefficiency and a waste of resource (AlYahya et al., 2013). This study aims to investigate employees’ needs for job training, the effectiveness and ineffectiveness of job training in multinational companies. Based on the aim of this study, we have investigated and seek for answers to the following research questions:

1. What do employees expect to get from Job Training in a multinational company?
2. How can the multinational company provide better Job Training to meet employees’ needs?
3. Is there any risk faced by multinational company related to the Job Training?

1.3 Limitation

Firstly, the interviews in our study were mostly carried out with the managers of Carl Zeiss (Shanghai) Management Co. Ltd., and our questionnaire survey included respondent from different multinational companies. So it may not apply for national companies.

Secondly, this is a small sample study, mainly focusing on the Job Training in multinational companies. On one hand, it values the job training towards its own staffs very much, on the other hand the updating of knowledge and technology revolution in multinational company happens frequently. So the practice of Job Training in multinational companies is much more successful than others.
1.4 Disposition

This study includes six parts. In Chapter 1 we gave an introduction of our study and present background of the research questions, motivation, research questions and limitation. Next, we studied and compared the existing literature and reflected these on Chapter 2. In Chapter 3 we introduced the method we used in our paper. In Chapter 4, the empirical study was shown. After analyzing and comparing, we presented our analysis in Chapter 5. Finally, we summarized our study by providing a conclusion and giving our further recommendations in Chapter 6.
2. Literature Review

In this section, we are presenting some relevant literature that is presented in seven parts. In first part we gave an introduction of job training. We presented the job training in multinational companies in the second part. The third part contains six common methods used in job training. Next we introduced two evaluation models of job training in the fourth part. In the fifth part, we showed the classification of job training. In the sixth part, we gave the effects of job training. In the end we presented our conceptual model.

2.1 The Job Training

According to Davies and Taylor (2004), effective job training cannot only enhance employees’ employability and add companies’ competitive advantage; but also make companies to differentiate their position as well as improve the quality of the products or service based on the productivity and profitability to be increased.

Notionally, not so many companies choose to invest in job training, because job training is different from other investments, human capital is flexible and hard to control, there are some risks in arranging job training in companies, the employees who take part in the job training in their companies have their own options to stay or leave these companies and they also tend to request pay bargaining (Hansson, 2005). To some extent, all of this will influence the result of the human capital investment.

On account of this disposition, there is a theory created by Becker (1962) to elaborate on human capital investment. Becker’s human capital theory states that the total input in job training gives an idea about who will arrange and pay for the job training system as well as who will get the maximum benefit from this kind of job training. According to Becker (1962), there are two types of training inside companies; they
are specific training and general training.

As Becker (1962) stated, the training not only contributes to the companies which conducting this training but also could be used in other same type of companies is called general training. So theoretically speaking, fewer companies tend to invest in general training, in spite of this general training could increase the payment and general skills of employees in a competitive labor market, it also cuts down the job training benefit (Backer, 1962). In general, this kind of training improves employees’ market value, hence, Becker’s human capital theory presents that the employees who take this kind of trainings in their company should pay for it. The employees who would like to take this kind of training can directly pay for the relevant trainings in their companies or take outside companies (Backer, 1962).

From the perspective of Becker (1962), specific training is not involved in every company; this kind of training is conducted in one company and does not affect profit of other companies, so the employees who take this training will not improve their market value. However, he further stated that the companies which provide this kind of training will pay for this job training and gain the benefit caused by training. More employees willing to take specific job training will make the companies gain more profit, and accordingly the employees who take this job training will get more shares (Backer, 1962).

According to Becker (1962), in competitive labor markets, conventional training is paid by individual, and specific training mostly is company-financed. In these two training periods, both the labor market’s functioning and information asymmetries are important in investing in human capital, they not only decide who will benefit from the training but also who will pay for the training investment (Hansson, 2005). From the perspective of Hansson (2005) for employers, what they should concern more is setting an appropriate wage range.
Although there is an authoritative theory to introduce the general idea of job training in the labor market, the realistic labor market however is not a copy, and the value creation depends on not only employees, but also employers (Priti, 1999). In addition, Priti (1999) further argued that the two cores of conducting job training, the mobility of employees and the wage setting are also influenced by institutional arrangements and the relative bargaining power between employees and their employers. Combining theoretical research and actual circumstance, when talking about job training, both employees and employers should be taken into consideration, bargaining power recently has taken a more and more prominent place in conducting job training inside companies (Booth et al., 2005).

Generally speaking, job training is a popular measure for companies to foster their employees (Noe, 2008). According to Davies and Taylor (2004), it is very difficult to distinguish formal training and informal training in a company, because some informal training also contributes to formal training and is involved in formal training, as well as acting as applying the skills that is learned from the formal training in doing one’s specific job and so on. As Pischke (2005) showed, only a few researchers have a chance to study the correlations between the organizations’ informal and formal training. From the perspective of Loewenstein and Spletzer (1994), comparing with formal training, informal training is more likely to be received by employees, and to some extent, formal training always combines with informal training. With the rapid development of the information age, more and more attention has been paid to improve the performance of employees to fulfill company’s sustainable development (Atak & Erturgut, 2010).

### 2.2 Job training in multinational company

Recently, an increasing number of companies are going global, they can get lots of business opportunities from the whole world, and they however are also challenged to become more and more global (Moumita and Zaman, 2013). For the companies in
international market, especially the competitive and successful companies, they are centered on the role of human capital (skill, ability, knowledge of people) as a crucial resource of their core competitive advantage (Dowling et al., 1999).

According to Moumita and Zaman (2013), for most multinational companies, they tend to use a kind of global training program which provides training globally to the employees of the multinational companies. The authors further stated that the multinational companies’ global training is mainly used to present an advanced concept which can be applied in every branch of the multinational companies in different countries. Hill (2007) also expressed that the aim of this global training may be a little bit different from the job training in other companies, it not only aims to enhance employees’ working skills, ability and performance, but also develop employees’ international working skills, such as communication skills, negotiation skills. For the employers of multinational companies, they expect their employees to be qualified and competent enough to work anywhere in the world after receiving job training; and they believe that this kind of job training programs can have an effective and lasting impact on their global business (Noe, 2008).

2.3 Methods of Job Training

In order to achieve different training goals, there are different training methods, when choosing a training method, company need to combine the demands from employees together with the goals which companies want to achieve (Treven, 2003). Training is not just necessary for new employees but also useful for the old employees (Layne, 2014). In the following we will introduce some common methods which are commonly used in the job training.

2.3.1 Lecture

Giving lectures to employees is a traditional training method. In this way, there is a trainer who gives the lectures to employees about specific knowledge or skills and
expects the trainees remember them or repeat the teacher’s work (Domizio, 2008). Domizio (2008) said that this method requires that the trainer has enough knowledge and training experience, and in order to let employees better memorize the new skills and knowledge, the teacher usually need to use impressive language and media devices. Read and Kleiner (1996) pointed out that this method has the advantages of efficiency and applying for the large population situation. They also said that the disadvantage of using this method is lack of the communication between the trainees and the trainers.

2.3.2 Job rotation

Job rotation is an on job training method and aims at letting the trainees obtain different kinds of job experience in a short time, it is mainly used in training new employees (Michalos, Makris, & Chryssolouris, 2013). Nowadays, more and more companies use job rotation to train the new managerial staffs or people who have the potential ability to help with the company’s development in the future, for example, the management trainee program running in many companies offered for recently graduated students (Ben, 2003). Job rotation can better recognize trainee’s advantages and weaknesses, by knowing this, company will put the right person in the right place, develop their capability and expect them to make more contribution in return (Li & Tian, 2013). However, Michalos, Makris, and Chryssolouris (2013) also said that the shortcomings along with the rotation is the time employees work in one job are so short that they cannot get enough knowledge and information before they turn to the next one.

2.3.3 Coaching

Coaching is usually done by a skillful and experienced staff or people who especially are in charge of this job, it focuses on a specific position, even in some cases it can be an one-to-one guidance (Berteig, 2009). He said that comparing with other methods, the result of using coaching will be more effective. The trainees learn from the trainer
and apply the same thing in their own work; it has significant effects in solving personal problems (Wilson, 2004). However, Wilson (2004) also added that because of the repeating imitation, sometimes it shows a lack of creativity.

2.3.4 Case study

Case study is generally used in training managerial employees, especially for the middle cluster managers (Guo, et al. 2010). Through study and analysis of the real case, trainees’ capability in decision making and responding to an emergency situation is expected to improve (Wallach, 2014). Sometimes this method is conducted in small groups, each group is required to give their opinions and solutions to the case, then they were asked to state their group perspectives and discuss with other groups (Read & Kleiner, 1996). Read and Kleiner (1996) also added that at the end of the case study, the trainer is responsible for assessing trainees’ work and guide them to a final agreement. Wallach (2014) said this method help employees in dealing with real work.

2.3.5 Role playing

Sogunro (2004) said that role playing method means to put trainees in a simulated environment and ask them to act some roles, as they act the roles, their work ability will be trained. He also pointed this method works for helping with managerial employees, since it can help trainees to adapt to the job rapidly, and make better performance on decision making. Role playing helps trainees to get aware of their personal problems by playing the role and get suggestions for the problems they have (Read & Kleiner, 1996). The things trainers should keep in mind is to give trainees reactions according to their performance quickly, an encouragement and proper guidance will help to enhance training effect (Williams, 2001).
2.3.6 Trainings based on the IT or other media devices

This is a new form of training, instead of a qualified trainer to guide the whole training program, it just needs simple hardware facilities like computers, projectors or televisions, for example, company put all the training text, images, audio and video on the Internet like an Internet library, and their employees can feel free to take the training and arrange the schedule themselves (Wagner & Flannery, 2004). Belykh and Byvaltsev (2014) think it is a tendency for future training development since it is much more convenient for both companies and employees.

The choice of training method is based on company’s training goal. Sometimes they just choose one of them, and sometimes they probably mix several methods together to achieve their goals (Riley, 2012).

