Chapter 3

Research Methodology

3.1 Introduction

This chapter will outline the research methodology that was used for the study. First this chapter will describe the research design, population, instrumentation that were chosen to address the problem and fulfill the objectives of the study. Second, it will describe how the selected research design and instrumentation were used to collect the population data. Finally, this chapter will explain the results of measurement model, reliability and validity issues.

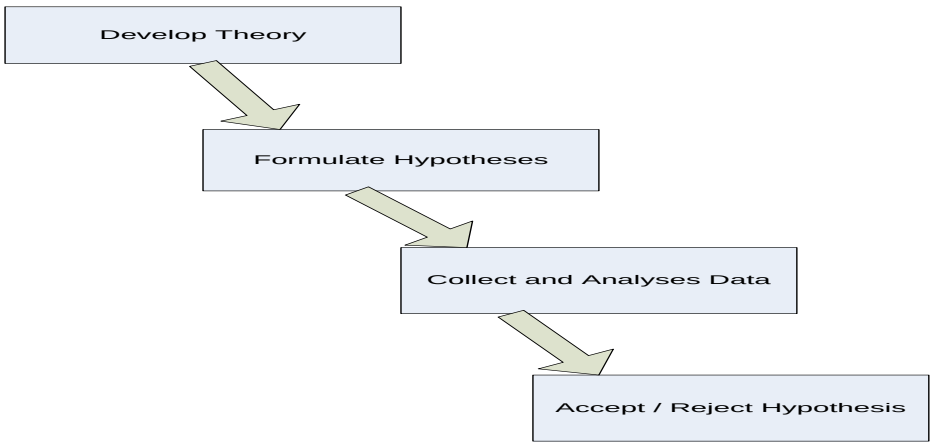
3.2 Research Design

To get the most reliable findings, quantitative method has been used for this research. Malhotra (2007) defined quantitative research method as "a research methodology that seeks to quantify the data, and typically, applies some form of statistical analysis". In this regard, Cavana, Robert and Sekaran (2001) argued that to obtain the valid finding about the relationship between variables; researchers should develop planned procedure for gathering and interpreting data. Furthermore, Malhotra (2007) suggested that research planned procedures represented a quantitative research. The ideal quantitative research design is to identify the research hypothesis (the expected solution to the problem or challenge) (Cavana et al., 2001). In addition, quantitative research analysis, also known as fixed design, is a deductive approach that used standardized method for collecting data (Meadows, 2003)

3.2.1 Deductive Reasoning

Quantitative methods tend to be based on deductive reasoning. Cavana et al., (2001) argued that qualitative research conclusion can be further confirmed by using more quantitative approach.

3.1 Deductive Reasoning



(Figure 3.1)

3.2.2 Epistemology of the Research

The philosophy behind this research is to build strong training transfer theory. With reference to epistemological background, the positivist supports this research. According to the positivist (Willmott, 1995) the aim of the research in the field of management is to "generate laws, which govern the ways in which organizations operate". The generation of these causal relationship or laws will enable management to become more scientific and managers to become better able to predict and control their environment.

This research have highlighted different relationships between variables, which would be better able to predict the effectiveness of training. The manager and the trainers would be able to follow this theory and can better manage their training programs. These training programs results the changing in behavior among all employees. Donaldson and Hilmer (1998) argued that "a fully positivist approach would not presume to call the approach strategic management but would rather call it corporate development". Therefore, this study is based on the corporate development rather than strategic management. Effectiveness of training provides the bases to the corporate industry to develop their strong foundation and effectively manage their training programs. Furthermore, building strong training transfer theory may be difficult without focusing on positivism approach.

Positivist claims that the aim of management research should be to identify casual explanation and fundamental laws that explain regularities in human social behavior. In other words, I can say that the aim of the positivist researchers is to generation of causal laws.

3.2.3 Unit of Analysis

The unit of analysis refers to "the level of aggregation of the data collected during the subsequent data analysis stage" (Cavana et al., 2001). In this study the unit of analysis is the individual employees in Malaysian Banking sector. In other words, the unit of analysis is individual. This study has been focused on the factors effecting transfer of training for employees in Malaysian Banking sector. The target respondents in the study were employees who have attended managerial training.

3.2.4 Key Informant

The key informants in this research were those employees in the Malaysian Banking sectors who had attended training program related to banking sector services within one year. The purpose behind maximum one year time period is that the trainee can recall the training experience which trainee had during the training and it's difficult for trainee to memorize the training content after one year.

3.2.5 Target Population

Target population refers to "the entire group of people, events or things of interest that the researchers wish to investigate" (Canvana et al., 2001). The target population in this study is 9 banks in Klang Valley in Malaysia. The focus of this study was only Malaysian banks that operate under the policies of Bank Negara Malaysia (BNM). According to BNM, there are total 23 banks operating in Malaysia out of them 9 are Malaysian banks. Therefore, the data have collected from the Malaysian banks only to see the training transfer process in Malaysian banking sector. The reason for not including foreign banks in this study is that the foreign bank may have different training culture, training polices and training evaluation system. The targeted Malaysian banks are:

1- RHB Bank Berhad
2- Public Bank Berhad
3- Malayan Banking Berhad
4- Hong Leong Bank Berhad
5- EON Bank Berhad
6- CIMB Bank Berhad
7- AmBank (M) Berhad
8- Alliance Bank Malaysia Berhad
9- Affin Bank Berhad

3.2.6 Sampling Method and Subject for the Study

"A sample is a subset of the population. It comprises some members selected from the population and a subject is a single member of the sample, just as an element is a single member of the population" (Cavana et al., 2001). The researcher has been randomly selected every 5^{th} branch out of 120 bank branches in the Klang valley. To select the bank branches, researcher used the list of bank branches available at Bank Negara Malaysia (BNM) website. Therefore, 24 bank branches have been selected as sample and each employee represents a subject for this study.

3.2.7 Positivist epistemology behind sampling Method

According to (Johnson and Duberley, 2000) The attempt to get to the truth involves the development of sophisticated, replicable data collection techniques and careful attention to sampling to ensure that we can develop generalized propositions that give insight or have predictive powers.

For better understanding of the methodological issues the organizations should consider the comparative studies for the purpose of differentiating the problem from specific to particular organizations and need to generalize the methodology. Meaningful comparisons require common standards for measurement. According to Johnson and Duberley (2000) "the nature of an organization will be influenced by its objectives and environments so these must be taken into account. Study of the work behavior of individuals or groups should be related to the study of the characteristics of organizations in which the behavior occurs".

3.3 Instrumentation

To collect the quantitative data for this study the survey method was used as instrumentation. Malhotra (2007) argued that survey research is a systematic, standardized and common approach for collecting information from individual who represent the study population. The reason for selecting survey method is that the survey method is cost effective, suitable for this study, the type of data needed for this study, population characteristics and available resource.

