

CHAPTER III: RESEARCH METHODOLOGY

3.1 Introduction

This chapter is organised into five sections. The first section includes a description of the research design applied in this study. The second section contains the description of the population and sample of the study while the third section includes the method and procedures used for data collection. The fourth section explains a description of measures, followed by the final section highlighting a discussion about the procedure of analysing the data of this study.

3.2 Research design

This study is a quantitative study. Quantitative study is a formal, objective, and systematic process in which numerical data are used to obtain information about any subject (Burns and Grove, 2005, p: 23). Other researchers describe this research design as a method that explains phenomena by collecting numerical data that are analysed using mathematically based methods (in particular statistics) (Aliaga and Gunderson, 2000).

Quantitative research design can help the researcher to describe and test relationships and examine the cause and effect between variables. In other words, this type of research design allows researcher to test the hypotheses of this study (Coolican, 1990). Furthermore, this research design also enables the researcher to compile the data onto a chart or graph, conducts a research on a large scale and gives a lot more information as far as value and statistics are concerned (Aliaga and Gunderson, 2000). In addition,

the quantitative method has been selected for this study to allow for the generalisation of the findings to the selected population. Moreover, this is a method applied by previous studies in the field of training (e.g. Hicks, 2006; Kirwan and Birchall, 2006; Simosi, 2012).

This study also is a cross-sectional study, showing that the data of this study have been collected at a one-time point (Bland, 2001). Besides, this method of study has a number of advantages such as being relatively inexpensive and taking less amount of time to conduct data collection as the data of all variables can be collected at the same time (Bland, 2001).

3.3 Populations and sample

The population of this study consisted of the public sector employees in Libya who participated in a training program organised by a training centre known as the Libyan International for Training and Development. This training centre is located in Tripoli, Libya. The training centre provides employees of Libyan public sectors with different types of training courses namely communication, leadership, language, finance, information technology, professional development, quality and human resource development. The key purpose of the Libyan International for Training and Development centre is to promote the development of human capital in the Libyan public sector. Precisely, the focus of Libyan International for Training and Development is to develop talented and “thinking civil” servants with the goal of creating public sector officers who are knowledgeable, skilled, creative and innovative. The Libyan International for Training and Development also has the role of developing the right attitudes towards the Libyan public sector.

The samples of this study were selected using the purposive sampling technique. Purposive sampling is a non-probability sampling method and it occurs when “elements selected for the sample are chosen by the judgment of the researcher. Researchers often believe that they can obtain a representative sample by using a sound judgment, which will result in saving time and money” Black (2009). Purposive sampling method may prove to be effective when only limited numbers of people can serve as primary data sources due to the nature of research design and aims and objectives Saunders, Lewis and Thornhill (2012). Purposive sampling is one of the most cost-effective and time-effective sampling methods available. In Specific, the samples of the study are 227 public sector employees who participated in training program known as ‘Employee Orientation Training Course’ in 2015. The employees who participated in this course were from various sectors such as financial, economic and education. The main objective of the training course is to develop the knowledge, skills, and behaviours needed by public sector employees to understand and perform the daily functions of their role.

3.4 Data collection method and procedure

The data for this study were collected from the respondents (public sector employees who participated in the ‘Orientation Training Course’ in 2015 through survey or questionnaire. This method was chosen for some reasons such as having the ability to be developed in less amount of time (compared to other data collection methods), being capable of collecting data from a large number of respondents, allowing numerous questions asked about a subject, giving extensive flexibility in data analysis and finally, being cost effective (Kirwan and Birchall, 2006; Simosi, 2012).

The questionnaire contained questions relating to all variables that have been included in the conceptual framework of this study. The questionnaire was designed in English language and translated into the Libyan national language. The questionnaire has been translated by professional translator from the Magarief bureau for legal translation that located in Tripoli, Libya. Company is working in Legal services, Lawyers business activities. The use of the translated version improved the readability of the respondents in the questionnaire and increased the probability that the instrument would operate in this new target culture, just as it had in the original culture in which it was developed (Bates and Khasawneh, 2005).

An approval from the management of training centre had been sought before distributing the questionnaire to the target respondents, as the questionnaire had been distributed in person. In order to encourage participation from the respondents, researcher briefly explained the purpose of the study and made it clear to the participants that participation in the research was voluntary and anonymous (the respondents' identities would be kept confidential). This way was found very useful to clarify any doubt among participants in the survey and to motivate the participant to be more open and honest in his/her answers (Sekaran and Bougie, 2010). In addition, the researcher explained to the participants how to complete the questionnaire and allowed them to take about 15-20 minutes to complete the questionnaire.

