CHAPTER III : RESEARCH METHOD

A. Object and Subject of The Research

In this study the subject are head or leaders of Muhammadiyah HLE. This research interviewed 6 key Informant consisting of leader (Rector, Vice-Rector) and Secretary executive manager of infaq shadaqah in the HLE. And the object of this research are UAD and UMY.

B. Type of Data

In this research, the data used is primary data and secondary data. For the primary data used is data obtained from the results interviews (in-depth interviews) with experts, practitioners and regulators, who have an understanding of the issues to be discussed. After that followed by filling in questionnaires by key informants at the next meeting (which is useful for determining priorities in the ANP method). Furthermore, for Secondary data are obtained from literature such as books, journals, official websites (internet), archives, etc. related to problems which are discussed in this research. Secondary data also is useful as data support in this research.

C. Technique of Sampling

The selection of respondents in this research was conducted by considering the understanding of the respondents to the problems in the development of Muhammadiyah HLE in Yogyakarta. The sample collecting technique is use snowball sampling. Snowball sampling is a type of nonprobability sampling which the first respondent recommends others to be

included in the study. Because in the ANP method and logic model the number respondents is not used as a standard, the requirements that must be: experts, practitioners, researchers, or regulators who are selected as respondents must be competent enough represent the entire population.

There are 6 key informants consisting of leaders (Rector, Vice Rector or representative), among others:

<blockquote>
a. Key Informant 1, Rector of Universitas Muhammadiyah Yogyakarta

b. Key Informant 2, Vice Rector for Financial Resources and Assets of Universitas Muhammadiyah Yogyakarta

c. Key Informant 3, Vice Rector for Student Affairs, Alumni, and AIK Universitas Muhammadiyah Yogyakarta

d. Key Informant 4, executive secretary of badan pengelola infaq shadaqah Universitas Muhammadiyah Yogyakarta

e. Key Informant 5, Rector of Universitas Ahmad Dahlan

f. Key Informant 6, Vice Rector of Resources UAD
</blockquote>

D. Data Analysis Method

The method in this research is Qualitative analysis which use Analytic network Process (ANP) and Logic Model.

1. Analytic Network Process

This method is usually widely used in various studies related to decision making in planning and allocation resources, forecasting,

evaluation, mapping, strategy determination, etc. For research data, processed using software "Super Decision". The stages of research in the ANP method are as following:

Figure 3.1
Research Stages Using the ANP Method
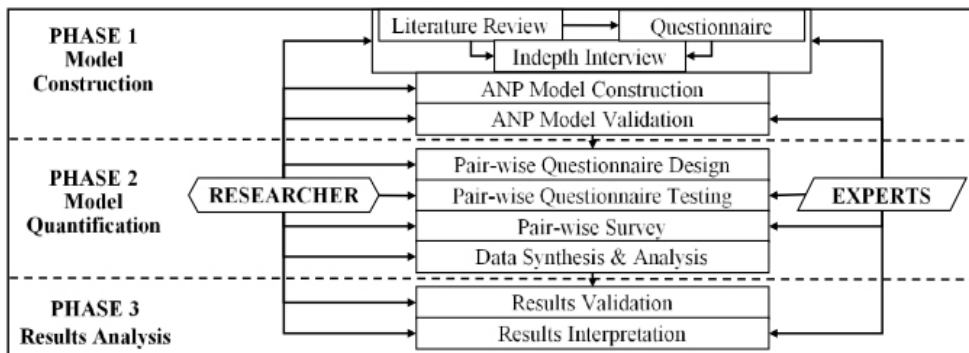
Source : (Ascarya, 2010)

a. Phase 1: Model Construction

The construction of the ANP model is compiled based on literature review, both theoretically and empirically and provides questions to experts and practitioners of Muhammadiyah HLE. In addition, to get more in-depth information, it conducted in depth interviews.