The researcher administered the survey instrument because of providing representative information timely, cost effective and confidentially. The researchers also consider the disadvantages of survey instrument like low response rate, difficulty in reading questionnaire and difficulty for researcher to understand the response. Therefore, to deal with the disadvantages of the survey instrument, researchers personally visit many of the bank branches to get the appropriate response rate. For clear understanding about the survey instrument, researcher conducted pilot testing and got the feedback from the respondent about the clarity of the statement and their understanding about the statement.

For the survey instrument, the researchers used 40 statements that represented the all variables and 5 statements about the demographic information of the respondents. The researcher grouped the variables into four categories (1) Trainee or individual factors which includes learner readiness, performance self-efficacy, Training retention and transfer motivation (2) work environment factors which includes supervisor support and peer support (3) Training design factors which includes perceived content validity, transfer design (4) Situational factors which includes Instrumentality (Intrinsic rewards). Furthermore, the researcher divided the questionnaire into three sections. First section related with feedback of trainee about specific training program and Second section related with feedback of trainee about general training program. Finally, third section is consisted on the trainee demographic information.

The trainee respond to the survey questions on 5 point likert scale with "1" indicated strongly disagree to "5" strongly agree. The trainee demographic section included gender (male, female), Ethnicity (Malay, Chinese, Indians and others), Trainee age, Trainee highest level of education and most recent training.

3.4 Details of the Instrument

All measurement scale in this study is adopted from the previous research. The details of the scales are as follow:

3.4.1 Transfer Design (Training design factor)

> Transfer design defined as "the degree to which (1) training has been designed and delivered to give trainees the ability to transfer learning to the job, and (2) training instruction match job requirements" (Holton et al., 2000).

3.4.1.1 Scale Description

"The extent to which the training program is designed to clearly link learning with on-the-job performance through the use of clear examples, methods similar to the work environment, and activities and exercise that clearly demonstrate how to apply new knowledge and skills".

3.4.1.2 Items to Measure Transfer Design (Training Design factor):

Transfer design scale developed by Holton et al., (2000) and measured with 5 point likert scale. The Alpha reliability of the scale is (0.788). The scale includes the following items;

1- It is clear to me that people conducting the training understand how I will use what I learn.
2- The trainer(s) used lots of examples that showed me how I could use my learning on the job.
3- The way the trainer taught the material made me feel more confident, I could apply it.

3.4.2 Perceived Content Validity (Training design factor)

Holton et al., (2000) define Perceived content validity as "the extent to which the trainees judge the training content to accurately reflect job requirements".

3.4.2.1 Description of the Scale

"This factor addresses the degree to which skills and knowledge taught are similar to performance expectations as well as what the individual needed to perform more effectively. It also addresses the extent to which instructional

methods, aids, and equipment used in training are similar to those used in an individual's work environment".

3.4.2.2 Items to Measure Perceived Content Validity (Training design factor):

Perceived content validity scale developed by Holton et al., (2000) and measured with 5 point likert scale. The Alpha reliability of the scale is (0.807). The scale includes the following items;

1- "The instructional aides (equipment, illustrations etc.) used in training are very similar to real things I use on the job".
2- "The methods used in training are very similar to how we do it on the job".
3- "I like the way training seems so much like my job".

3.4.3 Performance Self-efficacy (an individual factor)

Holton et al., (2000) define performance self-efficacy as "An individual's general belief that he is able to change his performance when he wants to"

3.4.3.1 Description of the Scale

"The extent to which individuals feel confident and self-assured about applying new abilities in their jobs, and can overcome obstacles that hinder the use of new knowledge and skills".

3.4.3.2 Items to Measure Performance Self-Efficacy (an individual factor):

Performance Self-efficacy scale developed by Holton et al., (2000) and measured with 5 point likert scale. The Alpha reliability of the scale is (0.798). The scale includes the following items;

1- "I never doubt my abilities to use newly learned skills on the job".
2- "I am sure I can overcome obstacles on the job that hinder my use of new skills or knowledge".
3- "At work, I feel very confident using what I learned in training even in the face of difficult or taxing situation".
4- "I am confident in my ability to use new skills at work".

3.4.4 Definition of Learner readiness (an individual factor):

Holton et al, (2000) defined the "learner readiness as the extent to which individuals are prepared to enter and participate in training".

3.4.4.1 Scale Description

"This factor addresses the degree to which the individual had the opportunity to provide input prior to the training, knew what to expect during the training, and understood how training was related to job-related development and work performance".

3.4.4.2 Items to Measure the Learner Readiness (an individual factor):

Learner readiness scale developed by Holton et al., (2000) and measured with 5 point likert scale. The Alpha reliability of the scale is (0.787). The scale includes the following items;

1- “Prior to the training, I knew how the program was supposed to affect my performance”.
2- “Before the training, I had a good understanding of how it would fit my job related development”.
3- “I know what to expect from the training before it begin”.
4- “Before the training, I had basic skills to perform different task during training”.
5- “Prior to the training, I had basic knowledge about training activities, which supposed to perform during the training”.

3.4.5 Definition of Peer Support (an environmental factor)

Holton et al, (2000) defined peer support as “The extent to which peers reinforce and support the use of learning on the job”.

3.4.5.1 Scale Description

“This includes the degree to which peers mutually identify and implement

Opportunities to apply skills and knowledge learned in training, encourage the

Use of or expect the application of new skills, display patience with difficulties associated with applying new skills, or demonstrate appreciation for the use of new skills”.

3.4.5.2 Items to Measure Peers Support (an environmental factor):

Peer support scale developed by Holton et al., (2000) and measured with 5 point likert scale. The Alpha reliability of the scale is (0.806). The scale includes the following items;

1- “My colleagues appreciate my using new skills I have learned in training”.
2- “My colleagues encourage me to use the skills I have learned in training”.
3- “At work, my colleagues expect me to use what I learn in training”.

3.4.6 Definition of Supervisor Support (an environmental factor)

Holton et al., (2000) define supervisor support as “The extent to which managers support and reinforce the use of learning on-the-job.”

3.4.6.1 Description of the Scale

“This includes manager’s involvement in clarifying performance expectations after training, identifying opportunities to apply new skills and knowledge, setting realistic goals based on training, working with individual on problems encountered while applying new skills, and providing feedback when individuals successfully apply new abilities”.

3.4.6.2 Items to Measure Supervisor Support (an environmental factor):

Supervisor scale developed by Holton et al., (2000) and measured with 5 point likert scale. The Alpha reliability of the scale is (0.779). The scale includes the following items;

1- “My supervisor meets with me regularly to work on problems I may be having in trying to use my training”.
2- “My supervisor meets with me to discuss ways to apply training on the job”.
3- “My supervisor set goals for me, which encourage me to apply my training on the job”.

3.4.7 Definition of Instrumentality or Intrinsic rewards (situational factor)

Guerrero and Sire (2001) defined "instrumentality as individuals' perceptions that their efforts in training will enable them to gain rewards at work".

