CHAPTER 3

METHODOLOGY

3.1 Introduction

This chapter discusses the methodological aspect of this study, including the research design, the population and sample, the data collection method and procedure, the research instrument and the data analysis method and procedure.

3.2 Research Design

The research design is a general plan that guides researchers' efforts during their research by identifying data collection, measurement variables, and analysis of data (Sekaran & Bougie, 2016). The framework helps and guides the researcher during the research journey. It should come with an appropriate approach that allows answering the research questions and problem in the best and most accessible way, considering potential the limitations the researcher may face, such as budget and time (Ghauri & Gronhaug, 2002; Mostafa, 2013).

This study applies quantitative research design. This type of research design is the dominant method, which has been applied by most previous studies on service quality (e.g., Lin & Huang, 2021; Nasution & Rafiki, 2020; Pangaribuan et al., 2020). Quantitative research is used to quantify the problem by generating numerical data or data that can be transformed into usable statistics. It is used to quantify attitudes, opinions, behaviors, and other defined variables and generalize results from a larger sample population. Quantitative research also uses measurable data to formulate facts and uncover patterns in research (Susan, 2011). This type of research design involves a field survey distributed by the researcher to the target population to answer specific issues about the problem within the scope of the study. It aims to gather data without manipulating the research context and deals with naturally occurring phenomena where the researcher has no control over the variables.

Although quantitative research does not aim to focus on the multiple meanings of individual experiences, and in-depth information uses strategies of inquiry (Panthee, 2020), the outcome is easy to measure, and the results can be clearly shown through objective data. Because of its numerical basis, making predictions based on quantitative data can also be more accessible. The possibility of expanding quantitative data into predictions is a major advantage (Mugenda & Mugenda, 1999).

3.3 Population and Sample

The population of this study are 282 heads of sections in the Directorate General of Education (DGOE) in all governorates of the Sultanate of Oman. There are eleven (11) regions in the Sultanate of Oman. They are DGOE in Musandam, DGOE in Muscat, DGOE in Al Batinah North, DGOE in Al Batinah South, DGOE in Sharqiyah North, DGOE in Sharqiyah South, DGOE in Al Dakheliah, DGOE in Al Dhaherah, DGOE in Al Buraimi, DGOE in AL Wusta, and DGOE in Dhofar. The population of this study share the same general characteristics and operates under the system and approaches of the Ministry of Education in the Sultanate of Oman.

The sample was selected from the population using a stratified sampling technique. Stratified random sampling is a method of sampling that involves the division of a population into smaller groups known as strata. A stratum is a subset of the population that shares a particular characteristic (Kimando & Njogu, 2012).

Stratification ensures that researchers have adequate numbers of participants from each stratum to examine differences in responses among the various strata. In addition, stratification can capture key population characteristics in the sample. This sampling method also produces characteristics in the sample that are proportional to the overall population (Learly, 2008; McQueen & Knussen, 2006). Moreover, stratified random sampling provides better coverage of the population since the researcher has control over the subgroups to ensure that all of them are represented in the sampling (Murphy, 2018). Figure 2 below shows the sample selection process using a stratified random sampling technique.

