CHAPTER 3

3.1 Research Design

The purpose of this study is to find out from the perspective of the customer if cassava plastic can replace the function of conventional plastic packaging without changing the quality of *Sweet Lab*'s cookies. To get the data to analyze, the researcher used a mixed method. The mixed method would combine elements from the qualitative method, used to receive deeper and more detailed data from the consumer's perception of the cassava bag as food packaging, and elements from the quantitative method used to receive numerical and to analyze it.

Triangulation uses multiple data and approaches to increase credibility, offer a balanced explanation, and avoid biases from research findings. There are four types of triangulations: data triangulation, investigator triangulation, methodological triangulation, and theory triangulation (Noble & Heale, 2019). This research used methodological triangulation to compare data received through observation and questionnaires with the results from interviews.

3.2 Method of Data Collection

3.2.1   Participants

This study took the data from 40 respondents in Semarang. The respondents are those who fit the target market of *Sweet Lab'*s cookies; people that enjoy sweets, desserts, and pastries. They filled out a questionnaire, and then the researcher chose 10 people to do a follow-up interview.

3.2.2 Instrument

In this research, the instruments used are: first, an initial observation conducted by the researcher herself, where she observed two packages of cookies, one packed in cassava plastic and the other in conventional plastic. After that, she left them at room temperature for one week to observe the appearance, smell, taste, and texture, and the entire process was documented with photos. Second, the researcher conducted a closed-ended questionnaire using the Likert scale that consisted of four alternative answers: strongly disagree (1), disagree (2), agree (3), and strongly agree (4). After that, the researcher continued with a follow-up interview to complete and cross-check the data.

3.2.3 Procedure

The data collection procedures are:

1. The researcher conducted an initial observation in which she prepared two cookies, one packed in cassava plastic, and the other in conventional plastic.

2. After a week, both cookies were observed by their appearance, smell, taste, and texture, in which the entire process served as a foundation for the questionnaire and interview questions.

3. The researcher distributed two packages of cookies to the respondents, one packed in cassava plastic and the other packed in conventional plastic. During this step, the respondents were given some time to analyze both cookies from the appearance of the packaging to the smell, taste, and texture of the cookies.

4. The researcher distributed a closed-ended questionnaire developed by Howard Gardner's theory of multiple intelligence (2013). The questions are based on the observation results for the respondents to fill out. The questions can be seen in the appendices.

5. The researcher analyzed the questionnaire results using SPSS 25, and presented the results in the form of Minimum, Maximum, Standard Deviation, and Mean score.

6. The researcher conducted a follow-up interview with ten respondents to ask in-depth questions. Some of the questions were among others.

    a. [in the questionnaire, you prefer the cassava plastic packaging/regular plastic packaging] would you mind elaborating your reasons?

        i. [If the answer is: it looks better] what makes it look better?

    b. What is your first impression of both cookies?

        i. (If the respondent likes the cassava plastic better) If you were to pay for these cookies at a higher price, would you buy them?

    c. Could you elaborate your reason as to why paying extra money for the same cookies but with biodegradable packaging is better?

    d. [The writer developed further questions based on the answers of the respondents.]

7. The results of the interviews were transcribed and grouped based on the topics discussed.

8. The results from the observation, questionnaires and interviews were combined using methodological triangulation techniques.

3.3   Method of Data Analysis

The researcher took notes from the initial observation results to provide complete data about cassava packaging which was assessed based on the 4 functions of a food packaging by Robertson (2005). Next, the data collected during the observation process became the foundation of the questionnaire and interview questions. After the questionnaire is distributed, the data obtained were analyzed using SPSS 25, the results were presented in the form of Mean, SD (standard deviation) and Minimum and Maximum scores. After that, the final step was conducting an interview. The results obtained were grouped based on the topics discussed then calculated and presented on a percentage basis.