3.4.7.1 Description of the Scale

"The concept of instrumentality explain that trainee perceive that participation in training activities will leads to some rewards in terms of intrinsic or extrinsic reward. Intrinsic rewards includes personal satisfaction, personal development and extrinsic rewards includes salary increment, career development or promotion".

3.4.7.2 Items to Measure Intrinsic rewards (situational factor):

Instrumentality (Intrinsic rewards) scale developed by Guerrero and Sire (2001) and measured with 5 point likert scale. The Alpha reliability of the scale is (0.791). The scale includes the following items;

1- "I do participate in training for personal satisfaction".
2- "Training increases my autonomy at work".
3- "Participation in training enhances my personal knowledge".
4- "Training helps me to acquire more skills".
5- "Training enhances my level of self-confidence at work".
6- "Training improves my efficacy at work".
7- "The skills, I learn from training leads to increase adaptation at work".

3.4.8 Definition of Training Retention (an individual factor)

Velada et al., (2007) define training retention as "degree to which the trainee retains the content after training is completed".

3.4.8.1 Description of the Scale

"The concept of training retention describes that the trainee retain the learned skills after training program. The trainee recall the learned skills where need to apply and think about the training content to improve the performance".

3.4.8.2 Items to Measure Training Retention (an individual factor):

Training Retention scale developed by Velada et al., (2007) and measured with 5 point likert scale. The Alpha reliability of the scale is (0.851). The scale includes the following items;

1- "I still remember the main topics what I have learned in the training course".
2- "I can easily say several things that I have learned in the training course".
3- "I had never thought again about the training content (reverse coding)"

3.4.9 Reverse Coding:

In the training retention scale, the item number 3 "I had never thought again about the training content" have reverse coding. The respondents were asked to indicate their level of agree or disagreement with the statement on 5 point likert scale. The scale indicated that 1 (strongly disagree) to 5 (Strongly agree). At the time of data entry, researcher will key in the data as; (1 = 5, 2 = 4, 3 = 3, 4 = 2, 5 = 1) those who indicated 1 = strongly disagree, I will key in the data as 5 = strongly agree; those who indicated 2 = disagree, I will consider as 4 = agree; the third option 3 = neither agree nor disagree

will remain the same, those who indicated 4 = agree, I will key in data as 2 = disagree and finally those who marked 5 = strongly agree, I will consider as 1 = strongly disagree.

3.4.10 Definition of Transfer Motivation

Holton et al (2000) defined transfer motivation as the "direction, intensity and persistence of effort towards utilizing in a work setting skills and knowledge learned".

3.4.10.1 Description of the Scale

"It is the extent to which individual are motivated to utilize learning in their work. This includes the degree to which individual feel better able to perform, plan to use new skills and knowledge, and believe new skills will help them to more effectively perform on-the-job".

3.4.10.2 Items to Measure Transfer Motivation:

Transfer Motivation scale developed by Holton et al (2000) and measured with 5 point likert scale. The Alpha reliability of the scale is (0.796). The scale includes the following items;

1- "Training will increase my personal productivity."
2- "When I leave training, I can't wait to get back to work to try what I learned."
3- "I believe the training will help me do my current job better."

3.4.11 Definition of affective reaction

Reaction refers to "the trainee's perception of the job relatedness to the training program" (Seyler et al., 1998).

3.4.11.1 Description of the Scale

"Affective reaction indicates that when trainee sees the contents of the training are similar with actual job, trainee will react positively. Furthermore, when trainee perceives training contents are similar with the actual job he/she would be more satisfied with the training program".

3.4.11.2 Items to Measure Affective Reaction:

Reaction scale developed by Smith et al., (2008) and measured with 5 point likert scale. The Alpha reliability of the scale is (0.814). The scale includes the following items;

1- "I am pleased I attended this training".
2- "I found this training program to be enjoyable".
3- "I found the information presented in this training program interesting".

3.4.12 Definition of Training Transfer

Tesluk et al., (1995) define "transfer of training as the extent to which individual transfer the knowledge and skills presented in training session to their core jobs".

3.4.12.1 Description of the Scale

"The concept of training transfer explains that the trainee transfer the learned skills to the work place. The trainee puts all efforts to transfer the training to the workplace because trainee believe that if he/she incorporate the learned skills into daily work activities, it would be helpful to improve the job performance."

3.4.12.2 Items measure Training Transfer:

Training Transfer scale developed by Tesluk et al. (1995) and measured with 5 point likert scale. The Alpha reliability of the scale is (0.783). The scale includes the following items;

1- "I have been using the skills presented in the training course to help improve my performance".
2- "The training will help me to improve my job performance."
3- "I have been incorporating learned skills into daily work activities".

3.5 Ethical Issues

It is to ensure that the research does not pose any ethical issue. The subjects were informed that:

1- Participation in this research is voluntary.
2- The data collected would be presented in an aggregate format.
3- Participation or non-participation would not affect their employment status.
4- They should not fill any information on any survey form which they feel uncomfortable.
5- The survey instrument does not require the participant name, and other data would be store at secure location.

3.6 Data Collection Method

To collect the data, the researcher administered the survey questionnaire. The following steps describe how the data for study was collected:

1- The researcher sent the survey instrument directly to the Bank manager including the cover letter, stating the importance and purpose of the study

and explained how this study is important for Malaysian Banking sector. The response rate required for this study was 500 respondents. (Hair, William, Barry, and Rolph, 2007) guideline have used for this study. According to (Hair et al., 2007) the required response rate for SEM should be: (Sample size = Parameters X 10). The number of parameters in this research was 50. Therefore, in this research the required sample size was (50 X 10 = 500).

2- In the cover letter which was attached with the survey instrument, the managers were asked to distribute survey instrument to the employees and explain them about the importance of this study and how this study would be helpful for employees and organization to improve their performance.

3- The survey instrument was sent to each bank branch through postal services with another envelope which they can use to send back the filled survey instrument.

4- The respondents were asked to fill up the survey instrument and sent back in four weeks. After two weeks, a telephonic reminder sent to each bank branch manager.

5- After four weeks, only 230 survey instruments were received out of 1000 survey instrument which was very low respond rate for this study. After 6 weeks, the researcher decided to visit few bank branches personally or send one more telephonic reminder and explain the importance of this study to bank managers.

6- The total targeted numbers of bank branches were 24. The researcher personally visited 18 bank branches and sent telephonic reminder to the other branches. The personal visit and second telephonic reminder helped

the researcher to get his targeted respond rate. Finally researcher got the respond rate of 526 which was suitable for this study.