2.4 The evaluation of the Job Training

Like other investments, job training is a long-term oriented investment, and requires measuring the cost and benefit in return (Brinkerhoff, 2006). Most of the courses and programs are generally aiming at how to improve the efficiency of employees and the profitability of the companies (Farjad, 2012). There are several factors that can be taken into account when assessing job training. For example, the improvement that employee can gain from it and the profit which companies will get after it (Grip & Sauermnn, 2013). The improvements of employees include their performance, their knowledge towards new skills and their contribution or adaptation to the organizational culture (Barzegar & Farjad, 2011). However, the benefit for the company is very difficult to evaluate, as there are not much knowledge about how to transform training impacts into economic profits, as it is pointed out that less than 5% of job trainings have been assessed regarding to their financial benefits (Aguinis & Kraiger, 2009). Companies invest a lot of time, money as well as manpower to provide the job training to their employees, the final result they want to obtain from
doing this is actually a visible process rather than all the invisible effectiveness (Mollahoseini & Farjad, 2012). The lack of method and the existence of mediating effects make the evaluating work very hard to do (Aragón, Jiménez, & Valle, 2013).

In the following, we are discussing the popular evaluation methods of job training.

2.4.1 The Kirkpatrick Hierarchy

The Kirkpatrick’s 4-level model was created by Donald Kirkpatrick in 1954. He introduced the model completely in his book of *Evaluating Training Program* which was firstly published in 1994; the four levels are the reaction, the learning, the behavior and the results. By analyzing the training in these four steps, it will help the company to identify whether the program has achieved its initial goals (Al-Athari & Zairi, 2002). It is the most widespread method to evaluate the training courses and has great influence in this field (Bates, 2004).

*Figure 2.1 the Kirkpatrick 4-level model*

![Kirkpatrick 4-level model](image)

Source: Kirkpatrick & Kirkpatrick., 2006; pp. 21

The reaction means trainees’ typical attitude towards the training program, it includes their satisfaction towards the training courses, training teachers, training materials and training methods (Kirkpatrick & Kirkpatrick., 2006; pp. 27). This is the basic level of the Kirkpatrick Model; the reaction of trainees will affect the subsequent learning process which will directly decide the transformation of training to real productivity.
from the beginning of the training program (Pallares, 2012). In order to better evaluate reaction, Kirkpatrick introduced a guideline which contains eight points for human resource employees to use. He also recommended a “smile sheet” to apply here. This level can be easily achieved by collection the feedbacks of trainees after the training course (Kirkpatrick & Kirkpatrick, 2006; pp. 28-41).

The second level is learning. This process aims to measure the changes lying in knowledge, skill or attitude which employees drive from taking part in the program (Kirkpatrick & Kirkpatrick., 2006; pp. 42). As they wrote in their book, learning process is a necessary step for employees to make some differences after participating in the training course. Learning evaluation is comparing the knowledge employees have gained, the skills they have obtained or the attitudes they have changed towards the organization or their work before and after the training program (Kirkpatrick & Kirkpatrick., 2006; pp 50-51). They also introduced that evaluation can be made by a paper-and-pencil test or an analog test. In addition, it also can help with the course designer to justify whether the content of the training program is reasonable or not (Bates, 2004).

The third level is behavior. It refers to employees’ application of the knowledge which they have received from training. Comparing with the two levels above, evaluating behavior is more complex. On one hand, it needs employees’ willingness to try the new things subjectively. On the other hand, it needs opportunities to apply these new approaches objectively. What is more, the existence of latencies makes it difficult to evaluate the behaviors. (Kirkpatrick & Kirkpatrick., 2006; pp. 52)

The last level is called result. The evaluating result here means to calculate the economic benefits which the training program has brought to the company (Kirkpatrick & Kirkpatrick., 2006; pp. 63). In this level, company and organization have been involved in the entire evaluation process; it can be learned from the productivity, the employees’ turnover intention or the customer satisfaction
(Kirkpatrick & Kirkpatrick., 2006; pp. 63). The result can be good or bad, it depending on the transformation from training to practice; this is the most difficult process since distinguishing between the outcomes of training and other activities is hard to identify (Steensma, Groeneveld, 2010).

2.4.2 The Importance-Performance Analysis model

The Importance-Performance Analysis model is a simple model to assess customer’s satisfaction through marketing strategies and aims at better make use of scarce resources (Martilla & James, 1977). This model will help the training course conductors to have an intuitive overview on which part should be paid more attention, and in where some space to make an improvement are still existing (Azzopardi & Nash, 2013). According to different levels of importance and performance, all works can be divided into four categories; they are high performance-high importance category, the high performance-low importance category, the low performance-high importance category, and the low performance-low important category (Hideki, George, & Meng, 2011). The performance of the job training can be explained as employees’ satisfaction after they take part in the program and the importance of the job training can be seen as employees’ general attitude towards the necessity of training content (Odete, F. P., 2011).

Figure 2.2 The Importance-Performance analysis models
Source: Martilla and James, 1977; pp.77

Category 1. The High importance-High performance
The works in this area are called good work and need continuous effort to maintain. This situation occurs when the main objectives of work have met the employees’ needs and were fully satisfied through the program (Martilla & James, 1977).

Category 2. The Low importance-High performance
The works fell into this zone was considered as the less important works were delivered too much emphasis. It indicates that the resource which has been put here was overhauled; the companies should adjust their focus elsewhere (Martilla & James, 1977).

Category 3. The High importance-Low performance
More attention should be given to the works in this area; the improvement for the next step is starting from here. It shows the shortcomings of the current job and calls for more concentration (Martilla & James, 1977).

Category 4. The Low importance-Low performance
The works here are far away from being a weak point. However, it is advisable not to devote too much to the work in this part (Martilla & James, 1977).

2.5 The Classification of Job training

2.5.1 Firm-financed Job training
According to existing literature, a large portion of returns from training is firm-financed job training; fewer researches are emphasized on training financed by individuals. For example, the finding on UK by Booth and Bryan (2002) presented that there is no obvious wage differential after employees taking individual financed
job training, especially in a short time. Similarly, Lee and Hsin (2004) declared their research result of a government co-financed job training project in Taiwan that when individuals pay for the training cost or companies only invest little in the training program, the wage growth of employees after receiving job training is negative. Moreover, comparing with other types of company-financed job training, the one which closely linked to participants’ work will bring more returns. For instance, a finding has shown that firm-financed job training is positively related to wage growth and as for the training not provided by companies, hardly have any effect on wage growth (Blundell et al., 1999).

### 2.5.2 Individual financed training

From the perspective of Loewenstein and Spletzer (1998), although individual financed training cannot bring a substantial wage growth, it really benefit to improve individuals’ ability and provide them a chance to communicate well with the employers outside as well in the entire labor market. The same as general training what we mentioned before, certified training is a two-edged sword for employers who provide this kind of training, it can yield more productivity as well as improve employees’ work ability, but there is also a risk that these highly trained employees could search for a new job in labor market (Hansson, 2005). Hansson (2005) also stated that, for firm-financed general training, what makes it exist until now is information asymmetry. Moreover, Acemoglu and Pischke (1999) pointed that companies provide general training to their employees because they have monopsony power among this industry.

### 2.5.3 Certified training

There are few researchers talking about certified training sponsored by employers. Booth and Bryan (2002) stated that certified training aims to increase employees’ wage growth and it really contributes on individuals’ financing and increases it from 3% to 17%. And the substantial portion of certified training is financed by companies.
However, for the point of individual, certification still cannot significantly increase the employees’ willingness to pay for further training and education. Table 2.1 shows the willingness to pay for job training.

<table>
<thead>
<tr>
<th>Table 2.1 Willingness to pay for education and training, by purpose, population aged 15 and more, EU15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keep present job</td>
</tr>
<tr>
<td>Would pay all the cost</td>
</tr>
<tr>
<td>Would pay some of the cost</td>
</tr>
<tr>
<td>Would pay none of the cost</td>
</tr>
<tr>
<td>Do not know</td>
</tr>
</tbody>
</table>

Source: Lifelong learning questionnaire included in standard Eurobarometer, wave 59.0 (2003)

We can see from the figure that most of the interviewees show unwillingness to pay for any types of training. Moreover, comparing with other training, certified training is one, to some extent, leads as the individuals invest in it. There is also a result presented by Lee and Hsin (2004) that certification actually increases the willingness that individuals pay for training cost. In this research, 35% of the interviewees chose to pay for certified training, compared with computer skill training (18.5%), professional training (11.4%) and management training (8%)(Lee & Hsin, 2004).

2.6 The effects of the job training

2.6.1 The value creation of employees

No matter in Europe, US or other economies and countries, a good deal of studies have presented that the value creation of employees and wage growth is related to the relevant job training to some extent (Hansson, 2008). As the perspective of Hansson (2005), the individuals who are involved in the job training will get wage growth or other improvement in most cases. Even though there are few researches insisted that
the returns of wage are owing to the excellent capability of employees not receiving job training, most of researches showed that the individuals will receive a higher wage after taking job training and the long time wage growth also a kind of investment in their employees for their companies (Goux & Maurin, 2000). Lengermann (1999) expressed in his findings those employees who take long-term job training (at least four weeks or even longer), will get the benefit of it, such as wage growth, career promotion, up to nine years after job training events. In the following, we are mentioning some factors that can influence the effect of job training.

**Ability or training**

In the existing literature, some researchers concern that there is a strong connection between training and ability. As Loewenstein and Spletzer (1994) studied, the more abled employees the more they are willing to take job training, no matter firm-financed or individual financed, and this could in turn influence the training result. They also expressed that if more excellent employees receive more job training, it will be very difficult to estimate the effect of job training.

Most studies choose to use wage growth as an index to measure the result of job training, certainly they tried to handle the error caused by ability in one way or another, however, some studies argue that ability and a few unobserved factors which are not taken into consideration seriously can also affect the wage growth of employees that undertake job training (Hansson, 2005). According to a research of firm-financed job training of Goux and Maurin (2000) in France, selectivity of employers, which means the employers who provide job training choose employees to take the relevant training, is a main factor causing the difference of wage growth between trained and untrained employees. They stated when taking selectivity into consideration, the returns to job training falls to zero as well. This research suggested that more able employees are chosen to take part in job training; also the returns to job training reflect their capability differences. Goux and Maurin (2000) made their
conclusion that the zero return of job training cannot prove that the job training is useless to improve productivity. In this situation, it only shows that job training tends to benefit on employers.