b. Phase 2: Model Qualification

Model quantification is done by using the questions in the ANP questionnaire in the form of paired comparisons. Furthermore, the data or assessment results obtained from the experts are then collected and inputted into the super decision software to be further processed to produce output in the form of priority and matrix (Ascarya, 2010)

c. Phase 3: Result Analysis

a) Geometric Mean

To find out the results of the individual assessment of the respondents and determine the results of the opinions in one group, the assessment is done by calculating the geometric mean (Saaty, 2006). Questions in the form of comparisons (Pairwise comparison) of respondents will be combined so as to form a consensus. Geometric mean is a type of average calculation that shows a certain tendency or value which has the following formula (Ascarya, 2011):

$$(\prod_i^n = 1\ a_1)^{1/n} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(3.1)$$

b) RaterAgreement

Rater agreement is a measure that shows the level of agreement of the respondents (R1-Rn) on a problem in a cluster. The tool that used to measure rater agreement is Kendall's Coefficient of Concordance (W; $0 < W \leq 1$). W = 1 shows perfect compatibility (Ascarya, 2010). To calculate Kendall's (W), first is rank every answer then sum it all.

$$R_i = \sum_j^m = 1\ r_{i,j}\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(3.2)$$

Then for the average value of the total ranking obtained from:

$$R = \frac{1}{2}m\ (n + 1)\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(3.3)$$

Furthermore, to get the sum of squares deviation (S), it can be calculated by:

$$S = \sum_{i}^{n} = (R_1 - \bar{R}) \quad \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(3.4)$$

Then the Kendall's (W) value is:

$$W = \frac{12S}{m^2(n^2-n)} \quad \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(3.5)$$

If the value of the W test is 1 (W = 1), it means that it can be concluded that the opinions or judgments of the experts (respondents) have perfect suitability. While when the value is 0 or closer to 0, it indicates the existence of varied answers, it means the answers among respondents have mismatches each other (Ascarya, 2011).

2. Logic Model

Logic model development in this study consists of several stages, including the analysis of the contextual situation of the program, identification of the main elements, the preparation of the logic model map of a program, and finally verification of the model.

The contextual analysis of the program's contextual phase illustrates at a glance the strategic issues of waqf in the field of education that underlies the implementation of Muhammadiyah HLE development programs. Further identification of the main elements to build a logic model of a program is the element of resources to run the program up to the desired outcome.

Figure 3.2
Logic Model Concept
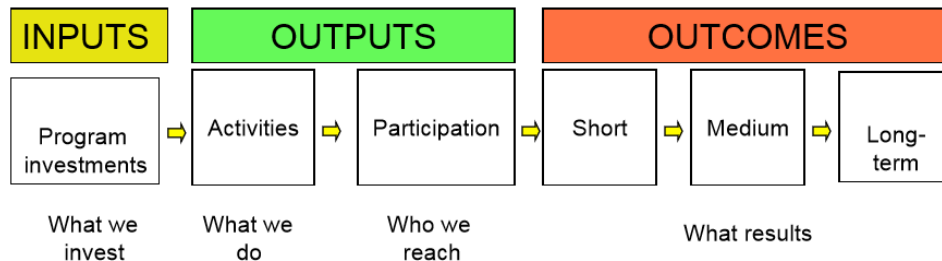
Source : (UW Program Development and Evaluation, 2010)

The Figure 3.2 above shows the concept of making a logic model. first there is input, what resources are prepared to develop HLE. secondly there is output which is what activities are carried out by existing resources. third, there is an outcome, which is what is produced. the last is what impacts and benefits can be given in the short and long term.

3. The validity of the data

The validity of the data used has been tested through triangulation techniques. This study uses source triangulation which means comparing opinions submitted by the subject with opinions submitted by informants with the intention that the data obtained can be trusted because the data obtained more than one source. The researcher confirms the results of the data processed to the key informant in order to ensure that the results are correct. The triangulation technique used is to go directly to the place of the informant key and via a call or message. There are several key informants who can only be asked via telephone, there are also those who have to be met directly.