Table 3.1

Number of Bank Branches in Klang Valley

Name of the Bank	No. of Branches
AFFIN BANK	12
ALLIANCE BANK	10
AM BANK	11
CIMB	20
EON BANK	14
HONG LEONG BANK	12
MAY BANK	18
PUBLIC BANK	13
RHB BANK	10

3.7 Variable Measured

To measure the variables, researcher has used 40 statements adopted from previous research. The respondents were asked to mark the number 1 to 5 for each statement. The researcher has used 5 point likert scale. The likert scale is designed to examined how strongly subjects agree or disagree with statement on a five-point likert scale with the following anchors (Cavana et al., 2001)

3.8 Five-Point Likert Scale

1	2	3	4	5
Strongly Disagree	Disagree	Neither agree Nor Disagree	Agree	Strongly Agree

Likert scale is standard of measurement that is frequently used in survey questionnaire (Wynne, Johnson, and Schwarz, 2008). This scale was developed for the measurement of a person's attitude (Likert, 1932). It consists of declarative statements to which people are required to say the extent to which they agree with these statements (Peterson, 1994). Most times these options are numbered, consecutively, from one to a maximum of nine (Flamer, 1983), Still, there are studies that have numbered this scale up to 11 (Russell and Bobko, 1992), but the rating options numbered 1 to 5 and 1 to 7 are the most common types (Beal and Dawson, 2007). It is these numbers that are used to provide a quantifiable measure for the statistical analysis of the scale (Wynne et al., 2008).

Total 11 variables was measured in this study including learner readiness, performance self-efficacy, transfer design, transfer motivation, Affective reaction, Training transfer, Instrumentality (Intrinsic rewards), training retention, supervisor support, peer support and perceived content validity. All these variables were representing the metric data.

3.9 Data Screening and Checking

After data collection, the researcher key in the data and checked the missing values, detected the outlier and coded the data.

3.9.1 Detection of Missing values:

To know about the missing values in the data, researcher run frequency distribution and found some values were missing in the data. It was a bit difficult to contact the respondent again to fill up the missing values. Therefore, the researcher just decided to insert “missing value” by using SPSS.

3.9.2 Detection of Outlier:

After checking the missing value, the researcher checked the outlier and discarded 23 survey forms. The reason for discarding the 23 survey forms was the response of the respondents. Mostly respondent marked only 1 point in the whole survey forms. Out of 23 discarded survey forms, 15 respondents were marked 5 (strongly agree) on the whole survey forms and 5 respondents were marked 3 (neither agree nor disagree) on the whole survey form. In the last 3 respondent marked 1 (Strongly disagree) on the whole survey forms. Therefore, all these 23 survey forms have been discarded because of outlier and as a result, only 503 questionnaires were included for analysis purposes.

3.9.3 Data Coding:

After the detection of missing values and detection of outlier, the data were coded. Following is the table-3 which shows the different codes for the all survey statements.

Table 3.2

Coding List

Factor	Statement Number on Survey	Coding
Specific Training Program Scales		
Learner Readiness	1, 5, 6, 27, 24	A1, a5, a6, a27, a24
Motivation to Transfer Learning	2, 3, 4,	A2, a3, a4
Peer Support	7, 8, 9	A7, a8, a9
Supervisor/Manager Support	10, 11, 12	A10, a11, a12
Training retention	19, 20, 21	A19, a20, a21
Perceived Content Validity	13, 14, 15	A13, a14, a15
Transfer Design	16, 17, 18	A16, a17, a18
Affective reaction	22, 23, 28	A22, a23, a28
Training transfer	25, 26, 29	A25, a26, a29
Training in General Scales		
Instrumentality (Intrinsic rewards)	33 to 39	A33 to A 39
Performance Self-Efficacy	30, 31, 32, 40	A30, a31, a32, a40
Demographic Profile		
Gender	41	A41
Ethnicity	42	A42

Age	43	A43
Education	44	A44
Last Training	47	A 45

3.10 Data Collection Procedure

The researcher sent the survey instrument with instruction for completing the form and self addressed envelope to subjects. A cover letter was also included with the document. In the cover letter the researcher emphasized the importance of the study and confidentially of the participants. The survey was sent directly to branch manager through courier. The respondent had 4 weeks to review, complete and returns the requested survey material to a designated mailbox. The researcher mailed reminder letter to the each branch manager 2 weeks after initial mailing. The reminder letter specified the importance and voluntary nature of the subject participations. After 4 weeks only 230 out of 1000 survey forms received from the respondents. After 6 weeks, the researcher decided to visit few bank branches personally or send one more telephonic reminder and explain the importance of this study to bank managers.

The total selected numbers of bank branches were 24. The researcher personally visited 18 bank branches and sent telephonic reminder to the other branches. The personal visit and second telephonic reminder helped researcher to get his targeted respond rate. Finally researcher got the respond rate of 526 which was suitable for this study and 23 questionnaires were discarded due to outlier effect.

3.11 Data Processing procedure

The researcher processed the data collected from the 503 (Total 526 surveys less 23 discarded, 526-23=503) surveys by using SPSS. The columns represented the statement from the three of the survey instruments as follow: Section I: specific training program (27 statements), Section II: General training program (13 statements) and section III: Demographic (5 statements). The researcher coded the responses for section I to III with consecutive integers from 1 to 5 (1= strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree).

3.12 Statistical Analysis

For this quantitative research study, the researcher performed descriptive statistics and frequency distribution analysis to report the attribute variables and numeric variables associated with demographic data. Structural Equation Modeling (SEM) with A-moss 16 has been used. CFA defines the relationship between the latent and their indicator variables. Normally CFA used to specify the indicators for each construct by assessing the extent to which the observed variables are measuring the hypothesized latent construct as well as measuring something other than the latent construct, and determining the best indicators for a particular construct. The relationships between observed and latent variables are expressed by factor loadings that inform researchers about the extent to which a given indicator is able to measure the variable or functions as validity coefficients. In addition, CFA compares the solution found against a hypothetical one Bryman and Cramer (2001). Confirmatory factor analysis in structural equation modeling (SEM) is refine and validate the measurement model (Garver and Williams, 2009) In addition, George (2008) proposed that confirmatory factor analysis

(CFA) examine the uniqueness of the construct and test the hypotheses in more appropriate way.

3.13 Demographic Profile of the Respondent

Table 3.3

Gender

		Frequency	Percent
Valid	Male	192	38.2
	Female	311	61.8
	Total	503	100.0

Table 9 shows that out of 503 respondents, female respondents are more than man. Female respondents are 311 with (61.8 percent) and male respondents are 192 (38.2 percent). One possible reason behind higher female respondent is the higher ratio of female in Malaysian population.

Table 3.4

Race

		Frequency	Percent
Valid	Malay	277	55.1
	Chinese	123	24.5
	Indians and Others	103	20.5
	Total	503	100.0

Table 10 shows that the highest ratio of respondent is Malay with 277 (55.1 percent) following with Chinese 123 (24.5 percent) and lowest number of respondents are Indian and others with 103 (20.5 percent). The reason behind the lower percentage of Chinese and Indians is not because they don't respond to survey but because of their lower ratio in total population. According to Malaysian population statistics, Malay are 60.7%, Chinese are 25.3%, and Indians are 7.4%, and others 6.6% in total population.

