

A STUDY ON IMPACT OF EMPLOYEE TRAINING ON PROJECT
PERFORMANCE IN CONSTRUCTION INDUSTRY IN KOTA BHARU,
KELANTAN

NIK ALIA HAIFAA BT NIK ADIK

Report submitted in partial fulfillment of the requirements for the award of the degree in
Bachelor of Project Management

Faculty of Industrial Management
UNIVERSITI MALAYSIA PAHANG

NOVEMBER 2014

SUPERVISOR'S DECLARATION

I hereby declare that I have checked this thesis and in my opinion, this thesis is adequate in terms of scope and quality for the award of the Degree of Bachelor of Project Management.

Signature :

Name of Supervisor : MDM. IDA RIZYANI BT TAHIR

Position : SUPERVISOR

Date : 28 NOVEMBER 2014

STUDENT'S DECLARATION

I hereby declare that the work in this project is my own except for quotations and summaries which have been duly acknowledge. The project has not been accepted for any degree and is not concurrently submitted for award of other degree.

Signature :

Name : NIK ALIA HAIFAA BT NIK ADIK

ID Number : PB11019

Date : 28 NOVEMBER 2014

DEDICATIONS

In the Name of Allah, the Most Beneficent, the Most Merciful

Special Dedication of This Grateful Feeling to my beloved father, Nik Adik B. Nik Hussian, my mother, Kamariah Bt Omar, and my beloved siblings who always give me encouragement and financial support in my effort to finish this thesis report. Also to my supervisor Mdm. Ida Rizyani Bt Tahir, my beloved friends, and entire colleagues that have contribute and give me a helping hand to develop this project.

Sincerely,

Nik Alia Haifaa Bt Nik Adik.

ACKNOWLEDGEMENTS

I am grateful and would like to express my sincere gratitude to my supervisor Mdm. Ida Rizyani Bt Tahir of Faculty of Industrial Management in Universiti Malaysia Pahang, for her germinal ideas, invaluable guidance, continuous encouragement and constant support from first day I applied to graduate program to these concluding moments. The contributions made by her toward my education experience, professional development during this study are gratefully acknowledged.

Lastly, I owe special debt to my family and friends who dedicate their love and support me, especially my parents who encouraged me throughout the journey in getting the research completed.

Thank you.

ABSTRACT

The purpose of this study is to determine the relationship between employee training (on the job training and off the job training), and the project performance in construction industry in Kota Bharu, Kelantan. In this research, the function is getting a response and difference idea to questions on what is the impact of employee training to the project performance in the related construction industry. The term in this research is “employee training” and “project performance” which find the way of this factor that contribute the construction industry in achieving their target. The main target is the result of good project performance after the completion of the project. A total of 48 sample size of participants which is contractors Grade 4 have completed the research study. Quantitative method and questionnaires have been used as the main instruments to collect the data. The questionnaires are consisted of three sections that are:- Section A: Demographic, Section B: Employee Training, section C: Project Performance. The data that are collected has been analyzed using Statistical Package for the Social Science (SPSS) database software. Reliability analysis, Pearson correlation analysis, regression analysis and analysis of hypothesis had been use to analyze the data. Based on the regression analysis that had been done, it shows that the hypothesis is accepted. As a conclusion, there is a positive relationship between employee training and project performance.

ABSTRAK

Tujuan kajian ini adalah untuk menentukan hubungan antara latihan pekerja (latihan kerja dan di luar latihan kerja), dan prestasi projek dalam industri pembinaan di Kota Bharu, Kelantan. Dalam kajian ini, tujuannya adalah untuk mendapatkan maklumbalas dan idea perubahan kepada soalan mengenai kesan latihan pekerja terhadap prestasi projek dalam industri pembinaan berkaitan. Istilah dalam kajian ini adalah " latihan pekerja " dan " prestasi projek " yang mencari jalan faktor ini yang menyumbang industri pembinaan dalam mencapai sasaran mereka. Tujuan utama adalah hasil daripada prestasi projek yang baik selepas tamat sebuah projek. Sebanyak 48 sampel saiz peserta yang merupakan kontraktor Gred 4 telah melengkapkan kajian penyelidikan. Kaedah kuantitatif dan soal selidik telah digunakan sebagai instrumen utama untuk mengumpul data. Soal selidik terdiri daripada tiga bahagian iaitu: - Bahagian A: Demografi, Seksyen B: Latihan Pekerja, bahagian C: Prestasi Projek. Data yang dikumpul telah dianalisis dengan menggunakan Pakej Statistik untuk Sains Sosial (SPSS) perisian pangkalan data. Kebolehpercayaan analisis, analisis korelasi Pearson, analisis regresi dan analisis hipotesis telah digunakan untuk menganalisis data. Berdasarkan analisis regresi yang telah dilakukan, ia menunjukkan bahawa hipotesis diterima. Kesimpulannya, terdapat hubungan yang positif antara latihan pekerja dan prestasi projek.

TABLE OF CONTENTS

SUPERVISOR’S DECLARATION	i
STUDENT’S DECLARATION	ii
DEDICATIONS	iii
ACKNOWLEDGEMENTS	iv
ABSTRACT	v
ABSTRAK	vi
CHAPTER 1 INTRODUCTION	1
1.1 Introduction	1
1.2 Background of Study	2
1.3 Problem Statement	2
1.4 Objective	3
1.5 Scope of Study	4
1.6 Significance of Study	4
1.7 Operational Definition	4
1.8 Expected Result	5
CHAPTER 2 LITERATURE REVIEW	6
2.1 Introduction	6
2.2 Employee Training	6
2.3 Benefits of Training	7
2.4 Human Resources Training Needs	8
2.5 Training an Development Methods (On-The Job Training & Off-The Job Training)	10
2.5.1 Job Rotation and Transfer (On-the-Job Training)	11
2.5.2 Coaching and/or Mentoring (On-the-Job Training)	12
2.5.3 Apprenticeship (On-the-Job Training)	12
2.5.4 Conferences (Off-the-Job)	13

2.5.5	Role Playing (Off-the-Job)	13
2.6	Project Performance	14
2.6.1	Time Performance	15
2.6.2	Quality Performance	15
2.7	Relationship Between Employee Training and Project Performance	16
2.8	Determinants of Project Success	18
 CHAPTER 3 METHODOLOGY		 19
3.1	Introduction	19
3.2	Research Objectives	19
3.3	Research Design	19
3.4	Data Collection	20
3.4.1	Population and Sampling	20
3.5	Data Collection Techniques	22
3.6	Design of Questionnaire	23
3.7	Conceptual Framework	24
3.8	Method of Data Analysis	24
3.8.1	Reliability Analysis	24
3.8.2	Research Hypothesis	25
3.8.3	Correlation Analysis	25
 CHAPTER 4 DATA ANALYSIS		 27
4.1	Introduction	27
4.2	Data of Respondents	27
4.3	Reliability Analysis	32
4.4	Correlations Analysis	36
4.5	Multiple Regression Analysis	37
4.5.1	Regression Analysis (Employee Training)	37

4.6	Analysis of Hypothesis	38
4.7	Summary of Hypothesis Testing and Summary of Finding	39
CHAPTER 5 CONCLUSIONS AND RECOMMENDATIONS		41
5.1	Introduction	41
5.2	Conclusions	41
5.3	Limitations of Study	42
5.4	Recommendations	43
APPENDIX A		47
APPENDIX B		49
APPENDIX C		55

LIST OF TABLE

Table no	Title	Page
2.1	The Training Need's Types	10
3.1	Krejcie & Morgan's Table	21
3.2	Table Ranking Scale (Part B)	23
3.3	Table Ranking Scale (Part C)	23
3.4	Correlation Coefficients	26
4.1	Data of Respondents	27
4.2	Reliability Statistics	32
4.3	Reliability for Independent Variable (Section B)	33
4.4	Reliability for Dependent Variable (Section C)	35
4.5	Correlations	36
4.6	Model Summary (Employee Training)	37
4.8	Results for Hypothesis	39

LIST OF FIGURES

Figure no	Title	Page
2.1	The Process of Planned Training	17
3.1	Conceptual Framework	24
4.1	Gender	29
4.2	Race	30
4.3	Age	31
4.4	Theoretical Framework	38

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

All organizations in the whole world are determined for victory and out-competing especially those in the same industry. In achieving that, organizations need to obtain and also utilize the human resources efficiently. Besides, in effort to keep their human resources the latest, organizations must to be alert of facing more realistic. This is one of the significant part in each of organizational, social, economically connected parts among other which is important to the accomplishment of the objectives in that particular organizations and also organizations successful market's determination. Managers also must give more focus to all the basic and important functions of human resource management. This study is about one of the most important part of human resource which is employee training and its impact of project performance.

This chapter is divided into few chapters. The first chapter in this research is the background of the study which will then be followed by problem statement, objectives, scope of study, significance of study, and the operational definitions. Finally, the overview of the progress of the rest of research will be presented at the last section.