3.5 Measures

All the measures for each variable are based on the existing measurement developed by previous studies. All measures used in this study are developed in English language cultures. The use of these measures in another culture has been a huge concern for

those involved in the cross-cultural study (Earley and Singh, 1995). To guarantee that the equivalence of meaning and intent of the previously-mentioned measures are captured, the researcher has translated the measures into a target language by bilingual individuals (people who speak two languages which is Arabic and English).

A pilot test has been conducted to test the reliability of the translated questionnaire. The respondents for the pilot test are 20 persons. The result has showed that all the translated measures have achieved an acceptable value (>0.70) (see Table 3.1).

Table 3.1: Pilot Test Results

No.	Variable	Alpha
1.	Motivation to learn	0.706
2.	Self-efficacy	0.762
3.	Job satisfaction	0.736
4.	Content relevance	0.720
5.	Opportunity to perform	0.700
6.	Organizational learning culture	0.815
7.	Power distance	0.917
8.	Motivation to transfer	0.726
9.	Work engagement	0.883

The respondents were asked to answer all items in the questionnaire based on five-point Likert-type scales; 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree. Below are the details of items of each variable.

3.5.1 Motivation to learn

Motivation to learn was measured using ten items developed by Newton (1993). The reliability of the measure is 0.81. Below are the details of the items:

1. I am motivated to learn the training material in this workshop.
2. I will try to learn as much as I can from this workshop.
3. I have a better chance of learning this training material than most others.
4. I volunteered for this training as soon as I could.
5. The knowledge and experience that I gain in this training may advance my career.
6. Even if I fail, this training will be a valuable experience.
7. I will get more from this training than most people.
8. If I have difficulty during training, I will try harder.
9. I am more prepared for this training than most people.
10. I am personally interested in the subject of training

3.5.2 Self-efficacy

Self-efficacy is measured using eight items developed by Jones (1986). The measure has reliability of 0.71. The measure has been used in previous studies by Palthe (2003)

and obtained reliability of 0.77, and by Simosi (2012), which gained a reliability of 0.84. Below are the details of the items:

1. My job is well within the scope of my abilities.
2. I do not anticipate any problems in adjusting to work in this organization.
3. I feel I am overqualified for the job I will be doing.
4. I have all the technical knowledge I need to deal with my job, all I need now is practical experience.
5. I feel confident that my skills and abilities equal or exceed those of my future colleagues.
6. I could handle a more challenging job than the one I am doing.
7. My past experiences and accomplishments increase my confidence that I will be able to perform successfully in this organization.
8. Professionally speaking, my job exactly satisfied my expectations of myself

3.5.3 Job satisfaction

Job satisfaction is measured using the three items scale adapted from the Michigan Organisational Assessment Questionnaire Satisfaction Subscale developed by Cammann and colleagues (1979). This measurement scale has been used by recent studies, which showed high internal reliability; 0.85 in a study by Golden and Veiga (2005) and 0.88 in a study by Bagger and Li (2011). Below are the details of the items:

1. All in all I am satisfied with my job.
2. In general, I do not like my job.

3. In general, I like working here

3.5.4 Content relevance

Content relevance is measured using three items developed by Warr, Allan and Birdi (1999). Below are the details of the items:

1. This course was very relevant to my job.
2. This course was a great practical value to me for my job.
3. This course was closely related to my job needs.

3.5.5 Opportunity to perform

The opportunity to perform is measured using six items developed by Holton and colleagues (1998). The measurement has been used in studies by Bookters (1999) and obtained reliability of 0.83 and in a study by Kirwan and Birchall (2006), which gained a reliability of 0.90. Below are the details of the items: I will get opportunities to use this training on my job.

