# Chapter 3

# Research Methodology

This research is a mixed method research. The details about the research method as follows:

- 1. Research design
- 2. Population and sample size
- 3. Research instruments
- 4. Data collection
- 5. Data analysis

# Research Design

This study adopted a qualitative research method. The main goal to be achieved in this study is to design a high-performance work system suitable for digital transformation. This study used two sources of data, primary data and secondary data. Primary data were obtained through semi-structured interviews and questionnaires to select the study sample. The determination of the study samples was done based on the characteristics of Company D and through purposive sampling. Secondary data came from previous research, reports and documentation on the design and digital transformation of high-performance work systems.

To conduct a comprehensive analysis of Company D, we conducted documentary research and in-depth interviews with Company D executives to examine the external and internal environment. After identifying the key factors affecting the company, an External Factors Evaluation (EFE) and Internal Factors Evaluation (IFE) were conducted to assess Company D's strengths, weaknesses, opportunities and threats. Selected factors are then used to design high-performance work systems that are aligned with digital transformation.

# Population and Sample Size

# 1. Select Company D to conduct a questionnaire survey on its employees.

In the form of questionnaires, 180 internal employees were selected to investigate the current situation of D company, including the current situation of five aspects: job involvement, employee selection, training & development, performance management, and compensation adapted from Takeuchi, et al. (2007, pp. 1069-1083). Basic characteristics of target respondents, including:

Gender composition of target respondents;

The age composition of the target respondents;

Educational level of target respondents;

Target respondent position composition;

Income composition of target respondents.

#### 2. Interviews with middle and senior managers within Company D

Collect interview data from 15 middle and high-level managers in the company, and find that there are problems at different levels in all aspects of human resource management, and then analyze the internal and external environment. An external factor evaluation (EFE) matrix and an internal factor evaluation (IFE) matrix are then created, which provide an overall factor evaluation score.

#### Research Instruments

#### 1. Questionnaire and interview forms

According to the current situation of human resource management after the digital transformation of Company D, a questionnaire form and an interview form were constructed to conduct the study.

# 2. SWOT analysis

Based on the results of the interviews, we analyze them to identify the existing problems of human resource management in Company D and propose solutions.

#### 3. PEST analysis

Analyze the political, social, economic and technological aspects of the HR industry to understand the current situation of Company D in the broader environment.

#### 4. Formation of key factors (EFE and IFE matrix)

By selecting one middle and senior leaders of Company D, one academic professor, and one industry expert, the strengths, weaknesses, opportunities, and challenges

of Company D are scored, and finally the average is calculated to derive the problemsolving ability of Company D.

#### Data Collection

#### 1. Interview research

The middle and senior managers of Company D were selected as interviewees, and the interview outline covered the entire business process of Company D. Understand the current situation and problems of various sectors of human resource management through exchanges with interviewees, gain a deeper understanding of the evaluation and improvement suggestions on management content, management methods and management processes at the current stage, and understand the company's human resource management content, processes and human resources Manage an assessment of the current state of digitization. Provide sufficient data support for the optimization measures of human resource management digitization in this article.

#### 2. Questionnaire survey

Select the relevant interviewees as the theme to understand the current situation of company D in five aspects job involvement, employee selection, training & development, performance management, and compensation that fully understand employees' views on and deficiencies in company D's digital transformation, so that the company's high-performance work system is designed to enhance employee loyalty and productivity.

#### 3. Document study

This article collects, retrieves, identifies, classifies and integrates a large number of literatures, books, magazines and academic papers. Comprehensively understand the development status of digital transformation in the human resources industry and fully grasp the development trends of the human resources industry. To provide a strong theoretical support for this paper, we sort out and research related theoretical knowledge such as human resources, human resource management and digital concepts, strategic human resource theory, value chain theory and process reengineering theory.

# Data Analysis

#### 1. Analysis of questionnaire survey

Determine the overall questionnaire. The total number of employees of Company D in this investigation is 180. Select the sampling box. The sampling method

chosen for this survey is simple random sampling, using online random selection of people, that is, the questionnaire form is randomly sent to employees' computers.

Collect sample data, calculate sample indicators, and conduct internal and external environment analysis using EFA analysis and IFA analysis.

# 2. During the interview, use the SWOT analysis method to communicate the status quo of D company

SWOT analysis is a research method. It is the method of investigation and analysis to find out the advantages and disadvantages within the enterprise, the opportunities and threats outside the enterprise, and analyze these elements investigated with each other, so as to draw some conclusions with decision-making. Through this method, we can have a more comprehensive and systematic understanding of the situation faced by the enterprise in today's environment, so as to formulate the development strategy of the enterprise.

During the interview, let the middle and senior managers analyze the advantages and disadvantages of Company D's internal and external environment through SWOT analysis, so that we can better understand the current status of Company D's digital transformation and possible challenges, so that we can formulate Design a high-performance work system that is more suitable for D company's digital transformation.

### 3. Content analysis of literature materials

Content analysis is actually an objective and systematic analysis of the contents of journal articles, movies and television that can be mass communicated. The information in the communication media is analyzed and converted into data that can be used in research. Content analysis has now become one of the important ways of literature research.

When analyzing the literature, the content of the study needs to be classified according to certain requirements, which reduces the researcher's subjective opinion about the content and makes the final data obtained more objective.

This research can give us a clearer understanding of the digital transformation process of the human resources industry, and through industry analysis, we can design a high-performance work system that is more suitable for D company.