Educational background

There are a substantial volume of studies recorded that the employees who are low educated and have low skills take less job training than highly educated and high skilled employees or other types of employees in a company (Hansson, 2005). Considering these two groups of employees of the results of the returns of job training are mixed to some extent. Lengermann (1999) described in his finding that for low educated and low skilled employees, the returns to long time firm-based training and school-based training are relatively higher than others. Nonetheless these kinds of employees are less likely to take part in training. Similarly, Lynch (1992) stated that especially in the field of off-the-job training, the returns to training are much higher for low educated and low skilled employees. In addition, according to the research result of Brunello (2001), the returns of training to the employees who have a secondary education are higher than university educated employees; also the returns of training will increase along with market experience of employees.

However, compared with the finding what we presented above, some opposite results were shown in Swedish data by Evertsson (2004). He expressed for the employees who have taken job training, the low educated and low skilled employees get lower returns to training than those professionals. And he also emphasized that the returns to training will always increase along with educational attainment. Likewise, some European researchers also find that higher education background is significant for employees in term of the returns to training (Booth et al., 2005). There is a similar finding of the OECD study (2004) that concluded the young employees who have high educational background in one company will get an obvious wage growth after receiving job training. For temporary office workers, the more experience significantly related to wage growth caused by job training, to the contrary, for
temporary blue-collar workers, job training cannot get any wage growth (Finegold et al., 2005). Firm-financed job training significantly influence on wages for the employees who have low payment in service market (Battu et al., 2004).

Although there are some findings that show that to some extent the returns of training to the disadvantaged employees can be lower, it still does not apply to all countries or all disadvantaged employees. Because of the different market policies and different functioning of companies, the training return results influenced by educational background may have lots of differences (Blanchard & Thacker, 2007).

**Gender**

There are many studies debating on job training differences between male and female. Leuven & Oosterbeek (1999) found that employers are willing to provide job training to more male than female, that may be caused by gender discrimination, job characteristics and other reasons. However in a study by Booth et al. (2005) of European Community Household Panel research from 1995 to 2001, the authors indicated that when in the same position and keeping same job and industry characteristics, male and female have same opportunities for receiving job training. Moreover, another finding is also given by this research that comparing with male employees, females are more willing to participate in individual-financed job training or pay for job training. In addition, there is also a notable result based on Swedish data which show that the returns to job training for female employees tends to be lower than male (Regné r, 2002). Evertsson (2004) also pointed that women have less opportunities to take part in job training than men, especially general training and the job training related to promotion, similarly, the returns to this types of training for women is low.

On the other side, some scholars reckoned that female employees benefit more from job training than male employees, as Veum (1995) indicated that from his research,
on-site job training effectively enhance wages of female employees and off-site job
training contributes to both male and female employees. Lynch (1991) gave her
finding by showing that young employees with good jobs are more likely to be
provided job training for higher productivity, higher wage growth and lower leaving
risk, and all these effects are more strong influence on female than male.

In conclusion, the studies about the relationships between effects of job training and
gender are still ambiguous up to now, so we cannot find any valid finding about this.
As Leuven (2004) mentioned in his study that the effects of gender in job training are
to some extent mixed and there is no conclusive conclusion that can be drawn to
expound mutual influences and relationships among gender, job training and wage
effects.

2.6.2 Employability, promotion and mobility

Vocational development and employability, to some extent, is closely related.
According to Grip et al. (2004), with the development of vocational development, the
concept of employee is more focused on the behavior of individuals in improving
their capability and skills to maintain their existing job or obtain a better job. As for
vocational development, from the point of Melero (2004), there are two reasons that
can lead to promotion, one is human capital accumulation in companies, and the other
is employees’ ability improvement based on training by companies.

For employees, promotion plays an important role in their career life (Lynch, 1992).
Wholey (1990) found a training in manufacturing companies in America shows that
for male employees, job training is positively related to their mobility inside
companies and promotion, for female employees however the effect of job training in
mobility is not so strong. what is more, Pannenberg (1995) gave his idea that job
training, significantly lead to employees’ upward mobility, moreover, a short time
training, usually two to seven days, will positively influence on employees internal
mobility and a long time training, usually one week to one month, can positively effect on their external mobility.

Employees of different departments in companies are unequal to get a promotion. Evertsson (2004) presented his finding that in a company the unskilled workers have fewer opportunities to get a job training related to promotion, the professional workers however are more likely to take promotion related job training and it is easier for them to get promotion compared with unskilled workers. He also expressed that lower grade non-manual employees were pointed to have the most opportunities to receive promotion related job training. Grip et al. (2004) also indicated that low skilled employees who have received job training will get an enhancement in their internal employees; however this job training has no contribution on their external employability. The authors also show that comparing with task flexibility, which means employees could do some tasks that belong to other jobs. Job training takes a more important place in internal employability (Grip et al., 2004).

There are some studies that signify the relationship between job training and employment security. A study of the European Community Household Panel shows that job training positively affects employment security and it does improve employees’ job security and promotion opportunities (Booth et al., 2005). Moreover, Parent (1999) found that no matter on-the-job training or off-the-job training both lead to a longer tenure of employees.

In summary, it is not enough that training is just related to wage growth and ability improvement, stable employment and job security as well as more promotion opportunities is more important for employees. Job training is also considered as one of the most significant factors associated with employability, job security, promotion and mobility (Noe, 2008).
2.7 Conceptual model

The conceptual model shows the three important factors in job training and how they effect on the effectiveness of job training as well as employees’ retention. We designed this model which can be seen below by analyzing and summarizing the core themes of the literature review that we presented above.

*Figure 2.3 Conceptual model (Source: Own construction)*

From our literature review, we can sum up that job training should be measured in three perspectives: *individual development, employees’ performance related to organizational performance* and *the appropriate methods for learning*. They are the three core factors in job training and also have a close relationship linked to each other. Subjectively speaking, the aim of job training is to increase employees’ value creation, no matter if the job training can have a positive impact on provided companies, it really directly effect on individuals. Then the individual development can further influence employees’ performance that can lead to organizational performance. However the first step that can make the aim smoothly realized is to use an appropriate job training method. These factors function together and could lead to an effective or ineffective result. Since in our research questions, as we have tried to understand the motivation of job training for employees as well as the factor of job
training on multinational companies, we used three factors to construct our conceptual model.

3. Methodology

In this part, we firstly gave a brief introduction about the data collection method and data collection technics. Then we introduced our analysis method including some detailed information about the Scoring criteria and formula, Analysis of Means (ANOM) Method and Standard Deviation Analysis Method. Finally, we presented the reliability and validity of our study.

3.1 Data collection methods

The data we used in this study is mainly primary data which comes from our questionnaire and our interviews. So our study has been done in both quantitative and qualitative approaches. According to Berg (2001), the reason we chose both quantitative and qualitative approaches was because of we tried to give a comprehensive overview about the job training in multinational companies, through the questionnaire survey on employees of different multinational companies as well as Carl Zeiss (Shanghai) Management Co. Ltd and interviews with managers of Carl Zeiss (Shanghai) Management Co. Ltd.

3.1.1 Quantitative approach

Quantitative research method means using numbers, counts or other measurement of things to do investigation (Sullivan, 2001). Through a quantitative approach, the researchers can generalize the result they learn from one sample to other cases or identify the different attitudes within one group. It can be conducted by questionnaires and with the help of some soft wares; it can usually be used to test the reliability of hypothesis (Berg, 2001).
3.1.2 Qualitative approach

Qualitative research method refers to collect data from words, pictures or narratives (Sullivan, 2001). This kind of method tends to explore the natural content of things; it cannot be generalized to other cases since the result from a qualitative research just applies for particular situation (Berg, 2001). When collecting data by qualitative approach, one-to-one interviews or group discussions are often adopted by researchers (Wengraf, 2001). The reasons of using this method are various from the purpose of study. Sometimes, people expect to have a better understanding upon basic information, sometimes they need a deep insight into their research questions, or just want to give a prospect about future development. The data collected by using this method contains more subjective characteristics; qualitative approach is the most popular method for doing research (Berg, 2001).

3.2 Data collection technics

3.2.1 Questionnaire survey

Our data collection was divided into two steps, one is our questionnaire and another one is our interviews. We investigated employees’ attitudes and their appraisal towards job training uses both data collection technics. For this purpose, we designed a questionnaire and gave it to people who received job training in multinational companies, and we emphasized that one out of three respondents come from Carl Zeiss (Shanghai) Management Co. Ltd. as we were doing our case study on that company. There are three parts in our questionnaire; the first part consists of the questions about some basic information of the respondents. The second part consists of the questions about employees’ understanding towards job training. And the last part consists of what we call as training risk identification from which we found out the effectiveness as well as ineffectiveness existing in job training. The questionnaire was tested to take ten minutes for the respondents to answer the questions of the
questionnaire.

**Sample and Respondents**

We uploaded our questionnaire on the Internet and it took us two weeks to collect to receive the filled questionnaires from the respondents. During the two weeks period, we received 17 replies from respondents working in multinational companies but having nationality of The U.S., Canada, England, Germany and Sweden. Out of 148 valid replies we received 125 replies from employees working in multinational companies but living in 21 different provinces of mainland China and two Hong Kong. Above all, we got 148 valid replies from people who are working in several of industries and multinational companies like Zeiss, Shanghai Volkswagen, Bank of China, China Central Television and so on.