1.2 BACKGROUND OF STUDY

According to Evans, Pucik & Barsoux (2002), the competitions in most of the organizations are increasing day by day due to globalization, changes in technology, political and economic environments. As a result, to prepare the employees to adjust to the increases above, the organizations need to train their employee and thus enhance their performance. In every organization, the responsibility to build up the company's performance and the employee training's implementation is one of the main actions that most companies have to achieve. Employees are very important and it is very significant to optimize the employees' contributions to the company's goals and goals in the effort of maintaining a successful performance. Managers need to make sure of an enough number of employees that are socially and technically knowledgeable and skilled of career development into specialist departments or management positions, which is very important (Afshan, Sobia, Kamran & Nasir 2012, 646).

Human resources are very important. Remember that human resources are the most important assets of the company, employees are the main contributors of achieving competitive benefit (Houger, 2006), and training is the only technique to develop the intellectual assets of the organization by building the competencies of the employees. Besides, organizations also need to obtain and utilize the human resource effectively in order to succeed. Human resource management that can fit into the organization's structure must be designed because it will make it easier for the organizations to achieve their goals and objectives. To get the essential needed skills and improve the commitment, organizations must assist their workforce.

1.3 PROBLEM STATEMENT

In spite of the increasing effects on training for employees by organizations, the literature on human resource development is still inadequate which is in the issues in developing countries (Debrah & Ofori 2006, 440). The presented studies in this relation have made the general human resource management (HRM) highlights on the making a slit on some issues such as the effect of training on the employees' performance

(Harvey 2002; Harvey, Matt & Milord 2002; Jackson 2002; Kamoche 2002; Kamoche, Debrah, Hortwiz & Muuka 2004; Kraak 2005).

A good Human Resource will eventually produce a steadily growing company in the aspect of management and also the performance. In addition, much more skilled and knowledgeable workforces are needed as from time to time the construction industry is becoming more complex. Saiyadain and Ali (1995) stated that in Malaysian firms nowadays, the measurement of training effectiveness was inconsistency and the formal education in management was not posed by most Malaysian contractors. The contractors might have low sensitivity to send their employees to the training because of this matter. Based on the study that has been conducted among the industry people, it shows that the contractors in most industries do not seem to be nurturing continuous learning. Training for the employees is usually practiced in the beginning of years of the employment at the organizations. Regarding to Coetzer (2007), once the employees become productive, the emphasis on learning starts to slowly disappear.

In this study, the researcher will find out the relationship of employee training on project performance in construction industry.

1.4 OBJECTIVE

The objective of this study is:

- To identify the relationship between employee training and project performance

1.5 SCOPE OF STUDY

This study was conducted at construction industry in Kota Bharu, Kelantan, Malaysia. This study is mainly applies to the contactors of gred 4 in the companies. The study groundwork will lies on the conducted literature review to identify the impact of training on the project performance.

1.6 SIGNIFICANCE OF STUDY

The findings of this study is expected to help to highlights which ways will human resource, which is employee training, can be useful not only to the organization itself, but also to the project performance.

1.7 OPERATIONAL DEFINITION

Human Resource Development is the method for organizations in managing their employees and shapes them to build up (McCourt & Eldridge 2003, 2) in the effort of executing organizations' objectives and goals successfully.

Training is a planned, organized and it results in improved level of skill, knowledge and capability that are very important to carry out the tasks effectively (Gordon 1992).

Project Performance is the overall quality of a project in terms of its impact, value to beneficiaries, implementation effectiveness, efficiency and sustainability.

1.8 EXPECTED RESULT

The expected result for this research is to achieve a finding that can be use by the higher managements to improve their management and at the same time improve the project performance.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

Human Resource Training and Development (HRD) function contains training and development that is argued to be one of the important parts of Human Resource Management (HRM) (Weil & Woodall 2005).

2.2 EMPLOYEE TRAINING

Employee training has actually already been recognized as one of the important factor in Human Resources Management. It has also attracted huge research attention by academic writers (Gordon 1992, Beardwell, Holden & Claydon 2004). Therefore it has come with several of training's definitions.

Employee training is the systematic and planned modification of actions by learning programs, events and activities that will result in the trainees having the higher level of skills, knowledge, abilities and competencies to do their work effectively (Gordon, 1992). However (Noe, Hollenback, Gerhart & Wright 2003) argues that training is a planned effort to facilitate the learning of skills, employee's behavior, and

job related knowledge. According to Bernardin and Russell (1998: 172), employee training is defined as any endeavor to improve the performance of the employee on a held job or anything that is related. It also means modification in skills, attitudes, behaviors, or specific knowledge. To make it more effective, it must involve the learning experience, planned organizational activity, and also be designed in response to recognized needs.

Employee training is not only about getting new knowledge, abilities and skills, but also the likelihood to endorse entrepreneurship, let the employees know how to fit-in any changes, encourage them to have a better attitude, train and involve the employees to make any important decision-making regarding the works (Jelena Vemic, 2007).

Besides that the researchers also keep arguing about the importance of the training as they continue their quest in the area of training research. Some of the researchers have some argue that the acclamation of employee training's important in these past years have quite been influenced by the competition's growth where foregoing of employee development is considerably enlightened (Beardwell et al. 2004). In addition to the above, Beardwell et al. (2004) also quote that the technological developments and organizational change have slowly bringing some employers to realize that success depends on the abilities and skills of the employees. So that considerable investment in training is really needed.

2.3 BENEFITS OF TRAINING

Cut Zurnali (2004) stated that the major training purpose is for the employees to have a better knowledge, behaviors, and skills highlighted in training programs and to use them in their daily activities. Besides, training's purpose is to acquire and increase knowledge in a good way, improve attitudes towards work related tasks, and improve skills. Training is also a motivator that can bring the short- term and long- term advantages for both individuals and organizations.

According to Cut Zurnali (2004), there are a few benefits of training that is provided by the company, that are suggested by Noe, Hollenback, Gerhart, Wright (2003). The examples of the benefits are:

- The knowledge of the employees about culture and outside competitors increased.
- The employees who have the expertise can be assisted to work with new technologies.
- The employees can also be guided to work productively in teams in order to produce a better quality of products and services.
- The culture of the company is ensured to focus on innovation, learning and creativity.
- The safety can also be ensured by providing new ways for the employees to contribute to the company during their employment and their interests change or expertise when they are absolute.
- The employees are prepared to be able to work more effectively with their mates, especially the women and the minorities.
- The availability and quality of the staffs can be improved.
- The employees that have undergone training will become more confident and motivated.

2.4 HUMAN RESOURCES TRAINING NEEDS

Regarding to Wognum (2001) training and development needs might take place at three organizational levels that are strategic level, tactical level, and operational level where in strategic level, the needs are based on the upper management while taking into account of organization's missions, strategy, problems and goals that must be resolved or fixed.

The second one is tactical level, where the middle management considers the needs of the developments to the cooperation and coordination between the organization units while determining the needs.

The third one is operational level which the employees and the lower executive management stated the needs while the operations problem is considered, such as individual workers and related departments performance problem. Effective training or development is based on having an understanding about what is needed by the individual, the department, and the organization as a whole. Besides, a training need can also be conclude as a shortage of skills that can be eliminated or lessen by having a training and development. In the process of enabling the organization to formulate the human resource training and development, the main targets that will allow both formal human resource training and informal human resource training and development programs and methods produce an employee that qualify competitiveness and effectiveness, the consideration is worth it for supplying proper coordination and also appropriate incorporation for three levels needs.

The first issue is to distinguish the needs that are linked to the objectives of the organizations. There are three categories of identifying training needs (Wognum,2001)(Torrington et al., 2005). The first one is *resolving problems* where it highlights on the worker's performance, *improving some working practices* that highlight the improvement notwithstanding of the performance problems, renewing or changing the situations of the organization, which might appear because of the changes or transformations in the strategy. It is shows in the Table 1 below. However while identifying the training needs, it is no need to generate, enlarge, sustain or enhance any system that is related in producing the workers with the needed skills. The objectives of the training program will determine the training programs, the chosen trainees and the content of the training (Milkovic & Bordereau, 2003).

There are a few approaches that have been focused in the past literature to identify the needs (Edmond & Noon, 2001; Torrington et al., 2005). The approaches are problem- centered (performance gap) and profile comparison (changes and skills). Correspondingly, the number of the ways for investigating training needs depending or either new or current employees have been discussed by the past studies (see e.g. Torrington et al. 2005, 390 - 392). The two most usual approaches are the problem centered approach and the profile comparison approach. Generally, the problem centered approach highlights on any difficulty in the performance and the management

will find out whether the problems are due to lacking of skills, which must be develop if the crisis is to be solved.

Profile comparison approach alternatively highlights on the matching the skills or abilities with the job filled, whether new position or existing position. Any improvement in strategy and technology may also carry the necessitate for new or extra skills.

Table 2.1 The training need's types

Researchers		
Wognum et al. 1999 (categories)	Wognum 2001 (levels)	Torrington et al. 2005 (approaches)
<ul style="list-style-type: none"> • Resolve problems (workers' performance) • Improve practices • Change or renew (company situation) 	<ul style="list-style-type: none"> • Strategic level (higher management) • Tactical level (middle management) • Operational level (lower executive management & other employees) 	<ul style="list-style-type: none"> • Problem centered (performance) • Profile comparison) changes & skills)

2.5 TRAINING AND DEVELOPMENT METHODS (ON-THE- JOB TRAINING AND OFF-THE- JOB TRAINING)

Nadler (1984:1.16) agreed that all the human resource actions are function to either develop individual's performance on the current work, train new workers for new jobs or new positions in the future and common development for both individuals and organizations in order of achieving organization's current and future targets.