Table 3.5

Age

		Frequency	Percent
Valid	Less than 30 years old	201	40.0
	30 to 39 years old	189	37.6
	40 to 55 years old	96	19.1
	56 to 65 years old	17	3.4
	Total	503	100.0

Table 11 shows the age of the respondents, the highest number of respondents are less than 30 years old with 201 (40 percent) following with 30 to 39 years old are 189 (37.6 percent), 40 to 55 years old respondents are 96 (19.1 percent) and finally 56 to 65 years old respondents are 17 (3.4 percent). The reason behind the higher number of young respondent is the policy of the Bank Negara. They give more opportunity to fresh graduates and provide training to adjust them in banking sector.

Table 3.6

Education

		Frequency	Percent
Valid	Primary School	8	1.6
	Secondary School	58	11.5
	Certificate	47	9.3
	Diploma	143	28.4
	Undergraduate Degree	190	37.8
	Masters	57	11.3
	Total	503	100.0

Table 12 shows that the higher number of respondents have diploma 143 (28.4 percent) and undergraduate degree 190 (37.8 percent) following with Masters Degree 57 (11.3 percent). But the respondents with primary, secondary and certificate have lower ratio. The educational criteria for selection of candidate in banking sector are minimum diploma. Those respondents who have education till primary, secondary and certificate are older employees.

Table 3.7

Training Period

		Frequency	Percent
Valid	3 month before	268	53.3
	6 month before	139	27.6

	9 month before	40	8.0
	12 month before	55	10.9
	More than 1 year before	1	.2
	Total	503	100.0

Table 13 shows that the higher number of respondent get the training 3 month before with 268 (53.3 percent) because Malaysian banking sector offers different training programs frequently.

Table 3.8

Normality Test

Variables	Mean	S.D	Skewness	Kurtosis
Learner Readiness	20.38	2.76	- 0.710	0.261
Transfer Motivation	12.95	1.62	- 0.675	0.346
Peer support	12.35	1.75	- 0.635	0.476
Supervisor support	12.25	1.87	-1.058	2.252
Training retention	10.86	1.39	0.577	0.579
Perceived content validity	12.37	1.78	-0.949	1.222
Transfer Design	12.67	1.81	-0.634	-0.088
Reaction	12.42	1.60	-0.469	-.119

Training Transfer	12.70	1.51	-0.545	0.195
Intrinsic rewards	38.66	3.52	0.1069	0.657
Performance Self-efficacy	17.15	1.94	-0.437	-0.285

The above table explains the normality of the data with mean, S.D, Skewness and kurtosis. According to Hair et al, (2006) the Skewness and kurtosis should be between (+ 2.58 to – 2.58). Therefore, all values in the above table lies between (+ 2.58 to – 2.58) which explain that the data is normally distributed. Skewness shows the tendency of the deviation from the mean to be larger in one direction than in the other (Melhotra; 2007). All values in above table except "instrumentality (Intrinsic rewards)" indicate negatively skewed and instrumentality shows positively skewed. Furthermore, the Kurtosis is a measure of the relative peakness or flatness. The kurtosis of a normal distribution is zero (Melhotra ;2007). The positive value means that the distribution is more peaked than normal distribution and negative values shows that the distribution is less peaked than normal distribution. Therefore, in the above table, all values except self-efficacy, transfer design and affective reaction have positive values which indicate that distribution is more peaked than normal distribution. In contrast, self-efficacy, transfer design and affective reaction have negative values, which indicate that the distribution is less peaked than normal distribution.

In addition, With reference to mean or average, which is the most commonly used measure of tendency (Naresh et al., 2007). The above table shows that mean of the learner readiness is around 20 with 5 indicators; transfer motivation is around 13 with 3 indicators; peer support is around 12 with 3 indicators; supervisor support is around 12 with 3 indicators; training retention is around 10 with 3 indicators. Perceived content

validity is around 12 with 3 indicators; transfer design is around 13 with 3 indicators; affective reaction is around 12 with 3 indicators; training transfer is around 13 with 3 indicators; instrumentality (intrinsic rewards) is around 39 with 7 indicators; performance self-efficacy is around 17 with 4 indicators.

3.14 Data Analysis

Structural Equation modeling (SEM) is a family of statistical models that seek to explain the relationship between multiple variables (Hair et al., 2007). SEM has become one of the popular statistical tools to test the relationships proposed in a parsimonious model (Cheng, 2007). In addition, Byrne (2001) pointed out that this technique is appropriately used: "when the researcher has some knowledge of the underlying latent variables structure. Based on knowledge of the theory, empirical research, or both, he or she postulates relations between observed measures and the underlying factors a prior and then tests this hypothesized structure statistically"

Cheng (2007) suggested that SEM is better statistical technique then other multivariate techniques including multiple regression, path analysis and factor analysis. In addition, Hair et al., (2007) claims that "SEM has been advocated because it can expand the explanatory ability and statistical efficiency for model testing with a single comprehensive method".

Structural equation modeling researchers propose a two step procedure when testing theoretical models (Medsker, Williams, and Holahan, 1994). The first step is to examine and validate the measurement model, with the second step testing the structural model and conducting hypothesis tests (Garver and Williams, 2009).

CFA defines the relationship between the latent variables and their indicator variables. Normally CFA used to specify the indicators for each construct by assessing the extent to which the observed variables are measuring the hypothesized latent construct as well as measuring something other than the latent construct, and determining the best indicators for a particular construct. The relationships between observed and latent variables are expressed by factor loadings that inform researchers about the extent to which a given indicator is able to measure the variable or functions as validity coefficients. In addition, CFA compares the solution found against a hypothetical one (Bryman and Cramer, 2001). Confirmatory factor analysis in structural equation modeling (SEM) is refine and validate the measurement model (Garver and Williams, 2009) Awoniyi et al., (2002) proposed that confirmatory factor analysis (CFA) examine the uniqueness of the construct and test the hypotheses in more appropriate way.

Therefore, to analyze the research data, two steps method was used by using Amos 16. At first step, measurement model (factor) analyses evaluated the contribution of each item to the construct (latent variables) being assessed. Then at the second step, the structural model was tested to determine the strength of the hypothesized relationships between the constructs.

3.15 Validity and Reliability Assessment

3.15.1 Reliability Assessment

The reliability of a measure indicates the extent to which the measure is without bias (error free) and hence offers consistent measurement across time and across the various items in the instrument (Cavana et al., 2001). To test the internal consistency of the survey instrument, the researcher conducted pilot study in lieu with the traditional

reliability method. A pilot study is considered a small-scale test of the whole administrative procedure (e.g. introduction letter, instrument etc.) for the survey process (Malthotra 2007). In this regards, Cavana et al., (2001) argued that a questionnaire should be piloted with a reasonable sample of respondents who come from the target population or who closely resemble the target population.

