

## CHAPTER 3

### RESEARCH METHODOLOGY

In this chapter, there are 4 sections; namely, 1) population and samples 2) research tools 3) data collection and 4) data analysis.

#### Population/ Sample groups

In this research, Kunming Medical University Haiyuan College was used as a case study. The population in this research project was divided into 2 groups; namely, 1) 20,000 students participated in online English grammar teaching in 2020, and 2) 80 teachers were taught online English grammar. To find out strengths and weaknesses of online English grammar teaching, there were 5 English teachers, 2 specialists, and 2 administrators to participate in focus group discussion meeting.

#### Sample groups

In this research project the sample groups were divided into 2 groups; namely, 1) 392 students, who participated in online English grammar; 2) 67 teachers teaching English grammar online. The sample groups were derived from Taro Yamane formula (Yamane, 1973). The respondents were collected through the stratified random sampling technique. To find out strengths and weaknesses of online English grammar teaching, there were 5 English teachers, 2 specialists, and 2 administrators to participate in focus group discussion meeting.

#### Research Instruments

##### 1. Questionnaire

In this research project, questionnaires were employed for the data

collection. The questionnaires were divided into 2 sets; namely, 1) students set, and 2) teachers set. The questionnaire was divided into 2 parts, 1) general information, 2) problems and needs of online English grammar teaching.

For the purpose of getting a better understanding of the present status of college students' online English grammar learning ability, the researcher chose the suitable questions from He Mingxia's (2012) doctoral dissertation questionnaire when she graduated from Shanghai International Studies University and compiled the college students' online English grammar learning ability questionnaire for this study.

For this part, the questionnaire was evaluated for the Index of item-objective Congruence scores (IOC scores) by the three specialists. Each question in the questionnaire evaluated with the range of IOC 0.67 to 1.00 and was employed for this research. The reliability of the questionnaires was measured by using the technique of Cronbach's alpha coefficient is .899.

## **2. A set of questions for this discussion meeting.**

1) In this research, 5 English teachers, 2 specialists, and 2 administrators were invited to share the idea on strengths and weaknesses with the set of questions of online English grammar teaching.

2) For developing guidelines for online English grammar teaching, the 3 specialists were invited to check correctness and suitability of the guidelines. The results were presented in terms of IOC (Index of Item-objectives congruence).

## **Data collection**

For this research project, the researcher herself collected the data and information online (<https://www.wjx.cn>) from the sample groups. The sample groups were informed the purposes of the data collection, made an appointment. The researcher submitted a letter of permission to the school director in advance to ask a permission to collect the data and information from the samples group at Kunming Medical University Haiyuan College.

1) To collect the data and information for the investigating of the problems

and needs of online English grammar teaching at Kunming Medical University Haiyuan College online survey, the researcher herself e-mailed questionnaire to the 392 students and 67 teachers, then all of the questions were e-mailed back to the researcher.

2) To analyze strengths and weaknesses of online English grammar teaching, the nine participants from English teachers, specialists and administrators were invited to share the opinions on online English grammar teaching.

3) To evaluate the effectiveness of the guidelines of online English grammar teaching in terms of correctness and suitability of the contents, the three specialists were invited to participate in a focus group discussion to evaluate the guidelines' IOC (Index of Item-Objectives Congruence). The IOC (Index of Item-Objectives Congruence) value of the strategic guidelines had been 0.67 to 1.00. The nine units were suitable for Kunming Medical University Haiyuan College English teachers and students to utilize as guidelines while teaching English grammar.

The validity of the evaluation of the guidelines is applied with IOC.

(1) For investigating problems and needs of online English grammar teaching, find out problems and needs by using questionnaire.

(2) For developing strategic guidelines through analysis of strengths and weaknesses with focus group discussion meeting, 5 English teachers, 2 specialists, and 2 administrators were participated by answering open questions.

(3) For developing strategic guidelines in the focus group discussion meeting, the three specialists share the ideas and comments which were analyzed and then used to correct and improve the contents of the guidelines.

## Data Analysis

(1) After evaluation and interpretation, the information and data were presented using frequency count, percentage, mean ( $\bar{X}$ ), and standard deviation (S.D.). The respondents' problems and needs of online English grammar teaching were evaluated using the five-point Likert Rating Scale.

The criteria and define at the range of the mean scores as the following:

- 4.51-5.00 = the highest level of problems and needs
- 3.51-4.50 = the high level of problems and needs
- 2.51-3.50 = the moderate level of problems and needs
- 1.51-2.50 = the low level of problems and needs
- 1.00-1.50 = the lowest level of problems and needs

### Statistics Used for the Research

- 3.5.1 Frequency
- 3.5.2 Percentage
- 3.5.3 Arithmetic

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