Basically, different organizations will choose different kind of training methods because of a few reasons such as it is based on the strategy, objectives, and resources available of the organization. It is also based on the identified needs at the time, and last but not least, it depends on the group that need to be trained, which might be among individual employees, groups, departments, or the whole organization.

Cherrington (1995:358) stated that the method of training is consisted of two methods, which are *on-the-job training* and *off-the-job training*.

On-the-job training might include of teaching or coaching by people or trainers that have more experience of that particular area, at the bench or at the worktable (Armstrong, 1995). Usually the *on-the-job* training is given to the employees while they are doing their usual work at the same work spaces. There are many examples of *on-the-job* training such as coaching and/or mentoring, job rotation and transfer, and apprenticeship.

Off-the-job training focus more on the development and long-term education. As discussed in the literature (e.g. Hamilton, 1990; Harris et al, 1998) and as foreshadowed by the employers, off-the-job training generally added an extra dimension to the training undertaken by the young people. For example, it afforded the chance to learn about practices in other companies and to learn skills that might not be utilised in the particular workplace.

Off-the-job training usually involving sending employees away from their regular work spaces, and at the same time the concentrations is all on the training. The examples for *off-the-job* trainings are conferences and role playing. These will be explained precisely.

2.5.1 Job Rotation and Transfer (On-the-Job Training)

According to McCourt & Eldridge (2003), job rotation and transfer is the way taken by the company to develop and improve the skills of the employees, that involving employee's movements from one particular responsibility to another official responsibility. As an example having to work on a higher position in the organization or from the different branch of the organization to another branch.

As an example, in transfers, it might need the employees to move from one country to another country. Along the differences exist in different countries which the organizations are operating, the rotations and transfers will increase the knowledge of give the employees about the different operations in the organizations. The selected employees will acquire a beneficial knowledge that can give benefit to company because the competitive advantage of the company will increase.

2.5.2 Coaching and/or Mentoring (On-the-Job Training)

The more knowledgeable and skilled employees will be coaching the less knowledgeable and less skilled employees (Devanna, Fobrum & Tichy 1984; McCourt & Eldridge 2003, 256; Torrington et al. 2005, 394 – 395). Mentoring is proved that it provides so many benefits for development of the responsibility and relationship building (Torrington et al. 2005, 394 – 395). Usually, the fresh recruited graduates in the company is applied by the practice by being attached to coach that might be their instant managers or senior manager. However that does not mean that the older employees do not need training method as it is more emphasized on the fresh employed individual in the company.

2.5.3 Apprenticeship (On-the-Job Training)

Basically, apprenticeship trains employees to meet industry standards for some specific work. Training programs which get together with the changing needs and individual needs are usually designed by employers and skilled employees. The objective of the program is to produce many skilled employees based on the requirement of the specific industry. Regarding to Gary Dessler (2008), apprenticeship training is a process where some individual become skilled workers, by the mixture of long-term and formal learning on-the-job training. Apprenticeship system can also be concluding as a form of full time employment and a process of training and education. While learning, the people can also earning. Training and education of apprentices should be arranged in a way to assist apprentices meet the company's objectives.

2.5.4 Conferences (Off-the-Job)

Conference is one of the training and development method that need presentations by more than one individual to a large number of audiences. A group of employees are trained on one some specific topics all at the same time in wide number of audiences. However, it is not that easy to make sure that all trainees understand the topic overall and this become as one of its disadvantages. The trainees might not have the same level of understanding.

2.5.5 Role Playing (Off-the-Job)

Role training is one of the most effective training and development techniques that attempt to capture and bring forth decision making circumstances to the employee that are being trained. It is an excellent method to achieve a lot of benefits for company, management, and employees. Role playing is not just about practicing to work with an imaginary client out loud. It actually helps a group of employees to act out work scenarios. A great deal of confidences can be developed by role playing technique as it is an open communication and it also put a player 'on-the-spot'. According to Goldstein (1993), role plays can be trained when one of the participants act as him/herself, meanwhile the other person act as that particular individual the trainee interacted before.

Role playing can help employees to learn the acceptable system and it is one of the best ways to communicate about the ideas with the clients. A low- stress environment is the most suitable environment to conduct this technique as it is easier to adapt learning. The trainers can make corrections about the employee on the role-playing by having more rehearsal and they can also critique the employees on training. To make it more clear, this type of training should be done in the real job place.

2.6 PROJECT PERFORMANCE

The main indicators of performance in construction projects are consist of cost, time, and quality (Pinto and Slevin, 1988). They are highly interconnected and need some trade- off and balance among them to reach overall control over the project performance.

Hobday (2000), Sydow et al. (2004) and Turner et al. (2008) stated that project-oriented companies (POCs) are momentary organizations that combine diverse expertise and resources to deal with increasingly complex environments through projects. The traditional barriers to organizational change and innovation can be overcome by project-oriented companies, and there are few project benefits such as increased technical and the complexity of the product, reduced time to market, and speedy response to customer needs (Hobday,2000; Sydow et al.,2004). Regarding to DeFillippi and Arthur (1998), POCs are usually found in a broad range of industries, which are in services and manufacturing. There are some contexts that be constituted of projects in POCs.

As an example, Sydow et al. (2004, p. 1478) said that there are four levels of projects: 1) organizational unit, where the project is surrounded by a business or functional unit; 2) whole organization, where the organization is fully project-based; 3) inter-organizational collaboration on project that are provided by networks; and 4) a particular framework for a project-based organizing that are provided by organizational areas in some particular industry. Behavioral aspects, in example the communication between workers and clients are included in the evaluation of project performance that has been widened by the scholars (Jugdev and Muller, 2005); stakeholder's view, in example client's satisfaction and profitability (Freeman and Beale, 1992); both external stakeholders and internal stakeholders (Lester, 1998); environments of the project, radical change and incremental change as the examples (Raz et al., 2002); and last but not least cross-cultural perceptions (Pinto, 2013). An important difference in separating the project performance evaluation in the short run and long run has been provided by Shenhar et al. (1997, p. 9). Performance of the short-run project refers on the project completion. It usually includes the efficiency of the project and the instant and commercial success of the project. Meanwhile long-project performance refers to the potential of the project for the upcoming projects.

2.6.1 Time Performance

The success of the performance mainly is an indicator of a success of any construction project. There has been many researches done that circulate about the performance of construction project. Regarding to Chan and Kumaraswamy (2002), the construction time is becoming more important because it is a vital benchmarking for assessing the project performance the organization's project efficiency. Time is one of the most basic criteria to determine a project success. Unfortunately, most constructions industry in Malaysia has been recognized as industries that are facing poor performance that will lead to failure in achieving effective time performance. Because of this, many projects faced a delay in big amount of time.

2.6.2 Quality Performance

The achievement of cost and time are the aspects that project management attends most of the time, resulting in the half- hearted effort to make quality of the project as one of the most important factor for project success. The quality is often overlooked while achieving the objectives of time and cost in a project. Even there are many studies that have been done showing that quality is very important in a project; they are sacrificed in order to achieve a short-term objective. The control of the performance of installation, building or engineering arrangement should be managed in the same way as how time and cost is managed (Barnes, 1987).

2.7 RELATIONSHIP BETWEEN EMPLOYEE TRAINING AND PROJECT PERFORMANCE

Smith (1997) in Irianto (2001:6) said that training has a very significant role for the project performance which contribute to three main issues, that are: 1) Training and development has the potential in improving the productivity of the labour; 2) Training and development can make the quality of that output better: a more highly trained employee is not only more skilled and experienced at the work but also alert of the importances of the project performance; 3) Training and development improves the capability of the employee to adapt to any changes; the successful implementation of change whether technical (in the form of new technologies, new products, new markets, etc.) depends on the skills of the organization 's member.

Since day by day the new technology is emerging, the training to help workers learn how to handle the complex machines related to a construction project as example, is very important. The improvement of skills and knowledge among the employees is becoming more vital towards the performance, competitiveness and innovation (Lawler, Mohrman, & Ledford, 1998; Martocchio & Baldwin, 1997). In spite the existence of relationship between training towards project performance, the studies that have been done to give enough proof for the thoughts are still lacking.

If training is planned, there are many benefits that can be derived from it. This means that the trainers and trainees are all set for the training well later on. Training is an important action needed in order of achieving the learning that are necessary for improved project performance (Kenney & Reid, 1986). Kenney and Reid agreed that there are a few steps involved in a planned training:

- 1) Identify and define training needs.
- 2) Describe the learning that are necessary such as types of skills and knowledge that have to be known and what attitudes need to be changed.
- 3) Define the training objectives
- 4) By using right combination for training techniques and locations, training programs to accomplish the needs and objectives have to be planned.
- 5) Decide who is going to provide the training.
- 6) Evaluate the training.