**Table 3.1 Respondents’ information (Source: Own construction)**

<table>
<thead>
<tr>
<th>Companies’ name</th>
<th>Number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carl Zeiss AG</td>
<td>45</td>
</tr>
<tr>
<td>Bank of China</td>
<td>20</td>
</tr>
<tr>
<td>Shanghai Volkswagen</td>
<td>10</td>
</tr>
<tr>
<td>China Central Television</td>
<td>6</td>
</tr>
<tr>
<td>Pactera</td>
<td>8</td>
</tr>
<tr>
<td>Deloitte</td>
<td>3</td>
</tr>
<tr>
<td>Huawei</td>
<td>3</td>
</tr>
<tr>
<td>Other multinational company</td>
<td>53</td>
</tr>
<tr>
<td>Total</td>
<td>148</td>
</tr>
</tbody>
</table>
There are five questions in first group; all the questions are about respondents’ basic information. The second group has 14 questions; these questions are aiming at surveying employees’ general attitude towards job training. The last group contains 18 questions, this is the main body of our research, and we tried to find out the effectiveness and ineffectiveness of job training.

### 3.2.2 Interview

Our interviews where aimed at investigating the effects of job training from the perspective of multinational companies. We did the interviews with the help of computer; this method is called Computer Assisted Interviewing (CAI) (Sullivan, 2001). At first we got contact with a female manager we called her respondent 1 who works in Carl Zeiss (Shanghai) Management Co. Ltd. and she helped us to find two more managers working in the Training Center of her company, so finally we got three interviews from three mangers who work at Carl Zeiss (Shanghai) Co. Ltd. to receive necessary information for our study. In the following table, we are focusing on the titles or positions of our respondents that participated in the interviews.

#### Table 3.2 Company and interviewees (Source: Own construction)
Carl Zeiss (Shanghai) Management Co. Ltd.

Respondent 1
International communication manager

Respondent 2
Training manager

Respondent 3
The manager of training center

We did not use the name of the respondents and use respondent 1, respondent 2, respondent 3 to represent our interviewees.

3.3 Analysis method

In order to analyze responses to our questionnaire, we decided to choose the descriptive and summary analysis methods, the Analysis of Means Method and the Standard Deviation Method. (Joseph, 2014, pp: 116).

From the conceptual model, first we divided all the questions into three categories. The three categories were named *encouraging employees’ individual development*, *understanding the impact of employees’ performance on organizational performance* and *using the appropriate method for learning* and the questions distribution was as following:

*Table 3.3 Three categories and questions (Source: Own construction)*

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>QUETIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encouraging employees’ individual development</td>
<td>6, 18, 23, 24, 25, 26, 27</td>
</tr>
</tbody>
</table>
Next we used the ANOM analysis and Standard Deviation analysis which we described in previous parts to further data processing. We expected to figure out the differences lying in these three categories based on gender, age, years of working, education background, frequency of job training and department.

The encouraging employees’ individual development category includes eight questions: 6, 18, 23, 24, 25, 26, and 27. This sector is mainly aimed to test individual’s general needs for the job training and the changes they have received after job training. After the quantization processing, we finally got the scores for each of the six indexes.

The second category is called understanding the impact of employees’ performance on organizational performance, it includes six questions: 7, 8, 10, 12, 16, and 27. The final results gave us a general idea about the relationship between employee and company on job training aspect.

The last category is called using the appropriate method for learning, includes nine questions: 7, 9, 13, 15, 17, 19, 20, 21, 22. From these questions, we could understand the employees’ satisfaction towards the existing training program. We also did quantization processing and got six grades for six indexes.

Then throughout the cross analysis between three categories and six basic indexes (gender, age, years of working, education background, frequency of job training and department), we finally found out the effectiveness of job training and employee retention.
3.3.1 Scoring criteria and formula

Basic scoring criteria formula

In order to provide an intuitive impression of each question we used ANOM analysis as well as Standard Deviation Analysis to analyze our data, we developed a scoring criteria to make the options of each question quantified.

We created our basic scoring criteria formula as following:

\[ a_i = 1 + \frac{4i}{n - 1} \]

\( a_i \) stands for option score.
\( n \) stands for the number of options in this question.
\( i \) stands for the ordinal number of options.

However, due to this formula, the option score of the questions which have two options are 1 and 5. In case of the result error caused by the big distance between 1 and 5, we made these two scores as 2 and 4. This is just a special case, as for the questions which have three, four or five options; we also followed our scoring criteria formula. The scoring criterion is showing in the table below:

Table 3.4 Scoring Criteria (Source: Own construction)

<table>
<thead>
<tr>
<th>(n)</th>
<th>i</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td></td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>1</td>
<td>3</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>1</td>
<td>2.33 ( \frac{7}{3} )</td>
<td>3.67 ( \frac{11}{3} )</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

For example, if there are four options in one question, the score of first option is 1, the score of second option is 2.33, the score of third option is 3.67 and the score of fourth option is 5.
3.3.2 Analysis of Means (ANOM) Method

According to Joseph (2014) analysis of means method was firstly introduced by Ellis R. Ott in 1969, and this method was usually used in seeking for differences in several groups later. When testing a group value, mean is a simple and easily understanding indicator. Since it is believed that average can stand for the general value of sample, it stands in the center of sample. On this basis, approaches like cross analysis can be applied. (Joseph, 2014, pp: 116-119)

Average formula

If we want to find out the difference between male and female in the aspect of encouraging employees’ individual development, due to the number of male respondents and female respondents not being equal, we introduced an average formula to calculate the average score of one gender in the aspect of encouraging employees’ individual development.

Here we present this average formula shown below:

$$\bar{x} = \frac{1}{n} \sum_{j=1}^{m} a_j$$

For example,

$\bar{x}$ stands for the score of female in the aspect of encouraging employees’ individual development

j stands for the ordinal number of one respondent

$a_j$ stands for the score of number j respondent on encouraging employees’ individual development

m stands for the number of female respondents

3.3.3 Standard Deviation Analysis Method

According to Joseph (2014), the standard deviation method provides a method for
researchers to have a deep look at the distributions of each group. Generally speaking, it stands for the degree of deviation between data and average value. The higher degree of the deviation means the less meaningful of the average value, because it cannot stand for general situation. (Joseph, 2014, pp. 119-121)

**Standard Deviation formula**

According to our research question, we expected to find out the risk related to job training, and after data collection, we found that after receiving job training, many employees tend to leave their companies, so we tried to calculate the turnover intention to explain this risk which we called *employee retention*.

First, we chose the last three questions in our questionnaire and used the basic scoring criteria formula to calculate the value of employee retention.

Then, we developed a standard deviation formula of turnover intention shown below:

\[ SD = \sqrt{\frac{1}{m} \sum_{j=1}^{m} (TR_j - \overline{TR})^2} \]

SD stands for standard deviation.

\( \overline{TR} \) stands for the average score of employee retention,

\( TR_j \) stands for the employee retention score of number \( j \) respondent.

\( j \) stands for the ordinal number of one respondent

\( m \) stands for the number of any factor (for example, \( m \) stands for the number of female or the number of master degree employees).

**3.4 Reliability and Validity**

For collecting our data, we followed two approaches, questionnaire and interviews. We sent the questionnaire to 148 employees who work for different multinational companies and we received 148 available replies. We interviewed three managers who work in Carl Zeiss (Shanghai) Management Co. Ltd. using computer assisted method, video interviews. Both the approaches are reliable and validity.
The tools we used to analyze our data from the questionnaire is excel, this software has the function of dealing with statistical data. We put all the answers of each respondent into the Excel, and then we used the analysis of mean method and the standard deviation method to analyze them. Finally, we got the result from it and presented them in our empirical study and analysis part. All the results are reliable.

4. Empirical study

The empirical study includes three parts. The first part is a short introduction about the four step model which we used to analyze the questionnaire data. In the second part, we showed the findings from the questionnaire based on the model. The third part is the findings from our interviews. By doing this, it is more convenient for us to analyze the data in next sector, and easier for readers to understand the whole process of our study.

4.1 Four steps model for researching the finding

Based on the (Kirkpatrik 4-level model and Importance-Performance model), we designed a new model and divided our questionnaire into four parts, we named it Four steps model. We simplified the two previous model and used the new one to help with analyzing our data. The four parts are attitude, reaction, application and risk factor identification.

Figure 4.1 Four steps model (Source: Adopted from Kirkpatrick & Kirkpatrick., 2006; pp. 21; Martilla and James, 1977; pp.77 and own construction)
In the first part, we intended to have a deep insight into employee’s general attitude towards job training. The second part is drawn from the Kirkpatrick model, and we also named it reaction, it stands for the evaluation of trainees of the training programs. In the third part, we focused on the results from participating and organizing the job training. And in the four steps, the result we ultimately wanted is to find out is whether there is any risk factor exists in the job training process.

4.2 Questionnaire Findings

This is the resource of our quantitative data, we received 148 replies and all of them are reliable. We followed the four steps model discussed above and divided the questions into four categories to present our findings shown below:

4.2.1 Attitude

We learned employees’ general attitude towards job training from question 6-14 and question 18. From the answers, we can see that employees have been fully aware of the importance of participating in job training.

Table 4.1 Attitude toward training (Source: Own construction)

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
<th>Number</th>
<th>Proportion</th>
<th>Average score</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>6. Do you think an On-Job-Training is necessary?</th>
<th>Everyone needs the On-Job-Training</th>
<th>136</th>
<th>91.89%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some jobs need the On-Job-Training</td>
<td>12</td>
<td>8.11%</td>
<td></td>
</tr>
<tr>
<td>No one needs</td>
<td>0</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>148</strong></td>
<td><strong>100%</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7. Do you think the Job Training is related to achieving company’s goals?</th>
<th>Definitely No</th>
<th>3</th>
<th>2.03%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>5</td>
<td>3.38%</td>
<td></td>
</tr>
<tr>
<td>Neural</td>
<td>18</td>
<td>12.16%</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>49</td>
<td>33.11%</td>
<td></td>
</tr>
<tr>
<td>Definitely Yes</td>
<td>73</td>
<td>49.32%</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>148</strong></td>
<td><strong>100%</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8. Do you think that after the company goes well then it does not need the Job Training?</th>
<th>Yes</th>
<th>21</th>
<th>14.19%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>127</td>
<td>85.81%</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>148</strong></td>
<td><strong>100%</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9. Do you think that the Job Training is only necessary for the poor performance staffs?</th>
<th>Yes</th>
<th>12</th>
<th>8.11%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>136</td>
<td>91.89%</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>148</strong></td>
<td><strong>100%</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>18. Do you think the job training is helpful with getting a promotion or improving your performance?</th>
<th>Definitely No</th>
<th>0</th>
<th>0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>8</td>
<td>5.41%</td>
<td></td>
</tr>
<tr>
<td>Neural</td>
<td>39</td>
<td>26.35%</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>46</td>
<td>31.08%</td>
<td></td>
</tr>
<tr>
<td>Definitely Yes</td>
<td>55</td>
<td>37.16%</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>148</strong></td>
<td><strong>100%</strong></td>
<td></td>
</tr>
</tbody>
</table>

We can see from Table 4.1 that all the respondents reckoned that job training is necessary, and 91.89% respondents confirmed that everyone in multinational companies should receive job training. Moreover, 82.43% respondents tended to link the job training with achieving company’s goals, and 85.81% respondents believed that no matter if companies do well; job training is indispensable for both employees and companies. In the aspect of job training returns to individuals, 68.24%
respondents show positive attitude towards job training, they believed that job training is helpful in getting a promotion or improving their performance in companies.