1. I will get opportunities to use this training on my job.
2. What is taught in training closely matches my job requirements.
3. There are enough human resources available to allow me to use skills acquired in training.
4. At work, budget limitations will prevent me from using skills acquired in training.
5. Our current staffing level is adequate for me to use this training.
6. It will be hard to get materials and supplies I need to use the skills and knowledge learned in training

3.5.6 Organization learning culture

The variable organisational learning culture is measured using seven items developed by Marsik and Watkins (2003). This measurement has been used by Dekouloua and Trivellas (2014) with Cronbach's alpha coefficients ranging from 0.895 to 0.946. Below are the details of the items:

1. In my organization people are rewarded for learning.
2. In my organization people spend time building trust with each other.
3. In my organization teams/groups revise their thinking as a result of group discussion or information collected.
4. My organization makes its lessons learned available to all employees.
5. My organization recognizes people for taking initiative.
6. My organization works together with the outside community to meet mutual needs.
7. In my organization leaders continually look for opportunities to learn

3.5.7 Power distance

Power Distance is measured using five items developed by Yoo, Donthu and Lenartowicz (2011), which obtained a reliability of 0.84. This measurement has been used by Issa (2013) and the reliability ranged between 0.61 to 0.69. Below are the details of the items:

1. People in higher positions should make most decisions without consulting people in lower positions.

2. People in higher positions should not ask the opinions of people in lower positions too frequently.
3. People in higher positions should avoid social interactions with people in lower positions.
4. People in lower positions should not disagree with decisions by people in higher positions.
5. People in higher positions should not delegate important tasks to people in lower positions.

3.5.8 Motivation to transfer

Motivation to transfer is measured using four items developed by Noe (1986). This measurement has been used by Handy (2008) and obtained a reliability of 0.83. Below are the details of the items:

1. Training will increase 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.
4. I get excited when I think about trying to use my new learning on my job

3.5.9 Work engagement

Work engagement is measured using 17 items developed by Schaufeli and Bakker (2003). This measurement has been used by Durán, Extremera and Rey (2004), and Montgomery, Peeters, Schaufeli, and Den Ouden, (2003) with reliability ranging between 0.80 and 0.90. Below are the details of the items:

1. At my work, I feel bursting with my energy.
2. I find the work that I do full of meaning and purpose.
3. Time flies when I am working.
4. At my job, I feel strong and vigorous.
5. I am enthusiastic about my job.
6. When I am working, I forget everything else around me.
7. My job inspires me.
8. When I get up in the morning, I feel like going to work.
9. I feel happy when I am working intensely.
10. I am proud of the work that I do.
11. I am immersed in my work.
12. I can continue working for very long periods at time.
13. To me, my job is challenging.
14. I get carried away when I am working.
15. At my job, I am very resilient, mentally.
16. It is difficult to detach myself from my job.
17. At my work, I always persevere, even when things do not go well.

3.6 Data analysis

The data for this study was analysed using statistical software known as SPSS (version 20). SPSS is a software product used for statistical analysis. SPSS is capable of handling large amounts of data and can perform all of the analyses covered in the text and much more. The program, originally called Statistical Package for the Social Sciences, was released in 1968 and quickly became one of the most widely used statistics programs in the social sciences, including in healthcare, government, market research and surveying. SPSS was chosen because of its compatibility with most other software packages and its user-friendliness used for data analysis (Field, 2009). Below are the steps used by this study to analyse the data:

The first step was analysing the demographic variable of respondents which included gender, age, working experience and work status. Frequency and percentage distribution is a display of data that specifies the percentage of observations that exist for each data point or grouping of data points. It is a particularly to express the relative frequency of survey responses.

The second step was conducting an exploratory factor analysis (EFA). In multivariate statistics, exploratory factor analysis (EFA) is a statistical method used to uncover the underlying structure of a relatively large set of variables. For instance, EFA is a technique within factor analysis whose overarching goal is to identify the underlying relationships between measured variables (Norris and Lecavalier, 2010). It is commonly used when developing a scale and serves to identify a set of latent constructs underlying a battery of measured variables. Also, it should be used when the researcher has no prior hypothesis about factors or patterns of measured variables

(Finch and West, 1997). There are procedures of conducting EFA. First is to check the suitability of the data for factor analysis. According to both Pallant (2011) and Leech, Barrett and Morgan (2005), the data are considered suitable for factor analysis if the result in the correlation matrix table shows at least some correlation, which is 0.30 or greater. In addition, if the Bartlett's test of sphericity shows statistically significant (the significance value is less than 0.05), this means that the variables are correlated highly enough to provide reasonable basis for factor analysis. Moreover, according to Leech, Barret and Morgan (2005), the Kaiser-meyer-olkin value should be 0.50 and greater to consider the data are suitable for factor analysis. Second is determining the number of components to extract. At this stage, the researcher looked at the total variance explained in the respective table to determine how many components to extract. Besides, the researcher was only interested in components that have an eigenvalue of 1.0 and above and see how much this component explains the total of the variance (Pallant, 2011). Third is assessing the items loading for each factor. At this stage, the researcher observed the component matrix in the table to check the items loadings on each factor. Of course, the researcher was only interested on the item that has loading greater than 0.30. Moreover, the communalities table was presented as well to give information about how much of the variance in each item was explained, low value (e.g. less than 0.30) could indicate that the item does not fit well with the other items in its component.