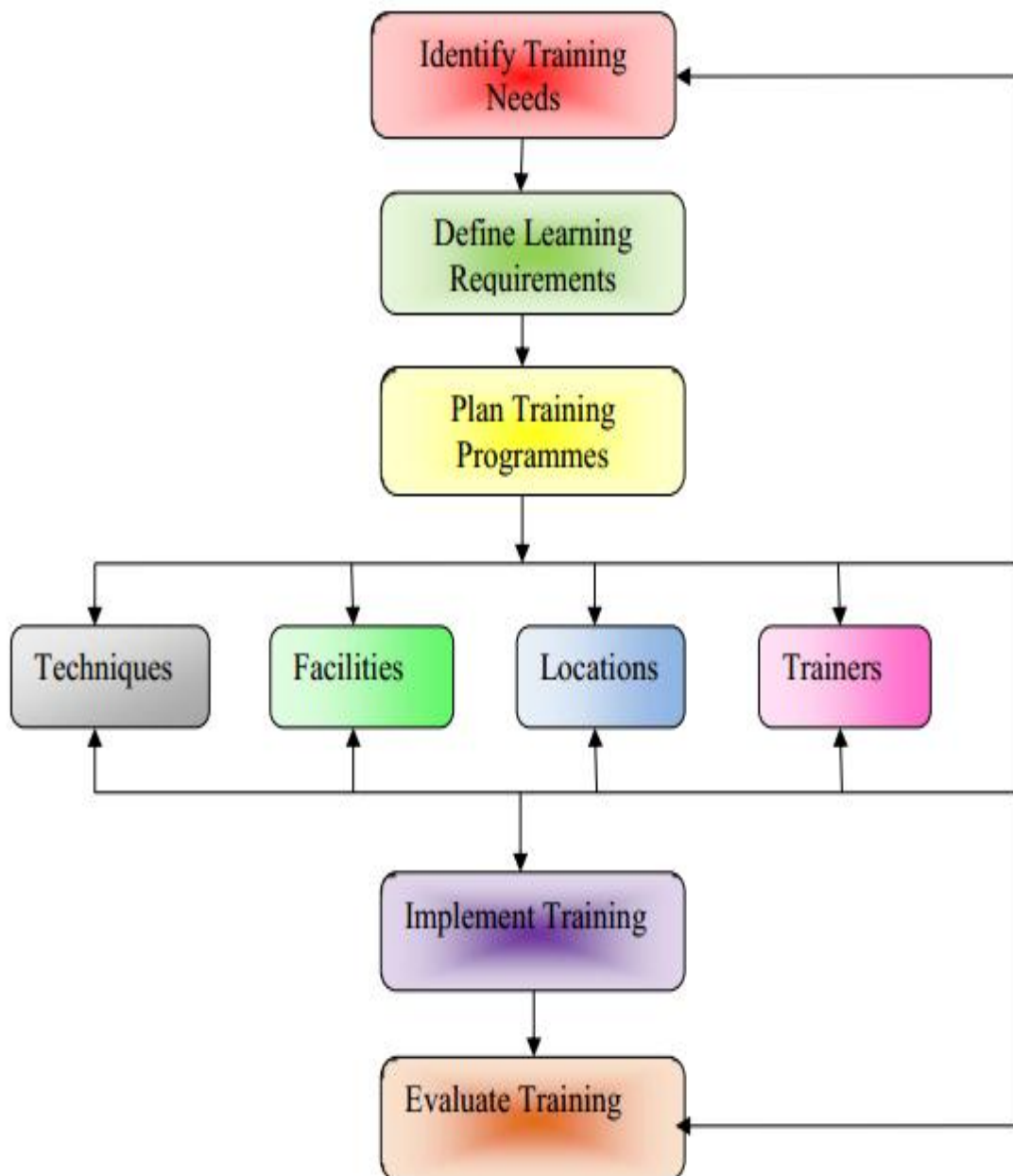


Figure 2.1 The Process of Planned Training (Source: Armstrong Michael (1995))

2.8 DETERMINANTS OF PROJECT SUCCESS

Soekidjo Notoatmodjo (1991, 53) stated that when the trainees themselves were to be a process of transformation in a few factors, the accomplishment of the training programs can be measured as successful. Those factors are:

- The ability in performing task in increasing.
- Changes of behavior in a better way in few subjects such as attitude, discipline, and work ethic.

As'ad (1987 : 73) conclude that the success of a training program can be determined by five components :

- Targeted training or development: every training must have clear goals that be decomposed into behaviors which will be observed and measured in order to detect the training's effectiveness.
- Trainer: trainer should know how to teach the training materials by specific methods that will produce a trainee that is better in skills and knowledge regarding their works.
- Training Materials: on the target training set, the training materials must be complete and also should be compiled.
- Training Methods (including aid): after the training materials are set, the next step is to arrange the proper training methods.
- Participants (Trainee): participants are the most significant component is training. It is because they are the biggest determinant of the successful of training.

CHAPTER 3

METHODOLOGY

3.1 INTRODUCTION

This chapter discusses about the description of the methodology that have been used in the research. In this chapter, the techniques and methods of sampling, data collection, data analysis, questionnaire design, and conceptual framework are included.

3.2 RESEARCH OBJECTIVES

- To identify the relationship between employee training and project performance

3.3 RESEARCH DESIGN

There are couples of types of research methods that can be use in conducting a research. The examples of the methods are qualitative research, quantitative research, and a combination of both qualitative and quantitative research. Regarding from Ghauri & Gronhaug (2005), the differences between quantitative and qualitative research is

based on the procedures. The qualitative methods usually emphasis on understanding. It also focuses more on understanding the respondent's point of view. Meanwhile, quantitative methods highlights on testing and verification. Besides it also focus on facts, and reasons for social events and it is used to collect numerical data to measure the trend in research. Under this research, the quantitative method is used to collect accurate and usable data of the identified variables. The data were collected from construction industry in Kota Bharu, Kelantan through survey for this study.

3.4 DATA COLLECTION

3.4.1 Population and Sampling

Basically, a research population is a large number of objects or individuals that is the highlight of a scientific query. It is for the good of the population that have been done by the research. This study focuses on the construction industry in Kota Bharu, Kelantan. The contractors of gred 4 that have been registered with Construction Industry Development Board (CIDB) in Kota Bharu, Kelantan are the main target population for this research. Sample is a small group of individuals that are chosen from the population. It is usually used to represent the population. Sampling techniques is used to select the participants for the sample which this technique helps to reduce the cost whilst the generalisability is maximized. There are two type of sampling techniques which are probability and non- probability.

For probability sampling, each person in the population is known and has a probability to be selected. Based on each person's probability, the random process decides the sample. The non-probability sampling is where the population is not wholly known, which at the same time the individual probabilities cannot be detected. In choosing the sample, common sense or ease is used. However to avoid bias and to keep the sample representative, some efforts should be made.

Under this study, simple random sampling which falls under probability sampling is used. Simple random sampling is the subset of individuals that have been chose from a bigger set. Every individual is randomly selected and completely by chance which means each of them has the same probability to be chosen at any phase in the sampling process.

Krejcie & Morgan (1970) is a strategy that has no calculation and the required sample size can be directly obtain from the table to determine the sample size (refer Table 3.1)

Table 3.1 Table for determining Sample Size from a Given Population

population	sample size	population	sample size	Population	sample size
10	10	230	144	1,400	302
15	14	240	148	1,500	306
20	19	250	152	1,600	310
25	24	260	155	1,700	313
30	28	270	159	1,800	317
35	32	280	162	1,900	320
40	36	290	165	2,000	322
45	40	300	169	2,200	327
50	44	320	175	2,400	331
55	48	340	181	2,600	335
60	52	360	186	2,800	338
65	56	380	191	3,000	341
70	59	400	196	3,500	346
75	63	420	201	4,000	351
80	66	440	205	4,500	354
85	70	460	210	5,000	357
90	73	480	214	6,000	361

95	76	500	217	7,000	364
100	80	550	226	8,000	367
110	86	600	234	9,000	368
120	92	650	242	10,000	370
130	97	700	248	15,000	375
140	103	750	254	20,000	377
150	108	800	260	30,000	379
160	113	850	265	40,000	380
170	118	900	269	50,000	381
180	123	950	274	75,000	382
190	127	1,000	278	100000	384
200	132	1,100	285	1,000,000	384
210	136	1,200	291		
220	140	1,300	297		

Sources: Krejcie & Morgan (1970)

3.5 DATA COLLECTION TECHNIQUES

Primary Data and Secondary Data are the two types of data that exist. Primary data is the data collected directly from first-hand experience while secondary data on the other hand refers to data that has been collected by a different party. Usually the researcher collects the primary data by a variety of methods such as surveys, interview, and questionnaire. For this study, I only depend on primary data.

According to Sabriah (2009), survey questionnaire is the best method for degree level. Even there are some other alternatives, the researcher decided to distribute the questionnaire to the respondents by email.

3.6 DESIGN OF QUESTIONNAIRE

The questionnaire was designed based on the information gathered from literature review and also from the research objectives. The past researches have been the guide to create the research question for this study. According to Taylor (2005), it is essential to create a research question that is easy to be understood and without touching the sensitive issues that might offend the respondents.

There are three parts of the questionnaire that are Part A, Part B, and Part C. In Part A, the participants are required to fill up their personal details such as gender, sex and race according to the given choices. Part B contains questions about the independent variable, which is employee training. The scale used is ranking scale where the respondents need to tick the level from 1 until 5 based on their own perceptions, while Part C consists of questions about dependent variable which is project performance and it also use ranking scale. Quality and time are two main factors in measuring project performance. For this study, closed-ended questions will be used. The ranking scale used is shown as in Table 3.2. For Part C, the ranking scale is also used which rank from 1 until 5 as shown in table 3.3.