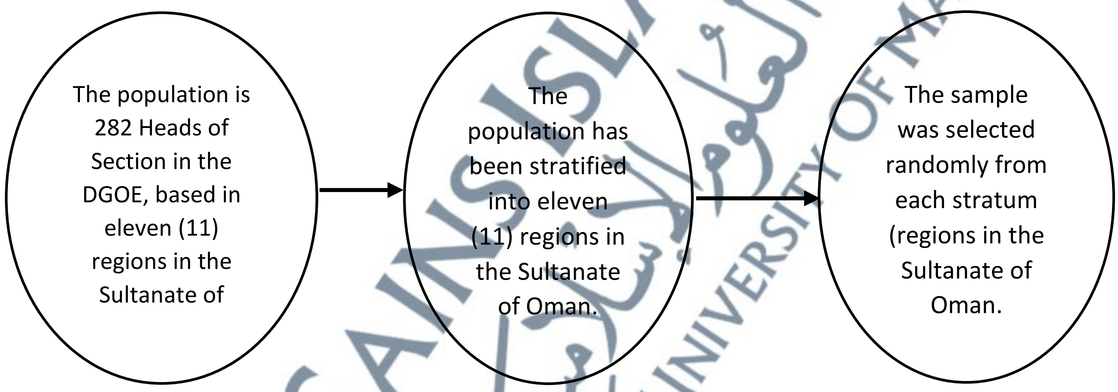

Figure 2: The process of sample selection using a stratified random technique

3.4 Data Collection Method and Procedure

This study utilized the questionnaire method to collect data to investigate the relationship between organizational learning culture, top management support, Islamic work ethics, motivation, job satisfaction and service quality. The questionnaire method is appropriate for collecting data for social science studies (Tuli, 2010; Zikmund et al., 2010) because it is the most practical and convenient data collection tool (Ihtiyar & Ahmed, 2012). The questionnaire method has also been recognized as a system for collecting information about people to describe their attitudes, knowledge, and behavior (Sekaran & Bougie, 2016; Sekaran, 2003). In addition, it can ensure a good response rate (Sekaran, 2003). Moreover, questionnaires provide a comfortable approach and allow the respondents to answer the questions without being identified (Sekaran, 2003).

There are two sets of questionnaires in this study. The first set of questionnaires was distributed to 282 heads of section, and the questions were related to organizational learning culture, top management support, Islamic work ethic, motivation, and job satisfaction. The second set of questionnaires, which consisted of questions related to service quality, was distributed to the employees who worked under the supervision of the head of the section in each department. Five employees were randomly selected from each department. They were regarded as an internal customer in this study. They were invited to provide feedback about the service quality provided by their head of section. Questionnaires have been recognized as appropriate in investigating service quality from the perspective of internal customers (employees) and have been applied in previous studies (e.g., Azzoli et al., 2010; Zumrah et al., 2013; Kolar et al., 2018). The names of the heads of section and employees in each section were obtained from the Statistics Department of the Ministry of Education. It contains names, job titles, section names and email addresses.

The questionnaire was emailed to the selected heads of section and their employees after obtaining initial authorization from the Ministry of Education to conduct the study. The questionnaire to the head of section and their employees was coded with the same code to guarantee ease of matching and to address the issue of confidentiality. This procedure was effectively used in previous studies (e.g., Zumrah, 2012; Zumrah et al., 2013) for similar purposes. The participants were given one month from the date of mailing to return the questionnaire by email. Several reminders were sent to the section heads and selected employees to improve the response rate. This study assumes that the participants who gave feedback to the questionnaire agreed to participate because the cover letter that was sent with the questionnaire mentions that participation in this study is voluntary.

A total of 234 heads of department responded to the first set of questionnaires. However, only 206 questionnaires were valid to be used. On the other hand, this study received 620 valid responses from employees for the second set of questionnaires.

3.5 Research Instruments

The questionnaire for this study was developed based on measurements from previous studies and was written in English. Therefore, it was translated into Arabic as the context of this study is Oman, an Arabic-speaking country. After translating the questionnaires into Arabic, they were sent to a professor in the Faculty of Education, Dhofar University, who checked the translated version and made amendments where necessary. Following this, the questionnaires (English and Arabic versions) were sent to two professors in the Faculty of Leadership and Management at Dhofar University to compare the two versions (English and Arabic) to improve the translation and adjust some phrases if needed.

After finalizing the translated version, the Arabic version of the questionnaire was pre-tested in small groups to ensure the questions were free of ambiguity, the questions were very clear, and the wording had no problems. This process helps to correct any shortages or any problem in the questions before administering the questionnaire or distributing it to the main sample of respondents, thus it reduces the likelihood of errors (Sekaran & Bougie, 2016; Sarstedt & Mooi, 2019).

A total of thirty respondents participated in the pre-testing process. They are employees at the Directorate General of Education (DGOE), Sultanate of Oman, and were excluded from this study's sample. All measurements show an acceptable Cronbach's Alpha value. The Cronbach's alpha value for organizational learning culture is 0.847, top management support is 0.748, Islamic work ethics is 0.841, Motivation is 0.740, job satisfaction is 0.751, and service quality is 0.814. Below are the details about the measurements used in this study.