To get the internal consistency of the instrument, researcher conducted pilot study and worked as moderator to get the opinion and feedback from the respondent about the survey instrument regarding clear understanding of the statement and asked for the suggestions to improve the survey instrument. The targeted group which was selected for the pilot study was not included in the population. Because the pilot study would not contribute to generalize the knowledge and therefore, not considered research (London and Flannery, 2004).

The researcher invited 60 employees form the different bank branches and distributed the survey questionnaire including with cover letter stated that the purpose of pilot study and assure them about the information and data belongs to respondent would be kept confidential. The cover latter also declared that the result would be calculate on aggregate bases. The respondents were required to evaluate each statement in the survey instrument and check whether the statements are clear and understandable. With reference to demographic point of view, respondents were asked to highlight if they feel any statement disclose their privacy.

The respondent were asked to give their feedback about whether the statement are clear, precise, well written by clicking on the yes or no box and their opinion about addition, deletion or changing the statement to improve the survey instrument. In result, respondents were agreed that the (a) the statements were easy to understand, (b) statements were well written (c) response choice was easy to identify (d) survey

respondents privacy was respected and protected and (e) the survey length was suitable to reply.

Table 3.9

Reliability of the Scale

Name of Variable	Reliability	Internal Consistency
Reaction	0.814	0.969
Instrumentality (Intrinsic rewards)	0.791	0.930
Learner Readiness	0.787	0.672
Motivation to Transfer	0.796	0.769
Peer Support	0.806	0.970
Perceived Content Validity	0.807	0.759
Performance Self-Efficacy	0.798	0.968
Supervisor Support	0.779	0.704
Training Retention	0.851	0.859
Training Transfer	0.783	0.980
Transfer Design	0.788	0.686

Table 3.9 shows that the reliability and internal consistency of all scales is above then 0.7 (Hair et al., 2000) which indicates that all scales have higher reliability and internal consistency level.

3.16 Validity Assessment:

There are different way to assess validity of the instrument like content validity, construct validity and criterion validity.

3.16.1 Content Validity:

Content validity also called face validity has to do with items seeming to measure what they claim to (Adcock and Collier, 2001). Content validity ensures that the measures include an adequate and representative set of items that tap the concept. "The more the scale items represents the domain or universe of the concept being measured, the greater the content validity" (Cavana et al.,; 2000). All scales in this research have been adopted from previous research and literature also confirmed the content validity of all scales.

3.16.2 Method for assessing Construct Validity

"Construct validity testifies to how well results obtained from the use of the measures fit the theories around which the test is designed" (Cavana et al.,: 2000). Researchers divide construct validity into two types: Convergent validity and discriminant validity. Hair et al., (2000) argued that "convergent and discriminant validity is both considered subcategories of subtypes of construct validity". To find out construct validity, researcher have calculated both convergent and discriminant validity.

3.16.2.1 Convergent Validity:

"Convergent validity established when the scores obtained by two different instruments measuring the same concept are highly correlated" (Cavana et al.,; 2000). By using Amos results, researcher have calculated the convergent validity as below. To find out the convergent validity, Researcher have used Average Variance Extracted (AVE) method. (Fornell and Larcker, 1981) developed this method to calculate

convergent validity and consider “a construct to display convergent validity if average variance extracted (AVE) is at least 0.50 (that is, when variance explained by the construct is greater than measurement error)”.

AVE is the variance in indicator items captured by a construct as a proportion of captured plus error variance. AVE is calculated as the sum of the squared standardized indicator item loadings on the factor representing the construct, divided by this sum plus the sum of indicator item error. Thus, let S1 = the sum of squared principal components analysis factor loadings of the indicator variables on the factor representing their construct. Let S2 = the quantity (1 - the squared loading) summed for all indicators. Then

$$AVE = (S1) / (S1 + S2)$$

Table 3.10

Convergent Validity

Construct	Composite	Convergent Validity	AVE
Perceived Content Validity	A13	0.714	0.715
	A14	0.753	
	A15	0.680	
Transfer design	A16	0.812	0.526
	A17	0.766	
Peer Support	A07	0.944	0.957
	A08	0.990	
	A09	0.937	
Supervisor Support	A10	0.616	0.664

	A11	0.726	
	A12	0.652	
Learner Readiness	A24	0.873	0.652
	A27	0.886	
Transfer Motivation	A02	0.798	0.723
	A03	0.740	
	A04	0.633	
Training Transfer	A25	0.998	0.970
	A26	0.987	
	A29	0.927	
Training Retention	A21	0.714	0.816
	A20	0.842	

	A19	0.894	
Intrinsic rewards	A39	0.693	0.806
	A38	0.715	
	A37	0.791	
	A36	0.890	
	A35	0.912	
	A34	0.910	
	A33	0.731	
Performance Self-efficacy	A43	0.861	0.940
	A32	0.945	
	A31	0.986	
	A30	0.969	
Reaction	A28	0.913	0.955

A23	0.977
A22	0.975

Fornell and Larcker (1981) argued that the convergent validity of all scales should be at least 0.50. As mentioned in the above table all variables have at least 0.50 or all values are greater than 0.50 which shows that all scales have adequate convergent validity.

3.16.2.2 Discriminant Validity:

The second major type of "construct validity refers to the principle that the indicators for different constructs should not be so highly correlated as to lead one to conclude that they measure the same thing" (Garson, 2009). Furthermore, Garson (2009) explained that "discriminant validity analysis refers to testing statistically whether two constructs differ (as opposed to testing convergent validity by measuring the internal consistency within one construct, as Cronbach's alpha does)".

An alternative factor-based procedure for assessing discriminant validity is that proposed by Fornell and Larcker (1981). In this method, "the researcher concludes that constructs are different if the average variance extracted (AVE) for one's constructs is greater than their shared variance". "That is, the square root of the average variance extracted (AVE) for a given construct should be greater than the absolute value of the standardized correlation of the given construct with any other construct in the analysis. For standardized data, squared covariances are equivalent".

"AVE is calculated as the sum of the squared standardized indicator item loadings on the factor representing the construct, divided by this sum plus the sum of indicator item

error". "Thus, let S1 = the sum of squared principal components analysis factor loadings of the indicator variables on the factor representing their construct". "Let S2 = the quantity (1 - the squared loading) summed for all indicators. Then AVE = (S1)/(S1 + S2)".

According to Garson (2009) "In terms of presentation, it is customary to provide a matrix of squared covariance of each construct with each other construct, replacing the diagonal elements with the AVE for the column construct". Therefore, all items in the table below are greater than squared covariance or greater than 0.60 as proposed by (Ghazale; 2006) which demonstrate that all variables are discriminate each other and statistically significant. See complete table for discriminant validity **(Appendix B)**

3.16.2.3 Criterion Validity:

"Criterion related validity is established when the measure differentiates individuals on a criterion it is expected to predict" (Cavana et al; 2000). Criterion validity explains the correlation between scale or instrument measurement. Criterion validity can be done by establishing predictive validity. "Predictive validity indicates the ability of the measuring instrument to differentiate among individuals on a future criterion" (Cavana et al., 2000). For example in this research, researcher have predicted that if the trainee will highly motivate, the more they will transfer the learned skills. The criterion validity of studied variables verified by Holton (1998) and velada (2007). In addition, the results obtained from hypothesis in this research established predictive validity which will be explained further in next chapter.