Table 4.2 Information about employees’ participating in training (Source: Own construction)

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
<th>Number</th>
<th>Proportion</th>
<th>Average score</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Is there a training system in your company?</td>
<td>Yes</td>
<td>121</td>
<td>81.76%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>27</td>
<td>18.24%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>148</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>11. Have you ever taken job training in your company?</td>
<td>1-3 times</td>
<td>71</td>
<td>47.97%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3-5 times</td>
<td>33</td>
<td>22.3%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>More than 5 times</td>
<td>42</td>
<td>28.38%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Blank</td>
<td>2</td>
<td>1.35%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>148</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

From Table 4.2, we can see that 81.76% respondents confirmed that there is job training system in their companies and almost 99% respondents have received job training including 28.38% respondents receiving job training for more than five times. These data also show the significant place of job training in every company.

Table 4.3 Attitude towards the training preparation (Source: Own construction)

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
<th>Number</th>
<th>Proportion</th>
<th>Average score</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. Did the company ask for your opinions before you take the job training?</td>
<td>Never</td>
<td>26</td>
<td>17.57%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sometimes</td>
<td>79</td>
<td>53.38%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Often</td>
<td>20</td>
<td>13.51%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Every times</td>
<td>22</td>
<td>14.86%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Blank</td>
<td>1</td>
<td>0.68%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>148</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>
According what we presented in the literature review, we can see that the job training mentioned in Question 12 is firm-financed job training. Even though job training is financed by companies, 81.75% respondents are ensure whether they were asked for self-determined options before taking job training. Moreover, 82.43% respondents express that the content of job training is related to their work and in this aspect, job training gets a higher score, 4.03 out of 5 points.

**Table 4.4 Preference for training content (Source: Own construction)**

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
<th>Number</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. What kind of job training program you</td>
<td>About the organizational culture and the regulations of your</td>
<td>77</td>
<td>52.03%</td>
</tr>
<tr>
<td>prefer to take? [Multiple]</td>
<td>company</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>About the job skills training</td>
<td>131</td>
<td>88.51%</td>
</tr>
<tr>
<td></td>
<td>The training in terms of network and teamwork</td>
<td>85</td>
<td>57.43%</td>
</tr>
<tr>
<td></td>
<td>For further education</td>
<td>94</td>
<td>63.51%</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>9</td>
<td>6.08%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>396</td>
<td></td>
</tr>
</tbody>
</table>

We can see from the above table that among the respondents’ job skills training (88.51%) is the most popular followed by the job training which help for further education (63.51%) and training in terms of network and teamwork (57.43%).
4.2.2 Reaction

In this part we expected to investigate whether employees were satisfied with the training they have ever taken in their companies or not. This section contains five questions, respondents were asked to select the most suitable one from five options to show their reaction to job training.

Table 4.5 Reaction (Source: Own construction)

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
<th>Number</th>
<th>Proportion</th>
<th>Average Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>15. Do you know the content, time, place and way of the training clearly before you take the training.</td>
<td>Have no idea</td>
<td>11</td>
<td>7.43%</td>
<td>2.9</td>
</tr>
<tr>
<td></td>
<td>Not too much</td>
<td>25</td>
<td>16.89%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Have general idea</td>
<td>79</td>
<td>53.38%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Have clear idea</td>
<td>32</td>
<td>21.62%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Blank</td>
<td>1</td>
<td>0.68%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>148</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>17. Are there some specific training materials?</td>
<td>Never</td>
<td>15</td>
<td>10.14%</td>
<td>2.64</td>
</tr>
<tr>
<td></td>
<td>Sometimes</td>
<td>58</td>
<td>39.19%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Often</td>
<td>39</td>
<td>26.35%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Every times</td>
<td>35</td>
<td>23.65%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Blank</td>
<td>1</td>
<td>0.68%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>148</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>19. Are you satisfied with the ability of the training teachers?</td>
<td>Strongly dissatisfied</td>
<td>0</td>
<td>0%</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>Dissatisfied</td>
<td>15</td>
<td>10.14%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Neural</td>
<td>59</td>
<td>39.86%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Satisfied</td>
<td>55</td>
<td>37.16%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strongly satisfied</td>
<td>16</td>
<td>10.81%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Blank</td>
<td>3</td>
<td>2.03%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>148</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strongly dissatisfied</td>
<td>1</td>
<td>0.68%</td>
<td></td>
</tr>
</tbody>
</table>
Kirkpatrick 4-level model suggests us to collect trainees’ reaction about the training program to test its usefulness. From replies received from respondents on these five questions, it is not difficult for us to tell that employees are generally satisfied with the whole training process, especially training in hardware part.

The satisfaction in training method, training environment and facilities has received more importance than in training teachers’ ability according to the respondents. Employees’ understanding towards training content before they took the training got 2.9 out of 4 points, this shows that company has done a good preparation work.

### 4.2.3 Application

Application means the effects of job training on employees and applications of the new skills and knowledge they learn from it.

<table>
<thead>
<tr>
<th>Table 4.6 Application for new skills and knowledge (Source: Own construction)</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>

| 20. Are you satisfied with the training methods such as lectures, case study and the use of multimedia technology? | Dissatisfied | 11 | 7.43% |
| | Neural | 52 | 35.14% |
| | Satisfied | 62 | 41.89% |
| | Strongly satisfied | 21 | 14.19% |
| | Blank | 1 | 0.68% |
| | **Total** | 148 | 100% |
| 21. Are you satisfied with the training environment and facilities? | Strongly dissatisfied | 0 | 0% |
| | Dissatisfied | 10 | 6.76% |
| | Neural | 53 | 35.81% |
| | Satisfied | 58 | 39.19% |
| | Strongly satisfied | 26 | 17.57% |
| | Blank | 1 | 0.68% |
| | **Total** | 148 | 100% |
In question 24, more than 95% respondents admitted that the job training has increased their work efficiency more or less. Question 24 got 3.83 out of 5 credits, which shows that people believed that job training indeed help with increased their work efficiency over 70%. However when question 22, 23 focused on employees’ application of the new skills and new knowledge they learned from the training, the result was good but significantly reduced. The results from question 22 and 23 reflect the work and encouragement from external environment reminded people to use the new skills and knowledge which they learned from job training on a degree of around 60%.
4.2.4 Risk Identification

The training risk we mentioned here is mainly about the relationship between job training and the turnover intention. Four questions have been set here.

Table 4.7 Training risk identification (Source: Own construction)

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
<th>Number</th>
<th>Proportion</th>
<th>Average score</th>
</tr>
</thead>
<tbody>
<tr>
<td>16. Is there an evaluation after ending the job training?</td>
<td>Never</td>
<td>15</td>
<td>10.14%</td>
<td>2.52</td>
</tr>
<tr>
<td></td>
<td>Sometimes</td>
<td>68</td>
<td>45.95%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Often</td>
<td>36</td>
<td>24.32%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Every times</td>
<td>27</td>
<td>18.24%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Blank</td>
<td>2</td>
<td>1.35%</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>148</strong></td>
<td><strong>100%</strong></td>
<td></td>
</tr>
</tbody>
</table>

| 25. Do you love your job more after you take part in the job training?  | Definitely No          | 5      | 3.38%      | 3.52          |
|                                                                           | No                     | 12     | 8.11%      |               |
|                                                                           | Neural                 | 54     | 36.49%     |               |
|                                                                           | Yes                    | 53     | 35.81%     |               |
|                                                                           | Definitely Yes         | 23     | 15.54%     |               |
|                                                                           | Blank                  | 1      | 0.68%      |               |
|                                                                           | **Total**              | **148**| **100%**   |               |

| 26. Does the job training add the possibility of you leaving your current | Definitely No          | 6      | 4.05%      | 3.28          |
| job for a better salary or higher position in another company?          | No                     | 24     | 16.22%     |               |
|                                                                           | Neural                 | 60     | 40.54%     |               |
|                                                                           | Yes                    | 39     | 26.35%     |               |
|                                                                           | Definitely Yes         | 19     | 12.84%     |               |
|                                                                           | **Total**              | **148**| **100%**   |               |

| 27. If you leave the job                                                                 | For better payment    | 82     | 55.41%     |
|                                                                                            | No opportunities of promotion | 90     | 60.81%     |
We put question 16 here since we think sometimes the lack of evaluation mechanism may also lead to some ineffectiveness. The evaluation can help company to find out the shortcoming of previous training program and make some progress next time. Over 90% respondents said there is a evaluation after their job training. Generally speaking, the multinational companies are mostly concerned with the training returns and employees’ turnover intention after job training. From Table 4.7 we can see that more than half of respondents answered yes when they were asked if they will love their job more after taking job training, so in this aspect, job training gets a higher score, 3.52 out of 5 points. As for turnover intention, just 20.27% respondents ensure they will not leave their job for a better payment or promotion, and the three popular reasons for leaving the old company are lack of prospects for future development, no opportunities of promotion and possibility for a better payment.