3.5.1 Organizational Learning Culture

The organizational learning culture in this study was measured based on the short version of The Dimensions of the Learning Organization Questionnaire (DLOQ) developed by Marsick and Watkins (1997). The DLOQ has been demonstrated to be a valid instrument to measure the organizational learning culture (Marsick & Watkins, 2003; Yang, 2003). In this short version, seven items represent the seven dimensions of organizational learning culture (Marsick & Watkins, 2003). This short version has been verified in a previous study by Yang (2003) with an acceptable reliability value (Cronbach's reliability coefficient was 0.84). The respondents are required to answer each item based on 5 Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree). Below are the details of the item.

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 discussions or information collected.
4. My organization makes the 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.

3.5.2 Top management support

The measurement for top management support in this study was assessed by four items adapted from Prieto-Pastor and Martin-Perez (2015). These items measure the degree to which managers are supportive and accessible to employees and provide them with the resources and assistance necessary for work development. The measures were found to be reliable (Cronbach's reliability coefficients was 0.81) by Prieto-Pastor and Martin-Perez (2015). The respondents are required to answer each item based on a 5 Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree). Below are the details of the item.

1. Employees in this organization feel it is easy to approach their supervisors.
2. Employees in this organization receive encouragement and support from their supervisors.
3. Employees in this organization have access to the resources they need to do their work.
4. Employees in this organization have the guidance and help that they need to do their work.

3.5.3 Islamic work ethics

The Islamic work ethics in this study was measured based on seventeen items developed by Ali (1992). This measure is a well-established measure, which has been used by previous researchers such as Ali (1988), Haroon and colleagues (2012) and Ahmed (2011). The measures were found to be reliable (Cronbach's reliability coefficient was 0.89) and valid. The focus of the IWE scale is on the view that work enables the person to be independent and is a source of self-respect, satisfaction, and fulfilment. Success and progress on the job rely on hard work and commitment to one's job. Commitment to work also involves a desire to improve the community and societal welfare. The respondents are required to answer each item based on a 5 Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree). Below are the details of the item.

1. Laziness is a vice.
2. Dedication to work is a virtue.
3. Good work benefits both oneself and others.
4. Justice and generosity in the workplace are necessary conditions for society's welfare.
5. Producing more than enough to meet one's personal needs contributes to the prosperity of society as a whole.
6. One should carry work out to the best of one's ability.
7. Work is not an end in itself but a means to foster personal growth and social relations.
8. Life has no meaning without work.
9. More leisure time is good for society.
10. Human relations in organizations should be emphasized and encouraged.
11. Work enables man to control nature.
12. Creative work is a source of happiness and accomplishment.
13. Any man who works is more likely to get ahead in life.

14. Work gives one the chance to be independent.

15. A successful man is the one who meets deadlines at work.

16. One should constantly work hard to meet responsibilities.

17. The value of work is derived from the accompanying intention rather than its results.

3.5.4 Motivation

Motivation in this study was operationalized as a two-dimensional construct, intrinsic and extrinsic motivation. Thirteen items were used to measure each dimension. The items were adopted from Amabile (1993), which shows a good internal consistency. For intrinsic motivation, the Cronbach alpha value was 0.907, while for extrinsic motivation, the Cronbach alpha value was 0.891. The respondents are required to answer each item based on 5 Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree). Below are the details of the item.

Intrinsic motivation

1. I enjoy working on new work cases.
2. I feel inner satisfaction when I am part of an outreach team.
3. I enjoy contributing to work research.
4. I enjoy helping employees.
5. The major satisfaction in my life comes from my job.
6. Pursuing my career is important to my self-image.
7. I am motivated when I get recognized by peers.
8. I am noticed when I do a good job.

9. I feel valued when recognized by senior management.
10. I am excited when I get full credit for the work I do.
11. I feel a personal obligation to give out my best.
12. I do not need to be told what I already know I have to do.
13. I work hard because I want to be the best.

Extrinsic motivation

1. I feel motivated when my pay /salary increases.
2. I chose this job because of the respect given to the profession.
3. I am more likely to give out my best if other work benefits are paid on time (i.e allowances)
4. I believe in equal pay for equal work.
5. Work environment has a great impact on my productivity.
6. I do well when I know the standards of work expected of me.
7. I will do better if I have a clear understanding of my job responsibilities and what is expected of me.
8. I do far better if my immediate supervisor gives me feedback on my job.
9. Having a clear career path would motivate me to give my best.
10. I love working with minimal supervision.
11. The leadership style of my supervisor can affect my output.
12. I believe workers should be accorded much respect if they need to give out their best.
13. Different reward systems should be developed for various categories of workers if they need to give out their best.