Table 3.11

Standardized Measurement Model Results

Construct	Composite	Parameter Estimate	P – Value
Perceived Content Validity	A13	0.741	****
	A14	0.755	****
	A15	0.742	****
Transfer design	A16	0.723	****
	A17	0.772	****
	A18	0.730	****
Peer Support	A07	0.737	****
	A08	0.840	****
	A09	0.712	****
Supervisor Support	A10	0.715	****

	A11	0.813	****
	A12	0.694	****
Learner Readiness	A01	0.523	****
	A05	0.775	****
	A06	0.765	****
	A24	0.634	****
	A27	0.586	****
Transfer Motivation	A02	0.752	****
	A03	0.782	****
	A04	0.694	****
Training Transfer	A25	0.832	****
	A26	0.692	****
	A29	0.694	****

Training Retention	A21	0.794	****
	A20	0.818	****
	A19	0.816	****
Intrinsic rewards	A39	0.684	****
	A38	0.602	****
	A37	0.705	****
	A36	0.668	****
	A35	0.772	****
	A34	0.667	****
	A33	0.639	****
Performance Self-efficacy	A43	0.704	****
	A32	0.599	****
	A31	0.746	****

	A30	0.762	****
Reaction	A28	0.764	****
	A23	0.829	****
	A22	0.722	****

In the above table, the results of measurement model are displayed. The results display that parameter estimates from composites to latent variables are of sufficient magnitude and are statistically significant. All parameter estimates are greater than 0.6 (Garver and Williams, 2009) with most values being 0.80 or greater. Furthermore, less than 0.01 p-value shows that all parameters are statistically significant.

Table 3.12

Standardized measurement model fit

Construct	Composite	T - value	Squared Multiple Correlation
Perceived Content Validity	A13	15.460	0.507
	A14	------	0.567
	A15	15.479	0.465
Transfer design	A16	15.047	0.618
	A17	------	0.602
	A18	15.180	0.343
Peer Support	A07	16.391	0.891
	A08	------	0.980
	A09	15.674	0.877
Supervisor Support	A10	14.772	0.379

	A11	------	0.528
	A12	14.414	0.423
Learner Readiness	A01	10.991	0.062
	A05	------	0.121
	A06	16.120	0.083
	A24	13.411	0.741
	A27	12.359	0.761
Transfer Motivation	A02	------	0.632
	A03	15.328	0.549
	A04	14.010	0.403
Training Transfer	A25	------	0.996
	A26	13.395	0.975
	A29	13.417	0.859

Training Retention	A21	17.675	0.086
	A20	------	0.701
	A19	17.936	0.514
Intrinsic rewards	A39	------	0.481
	A38	8.114	0.511
	A37	9.712	0.626
	A36	9.481	0.792
	A35	10.060	0.833
	A34	9.473	0.828
	A33	6.154	0.534
Performance Self-efficacy	A43	------	0.741
	A32	11.978	0.893
	A31	14.562	0.972

	A30	14.817	0.940
Reaction	A28	------	0.834
	A23	15.858	0.955
	A22	14.841	0.951

3.17 Model Fit Indicators in SEM

To test the structural model, different measures have been selected for model fit. With reference to chi-square goodness-of-fit indices statistic, (Wynne et al., 2008) argued that chi-square goodness-of-fit indices can be used to evaluate model fit but psychometricians tend not to consider it a reliable guide for model adequacy (Hu and Bentler, 1999). That is because the actual size of the test statistic depends not only on model adequacy (Wynne et al., 2008) but also on which one among several chi-square tests is used, as well as other conditions (Hu and Bentler; 1999). This statistic has no upper limit and as such its value is not interpretable in a standardize way (Kline, 2005). Therefore, researcher have selected alternative measure of fit like RMSEA, CFI, AGFI, CMIN/DF, TLI and IFI. For these measures goodness-of-fit is based on various cutoff criteria (Byrne, 2001).

For the goodness-of-fit indices like RMSEA, CFI, AGFI, CMIN/DF, TLI and IFI, it is important to be aware that there is no distinction made in terms of degree of fit for differences in fit indexes beyond the cutoff point (Wynne et al., 2008). For RMSEA, value less than 0.05 indicate a good fit (Byrne, 2001, p, 85) and higher up to 0.10 can indicate average fit (Chen, Kwok, and Goodson, 2008) but above a value of 0.10, the fit is said to be poor (Byrne, 2001, p, 89).

CFI ranges from zero to one (Byrne, 2001). Researchers consider Comparative fit index (CFI) $\geq$ 0.90 indicate adequate fit (Chau, 1997; Chen et al., 2008; Cheng, 2007; Cleveland, Laroche, and Papadopoulos, 2009). Adjusted goodness-of-fit index (AGFI) $\geq$ 0.80 indicates good fit (Cheng, 2007, Chau, 1997). With reference to CMIN/df < 3 indicate good fit (Cheng, 2007; Byrne 2001; Chau, 1997). Tucker-Lewis index (TLI) > 0.89 indicate adequate fit (Loibl, cho, Diekmann, and Batte, 2009). Finally, IFI $\geq$ 0.90 can consider good model fit (Lai, 2009).

Notes for the Model

Table 3.13

Computation of degree of freedom (Default Model)

Number of distinct sample moments	820
Number of distinct parameter to be estimated	107
Degree of freedom (820-107)	713

Tables 3.14

Results (Default Model)

Minimum was achieved	-------
Chi-square	978.532
Degrees of freedom	539
Probability level	0.000

Table 3.15

Summary of Model Fit Indicators

Overall Model Measure	Acceptable Baseline
CFI	≥ 0.90
AGFI	≥ 0.80
RMSEA	< 0.10
CMIN/DF	< 3
TLI	≥ 0.89
IFI	≥ 0.90

Table 3.16

Measurement Model fit

Overall Model Measure	Overall Model Score	Acceptable Model Fit	Acceptable Baseline
CFI	0.942	Passed	≥0.90
AGFI	0.821	Passed	≥0.80
RMSEA	0.053	Passed	< 0.10
CMIN/DF	2.406	Passed	< 3
TLI	0.934	Passed	≥ 0.89
IFI	0.942	Passed	≥ 0.90

The above table shows the measurement model fit. Six indicators have been selected to explain the model fit. In this model Comparative fit index (CFI) is 0.942 higher than the acceptable baseline (CFI ≥ 0.90) indicates adequate fit (Cleveland al., 2009; Chan et al., 2008; Cheng, 2007; Chau, 1997).