4.3 Interview

4.3.1 A brief introduction of Carl Zeiss (Shanghai) Management Co. Ltd.

ZEISS is an international company and plays a world leading role in the fields of optics and optoelectronics. In more than 160 years since 1846, ZEISS has been contributing to “make life clearly”. Their headquarters are located in Oberkochen, Germany, and there are more than 24,000 employees that work in Zeiss worldwide. The slogan “We make it visible” has now become a highly discernible symbol of Zeiss (About Zeiss, 2014).
Zeiss has much cooperation with universities and hospitals all over the world, and it also has its own academies to focus on employees’ training and education. Zeiss workshop for customers and employees training are its main approaches to share knowledge with others. Adhering to the idea of “Expand your possibilities”, Zeiss also provide some courses in their training and education web set, which called Zeiss Campus, about theoretical background and practical applications in lots of technologies from materials science, biology and medicine. (Zhang, 2007)

Carl Zeiss (Shanghai) Management Co. Ltd. is a part of Carl Zeiss China. Carl Zeiss entered Chinese market in 1957, and now Chinese market has become one of the most active markets, in 2011/2012 fiscal year Carl Zeiss China has achieved a performance of two billion Yuan. There are 2500 employees working in seven bases and 15 sales and service centers in Carl Zeiss China. In recent years, Carl Zeiss China has carried out much cooperation for research with several famous universities in China, like Tsinghua University, Tongji University and Shanghai University etc. The Carl Zeiss Innovation Center for Research and Development in Shanghai was established in 2012 for the better development in China (About Carl Zeiss China. 2014).

4.3.2 Interview findings

We did the interviews with the aim of evaluating job training from company’s perspective, and we got a lot of information from the three managers in Carl Zeiss (Shanghai) Management Co. Ltd. One of the managers is from the International Communication Department and the other two are both from Training Center. Respondent 1, works for International Communication Department, and mainly is in charge of the international communication issues. Respondent 2 is the training manager of the Training Center. Our last respondent is the manager of the whole Training Center.
Before conducting the interviews, we already finished analyzing our questionnaire, and got some findings, which we wanted to verify if those findings really exist in Carl Zeiss (Shanghai) Management Co. Ltd. from our interviewees. Focused on our questionnaire findings and related to our research questions, we developed our interviews in following aspects: organizational structure, training methods, evaluation program, effectiveness and existing problems, Zeiss training all over the world.

**Organizational structure**

When we asked questions related to the organizational structure of Training Center, the manager of Training Center, respondent 3, told us that the training center belongs to the Human Resource department and particularly takes charge of training issues. There are five employees working in this group, they are: our respondent 2, training manager and trainer, who works for global marketing training; Another female training manager and trainer, who works for service application and customer service; respondent 3, the manager of Training Center, as well as one administrator and one manager assistant. Respondent 3 also said that the job training of Carl Zeiss (Shanghai) Management Co. Ltd. aims to teach the advanced and efficient selling skills to salesmen to meet the needs of Sales department and help them to achieve their business goals. They established the training frame based on the job content of employees, considering their different levels and capabilities as well as their different career development, the training center provide different training for them. Generally speaking, the aims of job training in Carl Zeiss (Shanghai) Management Co. Ltd. are improving the capability of employees and profiting to the company.

Respondent 3 indicated that the training related to employees’ job content are all firm-financed. As for the training which employees asked for, for instance MBA education, the company is willing to pay for all or a part of training cost under the promise that the employees will continue to work for Carl Zeiss (Shanghai)
Management Co. Ltd. after they graduate.

**Training Method**

According to respondent 3, the most popular method used in Carl Zeiss (Shanghai) Management Co. Ltd. is lecture. Some of the lectures are provided by management people of Carl Zeiss (Shanghai) Management Co. Ltd., while others were given by trainers from external consultant companies. The lecture conducted by Carl Zeiss (Shanghai) Management Co. Ltd. was mainly about on-job-training and they track the employees’ reaction after the training. Besides this, they also provided the job training like workshop. Now, the Training Center is developing the E-learning model, where they trying to use the social media devices to share some training knowledge and information with their employees. Respondent 3 showed us one of the social media device they are widely using now, it is called *wechat*, this app enables them put all of the training related data together and share with their colleagues very fast, but only Carl Zeiss (Shanghai) Management Co. Ltd. employees have the access into the things they put out.

**Evaluation Program**

When we asked about the evaluation program of job training in Carl Zeiss (Shanghai) Management Co. Ltd., respondent 2 told us that they follow the Kirkpatrik 4-level model. On the first reaction level, they are concerned about how employees react to the training they provided. They wonder if the training meet employees’ need and is it good or not. For the second learning level, they have examinations to test trainee’s learning outcome after the training. Sometimes, they asked trainee to show the new skills or knowledge which they have learned from job training, like role play. The third level behavior evaluation is relatively difficult to fulfill, they use sample survey method to evaluate. He took marketing training as an example, and told us they selected two or three employees who have participated the job training, working
together with them to visit customers, they observed employees’ behaviors. By doing this, they wanted to know the influence of job training on trainee’s behavior. However the result of training is almost impossible to assess. Respondent 2 explained it in two aspects, on one hand the purpose of training in Carl Zeiss (Shanghai) Management Co. Ltd. is mainly about helping Sales department to have better performance, but the performance owes to various reasons and training is one of them. On the other hand, it is impossible for company to use contrast reference method which means divide employees into two groups one is experimental group and another one is control group. Give job training to experimental group and do nothing with the control group. Above all, according to the Kirkpatrick 4-level model, respondent 2 said that they are trying their best to fulfill the first and second level, some of the evaluation for training program have achieved the third level but not so much. Moreover, he believed that the behavior evaluation should be done in each department. In addition the Training Center does not have enough manpower to complete this. As for evaluation of trainees’ satisfaction towards training, respondent 2 said it is very easy, but cannot reflect much about the result of job training.

Talking about the most difficult and the most important part of job training, respondent 2 introduced a ADDIE model to us. He said that A stands for the analysis of training need, the first D is designing training outline, well the second D is the development based on the designed outline, I means implementation and E is the final evaluation. He felt that all of the five steps are important for company and difficult for them. But the analysis of need is the first step that should be settled down. He told us there are some consultant companies who can help them to do training need analysis; however for Carl Zeiss (Shanghai) Management Co. Ltd. itself, this process is very difficult. The reason for this is mainly because the managers of Sales department usually knows their employees need the job training, but they cannot tell what kind of job training their employees need. Respondent 2 emphasized the importance of training need analysis, and he also suggested that a comprehensive analysis should
take many factors into account, for example the existing work of employees and managerial position staffs, including both the good aspect and the bad aspect.

*Effectiveness and existing problems*

After talking a lot about the training program in Carl Zeiss (Shanghai) Management Co. Ltd., International Communication manager respondent 1 affirmed that job training is really helpful for improving employees’ capacity to work and performing better that contributes to their career development. However, there are also some problems existing in job training in Carl Zeiss (Shanghai) Management Co. Ltd. respondent 1 said that since there is a lack of understanding of the employees’ training need analysis, the training frame they design sometimes cannot satisfy all employees. In some cases they designed some training for sales people based on customers’ requirement but not based on employees’ requirement. In addition, another problem is that since the training center belongs to Human Resource department, if the manager of Human Resource department does not have a good communication with the manager of Sales department, he will not know which kind of job training employees of the sales department really need. So the training center cannot formulate a well-structured training program as well as ensure a good training result for the employees. To some extent, this could make Human Resource manager considering that job training is just dispensable.

Not only respondent 1, but also respondent 2 believed that this communication problem should be solved in the future as soon as possible. Respondent 2 told us that he always thinks that it is important for training center to establish a close relationship with sales department, he hoped that the trainer and training manager should play a role as a HR business partner or a learning business partner to communicate with sales managers, so that they can have a better understanding on the business models of sales department and a better knowledge about what the sales people really need to perform better.
Zeiss training all over the world

Respondent 2 is a professional trainer in Carl Zeiss (Shanghai) Management Co. Ltd. And conducts many international training programs in many countries, from the experience he received, we also got lots of information about Zeiss training program all over the world.

He reckoned that there are some structural problems in Carl Zeiss (Shanghai) Management Co. Ltd., he specified that there is only one Zeiss Academy in Germany that works for providing customized job training to employees all over the world. Respondent 2 emphasized that the Chief Sales Officer in Germany works with his team to design suitable job training program based on investigating and surveying the market demands. However, due to the culture differences, the job training program they provided may not make every business segment hundred percent satisfied, but it is still advanced and customized and positively influences their sales performance. Based on analyzing the key strategies used by the Sales department all over the world, they formulate special job training programs for sales departments in different countries. Respondent 2 added that he is one of the students have ever studied in Zeiss Academy, who have taken charge of promoting the customized job training in China, it is worth mentioning that respondent 2 also studied in Sweden and worked as an intern in Zeiss Sweden.

Though we talked a lot about the Training Center in China, but we knew that respondent 2 has the experience of working in training centers of Zeiss in many countries. So we subsequently asked for more information about Zeiss training in other countries.

Respondent 2 pointed out that in Zeiss, United States; they did not like to follow what Zeiss Academy has provided for them. They designed their own excellent and unique
training system according to Zeiss, United States’ reality. But this unique training system they used may not be suitable for other countries due to their special national environment. Respondent 2 also told us that an experienced employee Tom Tharp who had 35 years of working experience in Zeiss, United States, including 20 years working as a salesmen, 15 years working as a trainer, developed a training system based on his working experience called Carl Zeiss Microscopy LLC, and promotes it to other countries. Respondent 2 states that he has the honor to learn from this veteran and he is also the trainer of this training system in China.