3.5.5 Job satisfaction

Job satisfaction in this study was measured by three item scales adapted from the Michigan Organizational Assessment Questionnaire Satisfaction Subscale developed by Cammann et al. (1979). This measure has been tested in the context of public sector organizations (e.g., DeHart-Davis & Pandey, 2005). The Cronbach's alpha value for the measure is 0.87, indicating acceptable scale reliability. The respondents are required to answer each item based on a 5 Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree). Below are the details of the item.

1. In general, I like working here.
2. In general, I do not like my job.
3. I am satisfied with my job.

3.5.6 Service Quality

Service quality in this study was measured using the customer perceptions component of the SERVQUAL instrument developed by Parasuraman, Zeithaml and Berry (1988). This study uses the scale due to its relevance in measuring the service quality in the context of public sector organizations (Zeithaml et al., 1990). The respondents are required to answer each item based on a three-point scale (1= worse than expected, 2 = as expected, 3 = better than expected). Below are the details of the item.

1. The head of my section provides services as promised.
2. When I have a problem, the head of my section shows a sincere interest in solving it.

3. The head of my department is accurate.
4. My head provides services at the promised time.
5. My head does not keep customers informed when service will be provided.
6. My head does not provide prompt service.
7. My head is always willing to help customers.
8. My head is too busy to respond to customers' requests promptly.
9. I can trust my head.
10. My head makes me feel safe in my transactions.
11. The head of my section is polite.
12. I get adequate support from my head to do my jobs well.
13. My head does not give customers individual attention.
14. My head deals with customers in a caring way.
15. My head has the customers' best interests at heart.
16. My head always understands the specific needs of his/her customers.
17. My head has operating hours convenient to all customers.
18. The equipment that my head has access to is modern.
19. The physical facilities of my head are visually appealing.
20. My head is well-dressed and neat in appearance.
21. The appearance of my head's physical facilities is consistent with the kind of services provided.

3.6 Data Analysis

The data for this study was analyzed using SPSS software. Below are the steps usedby this study to analyze the data:

First, analyzing the respondents' demographic variables, including 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, particularly to express the relative frequency of survey responses.

Second, 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. EFA is also a technique within factor analysis whose overarching goal is to identify the underlying relationships between measured variables (Norris & Lecavalier, 2010). EFA 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 & West, 1997). There are procedures for conducting EFA. Firstly, to check the suitability of the data for factor analysis. According to Pallant (2011) and Leech et al. (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 orgreater. In addition, if the Bartlett's test of sphericity shows statistically significant (the significance value is less than 0.05), this means the variables are correlated highly enough to provide a reasonable basis for factor analysis. Moreover, according to Leech et al. (2005), the Kaiser-meyer-olkin value should be 0.50 and greater to consider the data as suitable for factor analysis. Secondly, to determine the number of components to extract. At this stage, the researcher looked at the total variance explained in the respective table to determine the number of 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 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 item loadings on each factor. The researcher was only interested in the item that has loading greater than 0.30. Moreover, the commonalities table was presented as well to give information about how much of the variance in each item was explained. A low value (less than 0.30) could indicate that the itemdoes not fit well with the other items in its component.

The third step was assessing the reliability of each variable based on 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. It ranges from 0 to 1. The higher the score, the more reliable the generated scale is. Nunnally (1978) has indicated that 0.70 and above is an acceptable reliability value.

The fourth step was conducting a descriptive analysis. The purpose of descriptive statistics was to check the mean and standard deviation of each variable. In addition, at this stage, a correlation between the variables was examined. If the correlations among all the variables are less than 0.90, this means there is a low probability of multicollinearity (Tabachnick & 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 the significant level of each relationship between variables to be checked. The procedure proposed by Baron and Kenny (1986)was followed to test the effect of mediation. Baron and Kenny (1986) proposed a four-step approach to test the mediation as detailed below:

Step 1: Conduct a simple regression analysis between the 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 the 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.

Step 4: if the relationship between X and Y is no longer significant when Mis 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.

3.7 Chapter Summary

This chapter has described the methodological aspects of this study, including the research design, the population and sample, the data collection method and procedure, the measure used in this study, and finally, the procedure and method of analyzing the data. Chapter 4 will explain the result of the data analysis.