With reference to adjusted goodness of fit Index (AGFI) the value is 0.821 which fulfill the acceptable baseline (AGFI ≥ 0.80) indicates good fit (Cheng, 2007; Chau, 1997). Furthermore, root mean square error of approximation (RMSEA) is 0.053 shows model

fit value which should be less than 0.05 indicate a good fit (Byrne, 2001, p, 85) and higher up to 0.10 can indicate average fit (Chen et al., 2008) but above a value of 0.10, the fit is said to be poor (Byrne, 2001, p, 89). The chi-square/degree of freedom (CMIN/d.f) is 2.406 also indicate good fit CMIN/df < 3 (Cheng, 2007; Byrne 2001; Chau, 1997). In addition, Tucker-Lewis Index (TLI) is 0.934 indicate adequate fit (Loibl et al., 2009). Finally, IFI is 0.942 which also consider adequate fit (Lai; 2009).

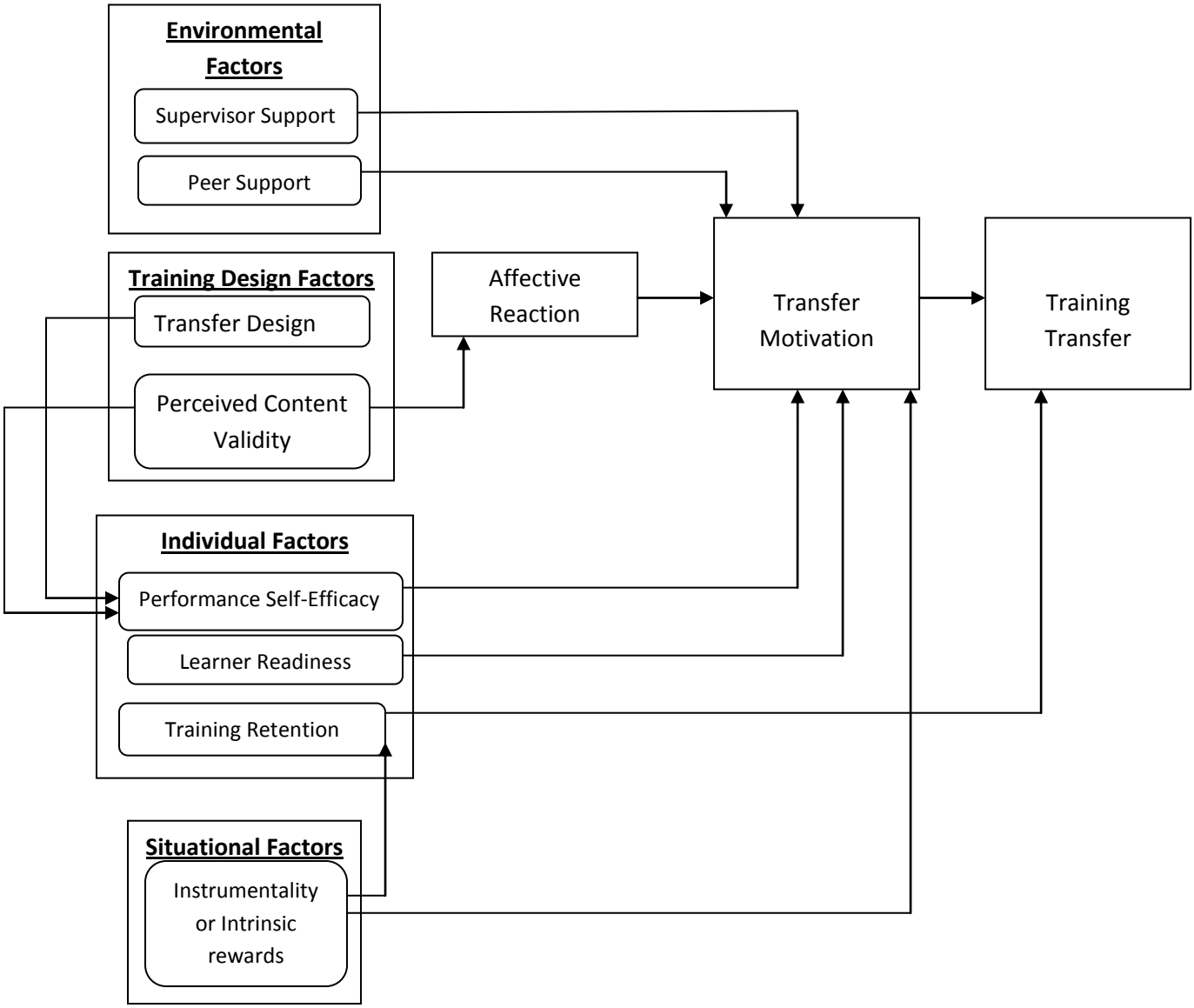
3.18 Research Methodology and Positivist Approach

Structural Equation Modeling (SEM) is used to test our effectiveness of training model. Structural Equation Modeling (SEM) is a most reliable technique to test the effectiveness of the model. SEM refers to quantitative approach. Positivist approach towards management research is generally associated with quantitative method. Balu and Scott (1963) argued that in order for knowledge or organizational phenomena to be expanded, researchers should collect quantitative data from large-scale studies rather than individual cases. While debate rages between these two established academics, it appears that positivism retains its dominant status.

Van (1995) argued that management researchers tend to narrow the scope of their research to a set of inflexible hypotheses. Paul (1995) argued that the process of searching and finding laws in management research is reduced to a random process of getting as high as possible the coefficient of determination values, r^2. He further quoted an example of a group of economists who did not care about their implausibility of their assumptions so long as their r^2 values are high. Hogan, Joyce and Roberts (1996) argued that the focus of management research has become very narrow that propositions being tested do not reflect the complexities in reality. Consequently, management research findings only apply to narrow circumstances. Therefore, in order

to validate management theory, it has to be contextual. As a result, there is a trend towards an interpretative approach in management research. Mitroff and Pondy (1978) argued that management research's aim is to fit their theories to one objective reality in which management researchers presume exist. Although there has been an emphasis of management research approach to be more scientific, some argued that it is too diverse. Pfeffer (1994) suggested that in order to resolve this diversity problem, there is a need for methodological consensus and technical certainty.

Figure 3.2 : Proposed Framework



3.19 Summary

Chapter 3 describes the methodology used to test the model. By testing this model and the relationships between variables, this study will provide clear insight to the human resource development professionals, trainers and training managers about the factors effecting transfer of training in Malaysian Banking sector. The result of this study would be helpful for trainers to develop better and effective training program and maximize training transfer.

The research methodology for the study included a quantitative research design and population of employees in 24 bank branches. The unit of analysis was employees in Malaysian banking sector. The survey instrument which was consisted on 45 statements was used to collect the data from 24 bank branches. To analysis the data the researcher has used structural equation modeling (SEM) technique with Amos-16 and SPSS 16. To test the reliability of the instrument, the researcher has conducted the pilot study with 60 employees in banking sector. Finally, the data is analyzed and result is interpreted. The result of the data is reported in chapter IV.