When talking about the differences of job training all over the world, respondent 2 said actually China is a special case. In most cases, each business unit is an independent company. For example, in Japan, Carl Zeiss Meditec AG is an independent company, it is not a department of Zeiss Japan. So as for Japan and other countries, their training group is working under the business unit not under the Human Resource department like China. Based on this kind of organizational structure, the training group can provide a better and targeted training program to the sales people. Respondent 2 also told us that from his perspective, the particular organizational structure in China owes to the slow development of the business unit in China. He added that there are few trainers who belong to the Sales department as well, but they mainly focus on product training, and do not provide too much training on sales skills, soft skills or other skills.
5. Analysis

There are three parts in this sector, first we have shown the results from the analysis of mean method and gave our comments on them. Secondly, we have shown the results from the standard deviation method and gave explanation to each result. In the last part we concluded the information we got from interviews and analyzed them with the Importance-Performance model.

5.1 ANOM on Effectiveness of Job Training

In order to further analyze the effectiveness of job training, we divided all the questions into three categories. The three categories are encouraging employees’ individual development, understanding the impact of employees’ performance on organizational performance and using the appropriate method for learning. By using ANOM analysis, we investigated these three categories based on gender, age, years of working, department, education background and frequency of job training. The scores represent the average reaction towards job training of each group.

5.1.1 Gender

Figure 5.1 ANOM on gender (Source: Own construction)
From the gender’s perspective, in macro level, all the scores are very similar between male and female. However, when we turned to the micro level, we still can find out that female’s willingness for personnel development through job training is a little bit lower than male and their engagement with company is slightly higher than male. This finding is also in line with the previous study which Booth et al. (2005) show that females are more willing to participant in individual-financed job training or pay for job training and what Veum (1995) indicated in his research that on-site job training is effectively enhance wages of female employees.

5.1.2 Age

*Figure 5.2 ANOM on age (Source: Own construction)*

The scores of these three categories also did not show significant differences according to different ages. But when we tent to details, we found that the scores of age from 30-40 in training content sectors got a higher score than others. Through this comparison, we can come to the conclusion that employees belonging to the age group 30-40 have more reactions to the job training. The reactions was showing in different ways, they may learn more or feel more satisfied than other ages, so they have stronger reactions to job training. Lynch (1991) gave her finding by showing that young employees with good jobs are more likely to be provided job training and makes for higher productivity, higher wage growth and lower leaving risk.
5.1.3 Years of working

*Figure 5.3 ANOM on years of working (Source: Own construction)*

When we focused on the working years, it specified on the fact of the loyalty of older employees. Table 5.3 gave us an overview that if an employee works for a company longer, he or she will get more benefit from job training. No matter from the aspect of **encouraging employees' individual development** or **using the appropriate method for learning**, even from **understanding the impact of employees' performance on organizational performance**, old employees got higher score than others. Employees who have a long time working experience in one company will have a better career planning; it also will help them to create more share value with company. Loewenstein and Spletzer (1994) said that the more abled employees, their willingness and reaction to the job training is much more stronger.
5.1.4 Education background

*Figure 5.4 ANOM on education background (Source: Own construction)*

![Education background chart]

The result from education background shows us that this factor indeed has some influence on the training effect. Employees who own higher education degree expect to get more from the training to help with their individual development, at the same time, they felt more satisfied after the training. As we mentioned before, previous studies told us, sometimes the higher education background employee will have more opportunities to receive job training and the impact after training is also more obvious than the less educated employees. Evertsson (2004) who also pointed out that the lower educated employees have less return from the job training.
5.1.5 Department

*Figure 5.5 ANOM on departments (Source: Own construction)*

![Figure 5.5 ANOM on departments](image)

When we did the analysis based on different departments, even though the scores we got were similar to each other, we could still find out some slight differences. Technology department employees pay more attention to individual needs, and they have less close relationship with company, as well as less reactions to training. As the perspective of Hansson (2005), the individuals who are involved in the job training will get wage growth or other improvement in most cases.

5.1.6 Frequency of job training

*Figure 5.6 ANOM on frequency of job training (Source: Own construction)*

![Figure 5.6 ANOM on frequency of job training](image)
After observing the result, it was not difficult for us to find that the more job training employees have participated, the closer relationship they have developed with their companies. Their satisfaction also got the highest score. These indicators confirmed the effectiveness of job training, and told us the job training really can contribute to the engagement between employee and company. Since the job training has improved the efficiency of employees of the companies (Farjad, 2012). Previous study of the European Community Household Panel also pointed out that job training positively affects employment security and it does improve employees’ job security and promotion opportunities (Booth et al., 2005). Moreover, Parent (1999) found that no matter on-the-job training or off-the-job training both lead to a longer tenure of employees.

5.2 Standard Deviation Analysis on Employees retention

The standard deviation analysis aims to investigate the spread out between individual and the average value of each group. We used this method here and wanted to know the general turnover intention of employees based on years of working, department, education background and gender.

5.2.1 Employees retention on Years of working

*Figure 5.7 Turnover intention on years of working (Source: Own construction)*
<table>
<thead>
<tr>
<th>Years</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤1</td>
<td>2.092409</td>
</tr>
<tr>
<td>1 to 3</td>
<td>2.333431</td>
</tr>
<tr>
<td>3 to 5</td>
<td>1.505093</td>
</tr>
<tr>
<td>≥5</td>
<td>1.592608</td>
</tr>
</tbody>
</table>

When we were testing the turnover intention based on years of working, we found that both employees work for company less than one year and over five years have showed a high propensity to leave. When we talked with the respondent 2, he told us that they took all the employees who work for less than five years as new employees, the turnover intention among this group is generally higher. All groups have low SD scores. This stands for employee’s choices are not of great different from each other within each group. Comparing with other groups, the less than one year group has a relatively bigger spread out between individual and the average value. So the uncertainty of employees in this group is higher. Loewenstein and Spletzer (1994) said that the more abled employees, their willingness and reaction to the job training is much more stronger. The ability of employees was affected by many factors, the age and years of working can just explain a very small part of this.

5.2.2 Employees retention on Department

*Figure 5.8 Turnover intention on departments (Source: Own construction)*
An interesting finding has been recognized here, a technology department employee has really high turnover intention. The high SD score in this department also tells us that job training has totally different effects on stable employees and unstable employees. For the stable employees from technology department they may love their job more after the training, on the contrary, for the unstable employees in this department, they may more likely to leave after receiving the job training. Pannenberg (1995) told us that job training directly leads to employees’ upward mobility; Lynch (1992) also confirmed that the promotion plays a very important role in employees’ career life. Through our ANOM analysis, we found that technology department employees pay more attention to their individual development, so they will more likely to leave their current job for a better payment or promotion.

5.2.3 Employees retention on Education background

*Figure 5.9 Turnover intention on education background (Source: Own construction)*
<table>
<thead>
<tr>
<th>Education background</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>High school or below</td>
<td>0.816497</td>
</tr>
<tr>
<td>Bachelor degree</td>
<td>1.879407</td>
</tr>
<tr>
<td>Master degree or above</td>
<td>2.111384</td>
</tr>
</tbody>
</table>

It is said that higher education background employees have more opportunities to access training program; they also obtain the most from training (Lynch, 1992). As we found here, the lower education background employees has the highest turnover intention. This can be a big risk factor for company; they may leave their current job for better payment or promotion after the training.

**5.2.4 Employees retention on Gender**

*Figure 5.10 Turnover intention on gender (Source: Own construction)*

<table>
<thead>
<tr>
<th>Gender</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>1.784826</td>
</tr>
<tr>
<td>Male</td>
<td>2.204064</td>
</tr>
</tbody>
</table>

The result we got based on gender did not show big differences. However there is a small distinction in male and female’s SD score. Female’s choices are more centralized than male. This can be considered as, from the perspective of overall, female employees are little bit more unified than male employees in the aspect of turnover intention. As previous studies proved, that the effects of job training are different based on gender (Leuven & Oosterbeek, 1999; Booth et al., 2005; Regnér, 2002; Evertsson, 2004). From our analysis, we got some slightly difference between
female and male, and we confirmed that females’ performance have stronger impact on organizational performance than male, and their turnover intention are lower than male, as Lynch (1991) stated early.

5.3 The Importance-Performance Model analysis

From the information we got from the interviews, we found that Carl Zeiss (Shanghai) Management Co. Ltd. also applied Kirkpatrick 4-level model in their practice and they confirmed that the last level can hardly be reached. As Steensma and Groeneveld (2010) said that the last level is very difficult to evaluate. They suggested that the evaluation of training results should be done by sales department itself. They also mentioned that this problem is related to their internal organizational structure, if each departments themselves take over the job training work instead of the Human Resource department in charge of all the training for the whole company it will be better, the job training in Zeiss will become more effective. Combining with the Importance-Performance model, we can say, more efforts should be made on using an efficient internal organizational structure to apply job training in next step. So it belongs to the concentration part of the High importance-Low performance category.

Figure 5.11 Zeiss Importance-Performance Model (Source: Own construction)
The training manager also pointed out that the training need analysis is of great importance to fulfill, however what they have achieved until now is still far away from good. According to the Importance-Performance model, the training needs analysis is also belongs to the concentration part of the High importance-Low performance category as we show in figure 5.11. (Martilla & James, 1977)

Except for the works which need to be improved in the future, the training system of Carl Zeiss (Shanghai) Management Co. Ltd. all over the world is excellent. They are exploring for the new training method and pursuit for innovation of the training course that are worth for learning. According to Importance-Performance model, this part should keep going on, and belongs to the High importance-High performance category in figure 5.11. (Martilla & James, 1977)
6. Conclusion

Through our research, we got a comprehensive knowledge about job training both from employees’ perspective and the company’s perspective. Our findings show us that the factors like education background, years of working, department, gender, the frequency of training have some impacts on the result of training, and we also confirmed that the more training employees have, the more efficient skills they will get. In this part, we concluded our findings, answered our three research questions as well as highlighted the contribution of this study.

6.1 Answer the research questions

(1) As we presented at the beginning, our first research question was What do employees expect to get from Job Training in a multinational company? After analyzing our questionnaire and interviews, we found out that most of the employees who actively participate in job training want to get a promotion or improve their performance in companies; they also expect better wages and value creation after receiving the job training.