Table 3.2 Table ranking scale (section B)

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

Table 3.3 Table ranking scale (section C)

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

3.7 CONCEPTUAL FRAMEWORK

Below is the conceptual framework for independent variable and dependent variable for this study.

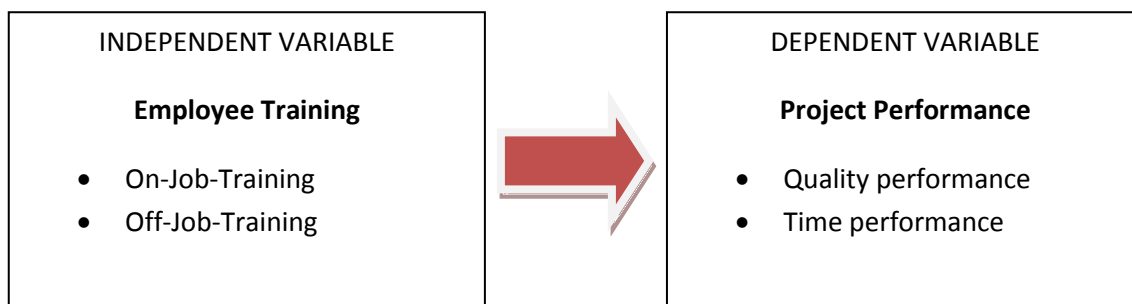


Figure 3.1 Conceptual Framework

3.8 METHOD OF DATA ANALYSIS

Statistical Packages for the Social Sciences (SPSS) software is used to analyze the data in this study. It is an easier and quicker way to score and analyzing quantitative data. Regarding to Nie, Bent & Hull (1970), the original SPSS manual has been described as one of the “sociology’s most influential books” for allowing common researches to do their own statistical analysis.

3.8.1 Reliability Analysis

Cronbach’s Alpha is a test for a model or survey’s internal consistency. Cronbach’s Alpha is also known as ‘scale reliability coefficient’. Under this study, it is used to test the reliability of each subscale of the instrument of survey. Alpha is an

important concept in the evaluation of assessments and questionnaires. The reliability coefficient of 0.7 and above is considered as acceptable in majority of social science applications. The Cronbach's Alpha of 0.8 and above is considered as good, meanwhile the reading of Cronbach's Alpha of 0.9 or higher is considered as excellent accuracy of independent variable. According to (Cortina J. ,1993), the Cronbach's Alpha value are affected by the number of test items, item interrelatedness and dimensionality. However there are many opinions about the value of alpha that are considered as acceptable ranging from 0.70 to 0.95 (Nunnally J, Bernstein L. 1994).

3.8.2 Research Hypothesis

H₀: There is no relationship between employee training and project performance.

H₁: There is a relationship between employee training and project performance

3.8.3 Correlation Analysis

In order to determine whether the two variables (dependent and independent variables) has a significant relationship or not, correlation test was done. To examine the relationship between employee training and project performance, Pearson correlation technique was performed in this research. Pearson correlation method determine the strength of the relationship presented in the form of correlation coefficient (r) and the direction of the relationship; positive or negative relationship where the r value has an interval between +1.00 and -1.00 (Abd Rahim, 2009). The correlation coefficient as proposed by Davis (1968) was applied in this research (see Table 3.4).

Table 3.4 Correlation Coefficient

Correlation Coefficient (r)	Explanation
0.70 or higher	Very strong relationship
0.50 – 0.69	Strong relationship
0.30 – 0.49	Moderate relationship
0.10 – 0.29	Weak relationship
0.00 – 0.09	Very weak relationship

CHAPTER 4

DATA ANALYSIS

4.1 INTRODUCTION

This chapter shows the results of the findings and the result of the statistical analysis that has been conducted on the data. It is structured by showing the profiles of the respondents through descriptive statistics, and then followed by reliability analysis to determine whether the questions used in the questionnaires are reliable or not,

A total of 56 sets of questionnaire were distributed among them and 48 sets of questionnaire are collected back. These questionnaires that are collected back are used for this research.

4.2 DATA OF RESPONDENTS

Table 4.1 Data of Respondents

Demographic Variables		Frequency	Percentage (%)
Gender	Male	41	85.40%
	Female	7	14.60%

Race	Malay	28	58.33%
	Chinese	13	27.08%
	Indian	7	14.58%
Age	20- 30	3	6.25%
	31- 40	12	25.00%
	41- 50	17	35.42%
	50>	16	33.33%

According to table 4.1, there are a total of 48 respondents that has answered the questionnaire. In this questionnaire, the frequency of male is 34 while the female is 14. Both comes with the percentage of 70.83% and 29.17%.

The respondents' races shows that out of 48 respondents, 28 of them are Malays with the percentage of 58.33%, 13 of them are Chinese with the percentage of 27.08%, and another 7 of them are Indians with the percentage of 14.58% which is also the smallest percentage.

In the terms of age, the majority of the respondents are in the age of 41-50 years old, which is 35.42%, followed by 33.33% of them are in the age of 50 and above which is 16 persons. The third highest is 31-40 years old with the percentage of 25% equivalent to 12 persons, and the lowest percentage is 6.25%, which is 3 of them are at the age of 20-30 years old.

Gender

	Frequency	Percent
Valid Male	41	85.4
Valid Female	7	14.6
Total	48	100.0

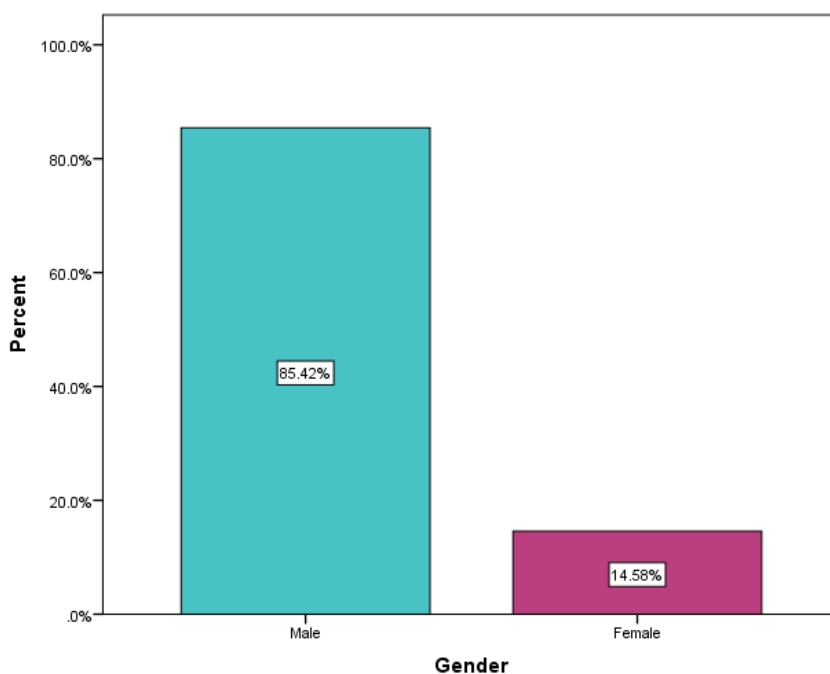


Figure 4.1 Gender

The pie chart above shows that majority of the respondents are male, which is 41 persons with the percentage of 85.42% compared to the female respondents, which is 7 persons out of 48 respondents, with the percentage of 14.58%. This shows that most of the respondents are male, which dominant the construction industry in Kota Bharu, Kelantan.