The third step was assessing the reliability for each variable based on the Cronbach's alpha value. Cronbach's alpha value determines the internal consistency or average correlation of items in a survey instrument to gauge its reliability. The Cronbach's

Alpha value ranges in value from 0 to 1. The higher the score, the more reliable the generated scale is. Nunnally (1978) has indicated the value of 0.70 and above to be an acceptable reliability value.

The fourth step was conducting a descriptive analysis. The purpose of doing descriptive statistics was to check the mean and the standard deviation of each variable. In addition, at this stage also a correlation between the variables was examined. If the correlations among all the variables are less than 0.90, this means there is low probability of multicollinearity issue (Tabachnick and Fidell, 2007).

The fifth step involved testing the hypotheses. A regression analysis was conducted to test the proposed hypotheses. The regression analysis can produce the result related to the relationship between the variables and the direction of the relationship, either positive or negative. Moreover, the regression analysis enables checking the significant level of each relationship between variables. The procedure proposed by Baron and Kenny (1986) has been followed to test the mediation by Holmbeck (1997), Yli-Renko, Autio and Sapienza (2001) and Frazier and Colleagues (2004). Baron and Kenny (1986) proposed a four-step approach to test the mediation as details below:

Step 1: Conduct a simple regression analysis between independent variable (X) and dependent variable (Y).

Step 2: Conduct a simple regression analysis between independent variable (X) and mediator (M).

Step 3: Conduct a simple regression analysis between mediator and dependent variable.

The purpose of Steps 1-3 is to establish that zero-order relationships among the variables exist. If one or more of these relationships are non-significant, researchers usually conclude that mediation is not possible or likely. Assuming there are significant relationships from Steps 1 through 3, one proceeds to Step 4. In the Step 4 if the relationship between X and Y is no longer significant when M is controlled, the finding supports full mediation. If the relationship between X and Y is still significant when M is controlled, the finding supports partial mediation. Table 3.2 shows the specific analysis techniques to test the hypotheses of this study.

Table 3.2: Analysis Technique To Test The Hypotheses Of This Study

No.	Hypotheses	Data analysis technique
1.	Motivation to learn is positively related to motivation to transfer the training outcomes.	Regression
2.	Self-efficacy is positively related to motivation to transfer the training outcomes.	Regression
3.	Job satisfaction is positively related to motivation to transfer the training outcomes.	Regression
4.	Content relevance is positively related to motivation to transfer the training outcomes.	Regression

5.	Opportunity to perform is positively related to motivation to transfer the training outcomes.	Regression
6.	Organisational learning culture is positively related to motivation to transfer the training outcomes.	Regression
7.	Power distance is positively related to motivation to transfer the training outcomes.	Regression
8.	Motivation to Transfer is positively related to work engagement	Regression
9.	Motivation to transfer mediates the relationship between motivation to learn and work engagement	Hierarchical Regression Based on the procedure by Baron and Kenny (1986)
10.	Motivation to transfer mediates the relationship between self-efficacy and work engagement	Hierarchical Regression Based on the procedure by Baron and Kenny (1986)
11.	Motivation to transfer mediates the relationship between job satisfaction and work engagement	Hierarchical Regression Based on the procedure by Baron and Kenny (1986)
12.	Motivation to transfer mediates the relationship between content relevance and work engagement	Hierarchical Regression Based on the procedure by Baron and Kenny (1986)

13.	Motivation to transfer mediates the relationship between opportunity to perform and work engagement	Hierarchical Regression Based on the procedure by Baron and Kenny (1986)
14.	Motivation to transfer mediates the relationship between organizational learning culture and work engagement	Hierarchical Regression Based on the procedure by Baron and Kenny (1986)
15.	Motivation to transfer mediates the relationship between power distance and work engagement	Hierarchical Regression Based on the procedure by Baron and Kenny (1986)

3.7 Summary

This chapter has described the methodological aspects of this study including the research design, the population and the sample of this study, the data collection method and procedure, the measure used in this study, and finally the data procedure and method of analysing the data of this study. Chapter 4 will provide a discussion on the results of data analysis.