Except for the above macro expectations that employees want to get from job training, we also found out that when we asked what kind of training programs employees most prefer, the training related to their job skills, the job training which can help for further education as well as the training in terms of network and teamwork are the most popular three options. In addition, the training manager in Carl Zeiss (Shanghai) Management Co. Ltd. also told us the sales skill straining is the most popular one in their company, moreover, the job training about the communication skills and negotiation tactics are definitely important in their company as well.

(2) Our second research question was how can the multinational company provide better Job Training to meet employee’s needs? In order to figure out the effective way for companies to meet employee’s needs, we investigated whether employees satisfied
with the training they have ever taken in their companies, and finally we got some tips for companies.

Through our research, we found out that most of the employees who received job training basically were satisfied with the hardware part of job training, however, what they want more is to improve the training teachers’ ability, and it will be better if the companies could investigate employees’ needs before organizing job training. The training manager in Carl Zeiss (Shanghai) Management Co. Ltd. also confirmed that the most challenging part of job training is to have a forward looking on employees’ needs.

After the Importance-Performance Model analysis, we understood that the multinational company should pay more attention to training needs analysis; this has significant importance for companies. Moreover, for the companies which have internal organizational structure problems, it is better to change their structure and make sure that the training department can have a direct connection with their target training group. Innovation about training and training teachers’ ability are also crucial for effective job training.

(3) Is there any risk faced by multinational company related to Job Training was our third research question. According to the last level of Kirkpatrick Four-level model result evaluation, we understood that the final result of job training can be good or bad, although it is very difficult to assess, we still can learn from the productivity, employees’ turnover intention or customers’ satisfaction. In our study, we took employees’ retention as a risk of job training. Through the Analysis of Mean and Standard Deviation Analysis based on age, gender, years of working, department and education background, we found out that these factors do have some effect on employees’ retention.

From our analysis, we got some slightly different results between female and male,
and we confirmed that females’ performance have stronger impact on organizational performance than male, and their turnover intention are lower than male. When we investigated the employees’ reactions toward job training based on age, we figured out that the employees of 30-40 have more reaction toward job training than others. The analysis of years of working has shown us that employees who work for less than one year and more than five years show the similar result, both of them have a high turnover intention. On this issue the respondent 2 told us that they took all the employees who has less than five years working experiences as new employees, the turnover intention among this group is generally higher.

When we turned to test the education background, we found that higher educated employees got significantly higher scores that mean high educated employees gain more from job training than low educated employees. The turnover intention of low educated employees is also higher than others. Another obvious result show in our study that technology department employees’ turnover intention is relatively higher than other departments. Through our ANOM, we found that technology department employees pay more attention to their individual development, so we found that they are more likely to leave their current job for a better payment or promotion after the job training. As we predicted before, the frequency of job training indeed contribute to the engagement between employees and company, however, the turnover intention is the core risk that multinational companies often face.

6.2 Contribution

Job training is becoming more and more popular in companies, especially in multinational companies. Our original intention was to do this study to further illustrate the effectiveness of job training and find risk factors caused by the ineffectiveness aspect of job training. The study focuses on both employees and companies.
From employees’ perspective, we aimed to have a better understanding about what they expect to get from job training and what training condition they are in. Training needs analysis is a ubiquitous problem. To solve this problem, company should pay more attention to analyze employee’s needs, for example if employees have a directly communication with their training managers, to make the training program and course more effective.

From the perspective of managers, we point out the advanced part of the job training they are keeping now, and we also give suggestions about where they should concentrate more. Particularly, since we found out that the employees of technology department have the highest turnover intention, we suggest that companies should provide opportunities for them to get a promotion or have better salary. In addition, we also found that female employees have a stronger willingness to take job training, even individual financed, so we suggest that managers should pay more attention on female employees’ job training and provide them equal opportunities as male.

From the theoretical perspective, According to the literature we introduced in our study, we develop our conceptual model and use it to get our findings. After our analyzing, we find that some findings in our study are in line with previous literature, for instance, female’s willingness for personnel development through job training is lower than male; young employees with good jobs are more likely to be provided job training and contribute with higher productivity, higher wage growth and lower leaving risk. However, we also revise the previous studies as well as find out new findings, they embody in the following two points: technology department employees pay more attention to individual needs, and they have less close relationship with company, as well as fewer reactions to training, so they will more likely to leave their current job for a better payment or promotion; and both employees working for the company less than one year and over five years have showed a high propensity to leave after receiving job training. We provide a valid literature framework and propose new perspectives as well as integrate and validate the previous perspectives;
these could be our contribution in theoretical perspectives.

From the social perspective, we thought that job training provides a good way for company to engage with their employees. A steady relationship between employees and employers can contribute to a better work environment in the whole society.

6.3 Reflection and Directions for future research

We combined both the quantitative method and qualitative method to do our study and we got many significant results from them. Later studies should pay attention to help companies with developing a better evaluation method to track the whole training process. Further researchers also need to give efforts towards how to establish an effective training system within companies.

As for qualitative research, our research mainly focused on multinational companies and we only interviewed the managers from Carl Zeiss (Shanghai) Management Co. Ltd. Since we considered that Zeiss is a world leading high technology and famous for its job training all over the world. However, we still think that the results of our study cannot be generalized to all types of companies and suggest that future studies should involve more multinational companies.

In addition, we think that the investigation about the return of job training is necessary. We intended to do research on this issue at the beginning of our study, but we could not find the specific data on the cost of job training in the financial report of Carl Zeiss. So we recommend future researchers to focus more in this field. We also suggest that regression analysis as well as EVIEWS and SPSS software could be used in future research to focus on empirical findings about the return of job training.
References


Appendix

Job-Training Questionnaire

Dear participants, we are students from business department of the University of Gavle. We are doing our master thesis; this questionnaire is designed to investigate the impact of Job Training for employees. It will take you about ten minutes to answer the questions below. Please select the options which you think are the most appropriate. Best regard and thank you for your cooperation!

Basic information
1. Gender
   Female
   Male
2. Age
   $\leq 30$
   30-40
   40-50
   $\geq 50$
3. Education back ground
   High school or below
   Bachelor degree
   Master degree or above
4. Years of working in current company
   $\leq 1$
   1-3
   3-5
   $\geq 5$
5. Department
   Technology department
   Management department
   Marketing department
   Other departments

The understanding towards Job Training in your opinion.
6. Do you think an Job Training is necessary?
   No one needs
   Some jobs need Job Training   Your answer:____________
   Everyone needs Job Training
7. Do you think Job Training is related to achieve company’s goals?
   Definitely no 1 2 3 4 5 Definitely Yes

8. Do you think that after the company goes well then it does not need Job Training?
   Yes
   No

9. Do you think that Job Training is only necessary for the poor performance staffs?
   No
   Yes

Training risk factors identification
10. Is there a training system in your company?
    No
    Yes

11. Have you ever taken job trainings in your company?
    Never
    1-3 times
    3-5 times
    More than 5 times

12. Did the company ask for your opinions before you take the job training?
    Never
    Sometimes
    Often
    Every time

13. Does the content of Job Training related to your work?
    Definitely no 1 2 3 4 5 Definitely Yes

14. What kind of job training program you prefer to take? [Multiple]
    About the organizational culture and the regulations of your company
    About the job skills training
    The training in terms of network and teamwork
    For further education
    Others___________

15. Do you know the content, time, place and way of the training clearly before you take the training?
    Have no idea
    Not too much
    Have general idea
    Have clear idea

16. Is there an evaluation after ending the job training?
    Never
    Sometimes
    Often
    Every time

17. Are there some specific training materials?
18. Do you think the job training is helpful with getting a promotion or improving your performance?
   Definitely no 1 2 3 4 5 Definitely Yes

19. Are you satisfied with the ability of the training teachers?
   Strongly dissatisfied 1 2 3 4 5 strongly satisfied

20. Are you satisfied with the training methods such as lectures, case study and the use of multimedia technology?
   Strongly dissatisfied 1 2 3 4 5 Strongly satisfied

21. Are you satisfied with the training environment and facilities?
   Strongly dissatisfied 1 2 3 4 5 Strongly satisfied

22. Have you ever gotten encouragement when you try to use new skills which you learn from Job Training?
   Never
   Sometimes
   Often
   Always

23. Have the tasks ever remind you to use the new skills which you learn from Job Training?
   Never
   Sometimes
   Often
   Always

24. Do you think Job Training has improved your work efficiency?
   Definitely no 1 2 3 4 5 Definitely Yes

25. Do you love your job more after you take part in the job training?
   Definitely no 1 2 3 4 5 Definitely Yes

26. Does the job training add the possibility of you leaving your current job for a better salary or higher position in another company?
   Definitely no 1 2 3 4 5 Definitely Yes

27. If you leave the job after you finish Job Training, the possible reasons may be:
   [Multiple]
   For better payment
   No opportunities of promotion
   The old company is lack of prospects for future development
   Tensions caused by the interpersonal relationships
   Other reasons___________

Thank you for your participation and wish you have a nice day!
Interview question

1. Is there any department especially take charge of job training? How many people working in that department?
2. What is the aim of job training in Zeiss? Is it aim to improve the capability of employees or profit to the companies?
3. Are the jobs trainings all financed by firm or is there any training need participants pay for them or a part of them?
4. What types of job training has Zeiss ever used? Which type of training do you think is best? Is there a unique and complete training system in Zeiss? Are there any unique aspects within the job training of Zeiss compared with other companies?
5. Is there any training difference among different working years employees? Do the more capability employees have more opportunity to get training? Do the better performance employees have more opportunity to take part in job training than poor performance employees?
6. Is there a training evaluation providing to employees after job training? If have, which aspect does company pay more attention to evaluate, the financial benefits or the employees’ satisfaction?
7. Could you talk about the good part and bad part of job training in Zeiss separately? Is there any negative affects after taking job training? For instance, after taking job training, employees may leave their office for a better job.
8. In the job training process, from your perspective, which part is the most important and which part is the most difficult?
9. Comparing with the job training of other companies, what is the predominance of the job training in Zeiss?
10. Which part of the training system in Zeiss should be improved in the future?