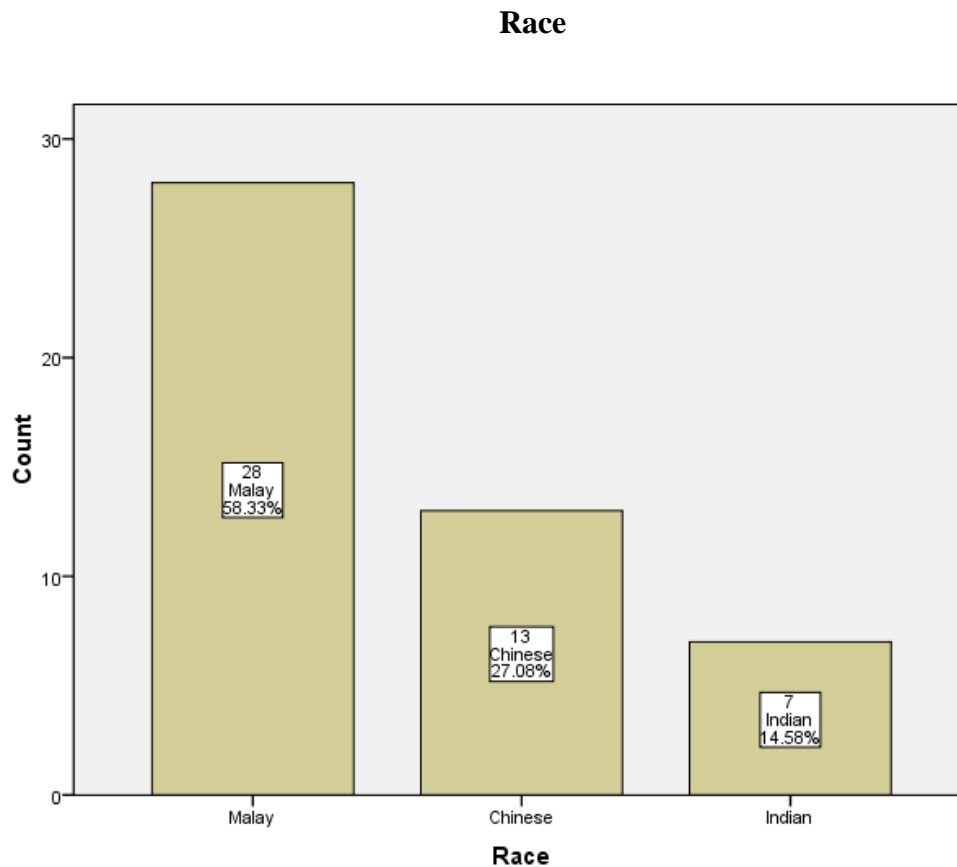


Figure 4.2 Race

The bar graph above shows that out of 48 respondents, majority of the respondents are Malay, which is 28 persons with the percentage of 58.33%, 13 respondents are Chinese with the percentage of 27.08%, and another 7 respondents are Indian, which is the percentage of 14.58%.

Age

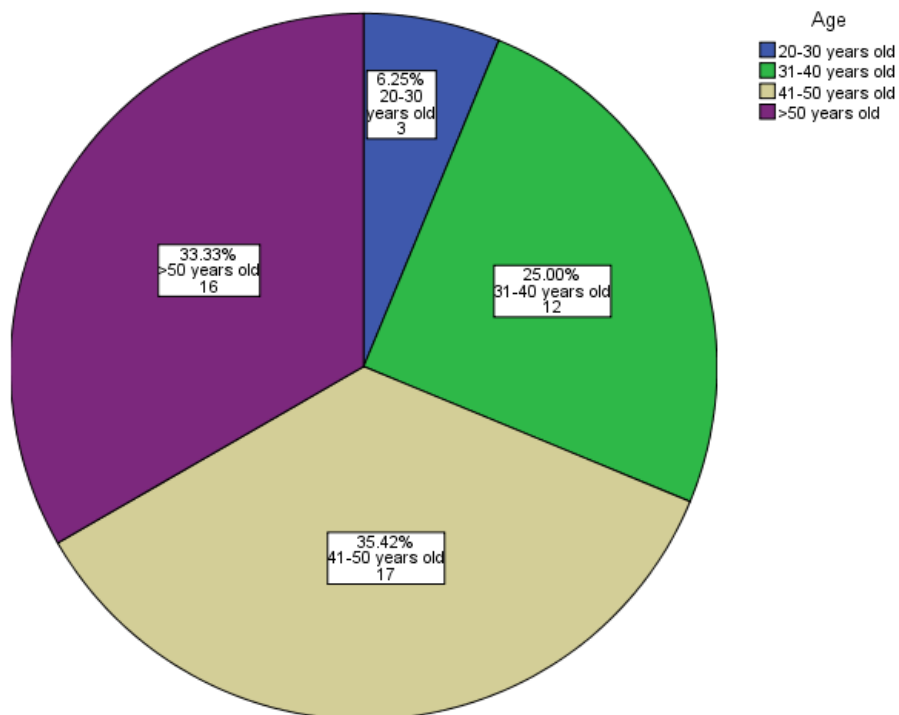


Figure 4.3 Age

Based on the pie chart above, we can see that the majority of the respondents are in the age of 41-50 years old which is 17 individual which comes with the biggest percentage that is 35.42%. it is the followed by the ranking of age 50years old and above, 16 respondents with the percentage of 33.33%. The third highest is the respondents in the age of 31- 40 years old, that is 12 persons that comes with the percentage of 25%. The least is the respondents at the age of 20-30. All of them are 3 persons, with the percentage of 6.25%.

4.3 RELIABILITY ANALYSIS

Cronbach's Alpha is a test for a model or survey's internal consistency. Cronbach's Alpha is also known as 'scale reliability coefficient'. Under this study, it is used to test the reliability of each subscale of the instrument of survey. Alpha is an important concept in the evaluation of assessments and questionnaires. The reliability coefficient of 0.7 and above is considered as acceptable in majority of social science applications. The Cronbach's Alpha of 0.8 and above is considered as good, meanwhile the reading of Cronbach's Alpha of 0.9 or higher is considered as excellent accuracy of independent variable. According to (Cortina J. ,1993), the Cronbach's Alpha value are affected by the number of test items, item interrelatedness and dimensionality. However there are many opinions about the value of alpha that are considered as acceptable ranging from 0.70 to 0.95 (Nunnally J, Bernstein L. 1994).

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.808	.809	14

Table 4.2 Reliability statistics

The table below shows that the overall Cronbach's Alpha for the questionnaires is 0.808, which has successfully passed the valid level.

Table 4.3 Reliability for independent variables (Section B)

	Item	Cronbach's Alpha
On The Job Training	The employees receive on-the-job training necessary to the job.	0.799
	The employees receive on-the-job training about new technology (e.g. : IT & procedures)	0.798
	On-the-job training helps managers to communicate a clear sense of directions of company to its employees.	0.800
	On-the-job training is linked to the performance of the project.	0.796
	Suitable on-the-job training objectives empower the employees' skills doing the job tasks.	0.793

	Item	Cronbach's Alpha
Off The Job Training	The employees receive off-the-job training necessary to the job.	0.792
	The employees receive off-the-job training about new technology (e.g.: machines) or handling clients.	0.806
	The methods used during off-the-job training have good impact on employees' skills.	0.802
	Off-the-job training does help employees to improve their performance.	0.797
	Off-the-job training motivates employees to be more committed towards organizational goal.	0.798

According to Sekaran (1992), reliability is related with the stability and stability which the concepts measure the instruments and also evaluate the goodness of measure. The internal consistency is used to test the inter- correlation's degree among the items in this research.

Pallant (2001) stated that number of ways can measure the internal consistency, but Cronbach's Alpha coefficient is the most popular way used which provide an indication of the mean correlation among all items that make up the scale.

The table above shows the reading of the Cronbach's Alpha for the independent variable that has all passed the valid level. Based on the table, all the readings exceed 0.7 which is the good range for Cronbach's Alpha where the highest Cronbach's Alpha for On The Job Training is 0.800, while the lowest reading is 0.793.

Meanwhile, for the Off The Job Training, all the readings also stated that the Cronbach's Alpha are above 0.7 that are generally considered as good, which is the highest Cronbach's Alpha value is 0.806 while the lowest value is 0.792. It means that all the questionnaires for on the job training are reliable for this research.

Table 4.4 Reliability for dependent variable (Section C)

	Item	Cronbach's Alpha
Time	Ability to design and/or deliver a project within time (on time) will help the company to reduce the number of delayed projects.	0.788
	Ensuring the project planner is well trained in the construction process to avoid project delay.	0.790

	Item	Cronbach's Alpha
Quality	Monitoring and feedback by project teams will help in controlling and enhance the quality of the project.	0.790
	The quality of project will be affected by a lack of training of employees.	0.791

The table above shows the reading of the Cronbach's Alpha for dependent variable which exceeds the valid level. Based on the table, all the readings exceed 0.7 which is the good range for Cronbach's Alpha. For the variable of time, the highest Cronbach's Alpha is 0.790 and the lowest is 0.788.

Meanwhile, for the variable of quality, all the readings also stated that the Cronbach's Alpha are above 0.7 that are generally considered as good, which is the highest reading of the Cronbach's Alpha is 0.791 and the lowest reading is 0.790. It means that all the questionnaires for on the job training are reliable for this research.

4.4 CORRELATIONS ANALYSIS

Table 4.5 Correlations

	DV	On the Job	Off the Job
DV		.550**	.548**
On the Job			.647**
Off the Job			

** correlation is significant at the 0.01 level (2-tailed)

From the result, all the dependent variable, which is project performance has a strong positive relationship with the independent variable of on the job training and off the job training. Project performance correlate with variable of on the job training ($r=0.550$) and off the job training ($r=0.548$) at $p < 0.001$.

4.5 MULTIPLE REGRESSION ANALYSIS

4.5.1 Regression Analysis (Employee Training)

Table 4.6 Model summary (Employee Training)

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.605 ^a	.366	.352	.34811	1.823

a. Predictors: (Constant), employee training

b. Dependent Variable: project performance

Based on results, it states the model summary for the project performance and independent variable employee training. The reading shows that the value of R^2 is 0.605 which is employee training with the percentage of 60.5% of various in the project performance. Based on the Durbin- Watson statistics, $D= 1.823$ which is valid according to the range that can be accepted that are $(1.5 < D < 2.5)$ which can be conclude that there's no auto correlation problem in data.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.714	.720		.990	.327
	Employee training	.854	.166	.605	5.153	.000

a. Dependent Variable: project performance

The regression coefficient, B, will be affected by the dependent variable that change by one unit that effect the amount of dependent variable. The b coefficient of employee training is 0.854. it can be concluded that if the respondent goes up 1 point on the employee training, the scale of project performance will increase by 0. 854 or can also be read as 85%.

4.6 ANALYSIS OF HYPOTHESIS

Theoretical framework is drawn below again and the hypothesis for the framework is listed again.

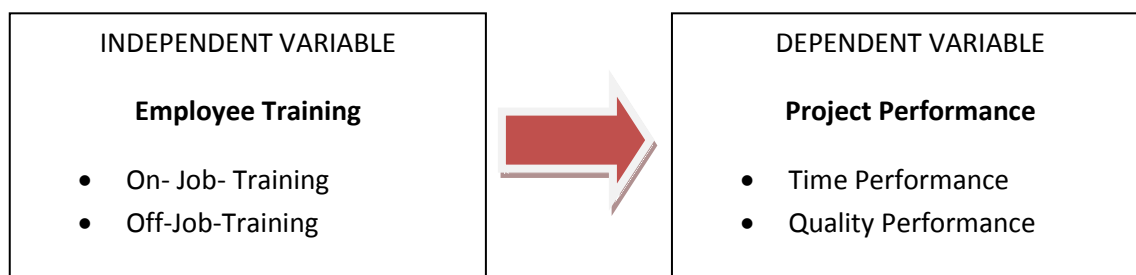


Figure 4.4 Theoretical framework of the proposed study

The research hypothesis is:

H_0 : There is no significant positive relationship between employee training and project performance

H_1 : There is a significant positive relationship between employee training and project performance

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.714	.720		.990	.327
	Employee training	.854	.166	.605	5.153	.000

a. Dependent Variable: project performance

In the hypothesis, it is to figure out the relationship between employee training and project performance. The relationship shows a significant value of 0.00, ($p < 0.001$). This means that there is a significant relationship between employee training and project performance at $t = 5.153$. It can be concluded that the higher the employee training, the higher the project performance. The hypothesis is accepted because $p < 0.001$ which is 0.00.

Table 4.7 Table shows result for the hypothesis

Hypothesis	Final Result
H ₁ : There is a significant positive relationship between employee training and project performance	Hypothesis is accepted as $p < 0.001$ which is $p = 0.000$

4.7 SUMMARY OF HYPOTHESIS TESTING & SUMMARY OF FINDING

This study is conducted to identify the relationship between employee training and project performance.

Research objective	Method	Result
RO : To identify the relationship between employee training and project performance	Correlation analysis	<u>On the job training</u> p- value : 0.000 r : 0.550 (moderate) <u>Off the job training</u> p- value : 0.000 r : 0.548 (moderate)
	Regression analysis	<u>Employee training</u> Model summary R : 0.605

		<p>R^2 : 0.366</p> <p>Durbin Watson : 1.823</p> <p>Coefficient</p> <p>p- value : 0.000</p> <p>B : 0.854</p> <p>Beta : 0.605</p> <p>Hypothesis</p> <p>H_1 : There is a positive relationship between employee training and project performance</p>
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CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

In this chapter, it is provided with a comprehensive discussion on the finding and consisted of the finding's results of hypothesis testing which is derived from the previous chapter and also the theoretical and practical significance of this study. In this chapter, conclusion, limitations of study, and recommendations for future research will be discussed.

5.2 CONCLUSIONS

The objective of this research is to find the relationship between employee training and project performance in construction industry in Kota Bharu, Kelantan. The problem statement, objective of this study, and questions were explained in chapter one.

Meanwhile in chapter two, the employee training, project performance in term of quality performance, project performance in term of time performance, and the relationship between employee training and project performance were emphasized.

In chapter three, it explained the methodology used in this study which consisted of population and sampling, sample, data collections, and statistical techniques. The results of the research were stated and presented in chapter four. A hypothesis was established based on the framework and tested using regression analysis in order to answer the research questions. The reliability, correlation and regression were used to test the data.

As a conclusion, there is a significant evidence that shows that there is a relationship between employee training and project performance. This answer my research objective that is to identify the relationship between employee training and project performance as the study proves that there is a positive relationship between independent variable and dependent variable.

5.3 LIMITATIONS OF STUDY

This research has provided the results and conclusions of the study, which comes with a few limitations. In this research, the first limitation is the problem of the companies' emails. There are a number of companies that has an invalid email address, which bring difficulties to distribute the questionnaire and limit the number of the questionnaires to be distributed.

Besides that, one of the limitations is this study only covers about employee training in that related area even though there are many more aspects that can be studied in construction industry.

In this research, it is also limited to only construction companies in Kota Bharu, Kelantan. In general, there are not so many constructions company in Kota Bharu, Kelantan compared to other developing state such as Kuala Lumpur. Because of this, the numbers of respondents are also quite small as it creates a tendency to receive fewer respondents compared to other states.

The limitation is the followed by the difficulty to collect back the questionnaire. Some of the respondents promised to fill in the questionnaires in a given time, but then they did not do it on the time. This results in waste of time as the researcher needs to

find other respondents to complete the questionnaires. It is because the researcher sends the questionnaire by email.

5.4 RECOMMENDATIONS

There are a few recommendations for future research so that it can always be improved from time to time. First of all, the companies should update their current email address to CIDB for the convenient of others if there is any important thing. Besides that, the researcher should also expand the research to other developing state such as Kuala Lumpur, Pahang, or Johor as there are more constructions company in those states compared to Kelantan. By that, more information can be collected for the benefits of the study.

Besides that, this study scope should also be expanding to other aspects other than employee training in construction industry to get more detail information and widen the research.

Last but not least, it is easier and much time- saving if the questionnaires are distributed by hands to the companies. The probability of the respondents not answering the questionnaires will be smaller. In addition, some gifts should be given to the respondents to encourage them.

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APPENDIX A (GANTT CHART)

Gantt chart for Final Year Project 1

Num	Research activity	Week													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Briefing by FYP coordinator														
2	Meeting with supervisor, discussing project title and objective														
3	Deciding the topic and objectives														
4	Getting supervisor's approval of topic and objectives														
5	Preparing project research proposal														
6	Preparing chapter 1, 2 and 3														
7	Submitting draft chapter 1, 2 and 3														
8	Correcting and editing chapter 1, 2 and 3														
9	Preparing cover page, content, preference list and questionnaire														
10	Submitting full report of FYP 1														
11	Preparing slide for oral presentation														
12	Presenting the FYP 1														

Gantt chart for Final Year Project 2

Num	Research activity	Week																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Briefing by FYP coordinator																		
2	Meeting with supervisor, discussing Data Analysis																		
3	Weekly meetings with supervisor																		
4	Submit 1 st Draft of FYP Report and Poster ¹ to supervisor																		
5	Supervisor comment & advice for any correction																		
6	Send softcopy of report to Turnitin																		
7	Submit hardcopies of FYP Report & Log book																		
8	FYP oral presentation approval from supervisor																		
9	FYP II oral presentation																		
10	Submit corrected Report with table correction to Supervisor																		
11	Submit 2 copies of Hard-Bind Project Report and ICD																		
12	Fill up the approval for binding form and submit to FYP coordinator																		

APPENDIX B (QUESTIONNAIRE)

**Universiti
Malaysia
PAHANG**
Engineering • Technology • Creativity

**FACULTY OF TECHNOLOGY****Questionnaire**

**A STUDY ON IMPACT OF EMPLOYEE TRAINING ON PROJECT
PERFORMANCE IN CONSTRUCTION INDUSTRY IN KOTA BHARU,
KELANTAN.**

Dear Participants,

First of all, I would like to present my appreciation and thanks to you for taking part in this survey. This research project aims to find relationship between employee training and project performance. Due to the requirement of this research, you are the only person who can give a correct picture on how the degree of importance of those factors based on the experienced throughout your work life being manage this construction industry.

For your information, the study is conducted in fulfilment of Final Year Project for Bachelor Degree in Project Management at University Malaysia Pahang. Your response will be kept strictly confidential and will be used as academic purpose only.

Thank you in advance for your participation. Your involvement in this study would be much appreciated. If you have any further questions, do contact me. Thank you.

Nik Alia Haifaa Bt Nik Adik

PB11019

0112-9471559

aliahaifaa23@gmail.com

Project Management

Faculty of Technology

University Malaysia Pahang

Section A: Demographic

Please read and answer from the options.

1. Gender : Male () Female ()
2. Race : Malay () Chinese () Indian ()
- Other ()
3. Age : 20-30 years old () 31-40 years old ()
- 41-50 years old () >50 years old ()

Section B: Employee Training

Please indicate your responses to the following statements by giving a (/) on only one option.

1	2	3	4	5
strongly disagree <i>sangat tidak setuju</i>	disagree <i>tidak setuju</i>	neutral <i>neutral</i>	agree <i>setuju</i>	strongly agree <i>sangat setuju</i>

Criteria : On-The-Job Training

Item	1	2	3	4	5
1) The employees receive on-the-job training necessary to the job. <i>Pekerja menerima latihan di-tempat-kerja yang diperlukan untuk pekerjaan itu.</i>					

2) The employees receive on-the-job training about new technology (e.g. : IT & procedures) <i>Pekerja menerima latihan di-tempat-kerja tentang teknologi baru (contohnya: IT & prosedur)</i>					
3) On-the-job training helps contractors to communicate a clear sense of directions of company to its employees. <i>Latihan di-tempat-kerja membantu kontraktor untuk menyampaikan maksud yang jelas tentang arah syarikat kepada pekerjanya.</i>					
4) On-the-job training is linked to the performance of the project. <i>Latihan di-tempat-kerja dikaitkan dengan pelaksanaan projek.</i>					
5) Suitable on-the-job training objectives empower the employees' skills doing the job tasks. <i>Objektif yang sesuai untuk latihan di-tempat-kerja memperkasakan kemahiran pekerja melakukan tugas-tugas pekerjaan.</i>					

Criteria : Off-The-Job Training

Item	1	2	3	4	5
1) The employees receive off-the-job training necessary to the job.					

<p><i>Pekerja menerima latihan di luar-tempat-kerja yang diperlukan bagi tugas.</i></p>					
<p>2) The employees receive off-the-job training about new technology (e.g.: machines) or handling clients. <i>Pekerja menerima latihan di luar-tempat-kerja tentang teknologi baru (contohnya: mesin) atau mengendalikan pelanggan.</i></p>					
<p>3) The methods used during off-the-job training have good impact on employees' skills. <i>Kaedah-kaedah yang digunakan semasa latihan di luar-tempat-kerja mempunyai kesan yang baik pada kemahiran pekerja.</i></p>					
<p>4) Off-the-job training does help employees to improve their performance. <i>Latihan di luar-tempat-kerja membantu pekerja untuk meningkatkan prestasi mereka.</i></p>					
<p>5) Off-the-job training motivates employees to be more committed towards organizational goal. <i>Latihan di luar-tempat-kerja memotivasi pekerja menjadi lebih komited ke arah matlamat organisasi.</i></p>					

Section C: Project Performance

Please indicate your responses to the following statements by giving a (√) on only one option.

This section is developed to identify about your organization project performance based on time and quality aspects.

Please indicate the scale below based on current or latest project that performed or already performed by your organization.

For your information, please use scale below to indicate your opinion

1	2	3	4	5
strongly disagree <i>sangat tidak setuju</i>	disagree <i>tidak setuju</i>	neutral <i>neutral</i>	agree <i>setuju</i>	strongly agree <i>sangat setuju</i>

Criteria: Time

Item	1	2	3	4	5
1. Ability to design and/or deliver a project within time (on time) will help the company to reduce the number of delayed projects. <i>Kebolehan mereka bentuk dan / atau menyerahkan projek dalam masa (waktu) akan membantu syarikat untuk mengurangkan bilangan projek-projek tertangguh.</i>					
2. Ensuring the project planner is well trained in the construction process to avoid project delay. <i>Memastikan perancang projek terlatih dalam proses pembinaan untuk mengelakkan kelewatan projek.</i>					

Criteria: Quality

Item	1	2	3	4	5
<p>1. Monitoring and feedback by project teams will help in controlling and enhance the quality of the project.</p> <p><i>Pemantauan dan maklum balas oleh pasukan projek akan membantu mengawal dan meningkatkan kualiti projek.</i></p>					
<p>2. The quality of project will be affected by a lack of training of employees.</p> <p><i>Kualiti projek akan terjejas oleh kekurangan latihan pekerja.</i></p>					

Thank you for lending your cooperation.

APPENDIX C (SPSS OUTPUT)

Reliability

Item Statistics

	Mean	Std. Deviation	N
onthejob1	4.33	.519	48
onthejob 2	4.23	.660	48
onthejob 3	4.35	.565	48
onthejob 4	4.50	.583	48
onthejob 5	4.38	.531	48
offthejob1	4.38	.531	48
offthejob 2	4.21	.582	48
offthejob 3	4.40	.574	48
offthejob 4	4.35	.601	48
offthejob 5	4.23	.592	48
time1	4.35	.601	48
time2	4.44	.649	48
quality1	4.33	.559	48
quality2	4.54	.544	48

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	4.359	4.208	4.542	.333	1.079	.009	14

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
onthejob1	56.69	16.900	.379	.528	.799
onthejob 2	56.79	16.211	.403	.427	.798

onthejob 3	56.67	16.738	.375	.362	.800
onthejob 4	56.52	16.425	.427	.358	.796
onthejob 5	56.65	16.489	.468	.397	.793
offthejob1	56.65	16.404	.489	.621	.792
offthejob 2	56.81	17.049	.291	.408	.806
offthejob 3	56.62	16.835	.344	.369	.802
offthejob 4	56.67	16.440	.407	.467	.797
offthejob 5	56.79	16.509	.401	.356	.798
time1	56.67	15.887	.530	.437	.788
time2	56.58	15.780	.501	.616	.790
quality1	56.69	16.177	.511	.484	.790
quality2	56.48	16.297	.499	.507	.791

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
61.02	18.787	4.334	14

Correlations

Descriptive Statistics

	Mean	Std. Deviation	N
Quality	4.4375	.44513	48
Time	4.3958	.48332	48
On The Job Training	4.3583	.34260	48
Off The Job Training	4.3125	.33238	48

Correlations

	Quality	Time	On The Job Training	Off The Job Training
Quality				
Time				
On The Job Training				
Off The Job Training				

Quality	Pearson Correlation	1	.736**	.457**	.494**
	Sig. (2-tailed)		.000	.001	.000
	N	48	48	48	48
Time	Pearson Correlation	.736**	1	.564**	.525**
	Sig. (2-tailed)	.000		.000	.000
	N	48	48	48	48
On The Job Training	Pearson Correlation	.457**	.564**	1	.647**
	Sig. (2-tailed)	.001	.000		.000
	N	48	48	48	48
Off The Job Training	Pearson Correlation	.494**	.525**	.647**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	48	48	48	48

** . Correlation is significant at the 0.01 level (2-tailed).

REGRESSION

Variables Entered/Removed^b

Model	Variables Entered	Variables Removed	Method
1	On the job training ^a		Enter

a. All requested variables entered.

b. Dependent Variable: project performance

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.664	1	2.664	19.995	.000 ^a
	Residual	6.128	46	.133		

Total	8.792	47			
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a. Predictors: (Constant), on the job training

b. Dependent Variable: project performance

Coefficient Correlations^a

Model		sumonjob
1	Correlations On job training	1.000
	Covariances On the job training	.024

a. Dependent Variable: project performance

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	3.4728	4.7236	4.4167	.23806	48
Std. Predicted Value	-3.965	1.289	.000	1.000	48
Standard Error of Predicted Value	.053	.218	.070	.027	48
Adjusted Predicted Value	3.7334	4.7666	4.4218	.21894	48
Residual	-.72356	.83233	.00000	.36109	48
Std. Residual	-1.982	2.280	.000	.989	48
Stud. Residual	-2.041	2.332	-.006	1.017	48
Deleted Residual	-.76665	.87073	-.00512	.38307	48
Stud. Deleted Residual	-2.116	2.457	-.007	1.036	48
Mahal. Distance	.015	15.719	.979	2.342	48
Cook's Distance	.000	.717	.033	.104	48
Centered Leverage Value	.000	.334	.021	.050	48

a. Dependent Variable: project performance

Variables Entered/Removed^b

Model	Variables Entered	Variables Removed	Method
1	Off the job training ^a		. Enter

a. All requested variables entered.

b. Dependent Variable: project performance

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.636	1	2.636	19.704	.000 ^a
	Residual	6.155	46	.134		
	Total	8.792	47			

a. Predictors: (Constant), off the job training

b. Dependent Variable: project performance

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	3.4814	4.9066	4.4167	.23685	48
Std. Predicted Value	-3.949	2.068	.000	1.000	48
Standard Error of Predicted Value	.055	.217	.070	.027	48
Adjusted Predicted Value	3.7436	4.8948	4.4225	.21763	48
Residual	-.72902	.80601	.00000	.36189	48
Std. Residual	-1.993	2.203	.000	.989	48
Stud. Residual	-2.016	2.248	-.007	1.014	48
Deleted Residual	-.74565	.83928	-.00579	.38211	48
Stud. Deleted Residual	-2.088	2.357	-.005	1.034	48
Mahal. Distance	.069	15.593	.979	2.365	48
Cook's Distance	.000	.729	.031	.105	48

Centered Leverage Value	.001	.332	.021	.050	48
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a. Dependent Variable: project performance

Correlations

		DV	sumonjob	sumoffjob
DV	Pearson Correlation	1	.550**	.548**
	Sig. (2-tailed)		.000	.000
	Sum of Squares and Cross-products	8.792	3.833	3.700
	Covariance	.187	.082	.079
	N	48	48	48
sumonjob	Pearson Correlation	.550**	1	.647**
	Sig. (2-tailed)	.000		.000
	Sum of Squares and Cross-products	3.833	5.517	3.465
	Covariance	.082	.117	.074
	N	48	48	48
sumoffjob	Pearson Correlation	.548**	.647**	1
	Sig. (2-tailed)	.000	.000	
	Sum of Squares and Cross-products	3.700	3.465	5.192
	Covariance	.079	.074	.110
	N	48	48	48

** . Correlation is significant at the 0.01 level (2-tailed).

	Time	On The Job Training	Off The Job Training
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Quality	.736**	.457**	.494**
Time		.564**	.525**
On The Job Training			.647**

