CHAPTER THREE

METHODOLOGY

Introduction

This chapter describes the methods employed to analyse the research trends and information sources used by humanities scholars. The methodology adopted for this study would be a mixture of descriptive statistics and bibliometric analysis. The term 'bibliometrics' indicate the collection, handling and analysis of quantitative bibliographic data which is derived from scientific text (Moed, 1989). Bibliometric data that is extracted, including all elements within a bibliographic record, such as the title, names of publishing authors, affiliation of the authors (geographic and institutional affiliation), specific disciplines coverage and references listed at the end of each dissertation are analysed (which includes types of document referred to, titles, publication year, volume number and length of the articles, etc.)

Descriptive statistics are used to describe quantities and trends of researches in the humanities as a whole and by each disciplines. Bibliometric methodology will be used to show the spread and character of the literature referenced by the humanities researchers. The process of collecting data involves identifying all titles of master's and doctoral dissertations submitted to the University of Malaya. This information is obtained from the December issues of *Kekal Abadi* a quarterly periodical published by the University of Malaya Library between the year 1984 and 1995. Subsequently, photocopies of all title
pages and references listed at the end of each dissertations were made for citations analysis.

Sample

The sample frame for this study are -- master’s and doctoral dissertations submitted by humanities researchers to the University of Malaya between 1984 and 1994.

According to the Encyclopaedia Britanica, humanities is a group of educational disciplines distinguished in content and method from the physical and biological sciences and, less decisive, from the social sciences. They are studies which centre their attention on the life of man. The core of the humanities in the modern university includes the following disciplines: language and literature (ancient and modern), the fine arts other than literature, philosophy, history, and religion.

Each postgraduate student (master’s and doctoral candidates) of the University of Malaya is required to submit a copy of the dissertation to the University of Malaya Library. These dissertations are kept at the Za’ba Memorial Library. All dissertations are catalogued by professional librarians in accordance with the Library of Congress Classification Scheme. On this basis, the humanities discipline included in this study will follow the broad classification categorisation given by the Library of Congress. In accordance with the scheme the class numbers which encompasses the humanities comprises the following;

B - Religion and Philosophical studies;
D - History;
P - Language and Literature;
M and N - Music and the Fine Arts;
C - Auxiliary History.

This study exclude dissertations in the C, M and N categories since the number is too small to be used as comparison. This study will concentrate on the following humanities disciplines; (a) religious and philosophy studies (represented by class number B, except BF which refers to Psychology), (b) history (represented by class number D), and (c) language and literature (represented by class number P). The sample will use all dissertations in the above three disciplines that is available at the Za’ba Memorial Library.

Table 3.1 shows the total number of dissertations covered in this study. There is a total of 263 (excluding dissertations classed in C, M and N) master’s and doctoral dissertations in the humanities which have been catalogued by the Za’ba Memorial Library between 1984 and 1994. This include 218 master’s and 45 doctoral dissertations. However, 3 master’s dissertations and 1 doctoral dissertation written in Arabic and Tamil language are excluded from the sample. This decreases the total number of dissertation to 259. Class P which represents language and literature category is the most productive discipline as it accounts for 151 master’s and 21 doctoral dissertations. Class B (religious and philosophy) consists of 37 master’s and 7 doctoral dissertations, and class D (history) comprises of 27 master’s and 16 doctoral dissertations.
Table 3.1: Total Number of Master’s and Doctoral Dissertations in Selected Humanities Disciplines Submitted to the University of Malaya Between 1984 and 1994

<table>
<thead>
<tr>
<th>Year</th>
<th>B Master</th>
<th>B Ph.D</th>
<th>D Master</th>
<th>D Ph.D</th>
<th>P Master</th>
<th>P Ph.D</th>
<th>Total 1984-1994</th>
</tr>
</thead>
<tbody>
<tr>
<td>1984</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>7</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>1985</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>1986</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>10</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>1987</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>6</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>1988</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>8</td>
<td>2</td>
<td>19</td>
</tr>
<tr>
<td>1989</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>13</td>
<td>2</td>
<td>21</td>
</tr>
<tr>
<td>1990</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>15</td>
<td>3</td>
<td>23</td>
</tr>
<tr>
<td>1991</td>
<td>7</td>
<td>0</td>
<td>4</td>
<td>3</td>
<td>22</td>
<td>3</td>
<td>39</td>
</tr>
<tr>
<td>1992</td>
<td>8</td>
<td>1</td>
<td>5</td>
<td>0</td>
<td>22</td>
<td>1</td>
<td>37</td>
</tr>
<tr>
<td>1993</td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>25</td>
<td>1</td>
<td>43</td>
</tr>
<tr>
<td>1994</td>
<td>5</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>19</td>
<td>4</td>
<td>30</td>
</tr>
<tr>
<td>Total</td>
<td>37</td>
<td>7</td>
<td>27</td>
<td>16</td>
<td>151</td>
<td>21</td>
<td>259</td>
</tr>
</tbody>
</table>
Design of the Databases

To facilitate analysis, two databases are created. One database accommodates the detailed information about the dissertation titles itself, and the other contains details of all references used within each dissertation. The software used for the database is micro CDS/ISIS version 3.07 developed by UNESCO which is supplied gratis to academic or governmental. From the database, elements or relevant portions of each of the records are extracted and saved in a text file. The text file is then fed into a spreadsheet to obtain XY graphs and a bibliometric toolbox to obtain cumulative frequency distribution counts showing the spread of the literature used (Bibliograph). Bradford (1948, cited in Basu, 1992) found that a small core of journals publish the bulk of articles related to any particular discipline. By ranking the journals in decreasing order of "productivity", it is able to divide articles covering a discipline into three zones. The zones contain journals in the ratio of 1: n: n^2: ... Bibliograph is a plot based on the cumulative number of articles (vertical coordinate) versus the logarithm of the cumulative number of journals in which the articles appear (horizontal coordinate). The bibliograph helps to identify the core journals and authors of literature which are being used in the subject area under study.

DISSEMINATION DB

The detail information about the dissertations, extracted from the title pages of dissertations, are recorded into DISSEMINATION DB. The structure of DISSEMINATION DB includes:

1. Author,

2. Title,
3. Year,

4. Type of thesis (1 = Ph.D; 2 = Master),

5. Faculty and/or department in which the dissertation was submitted to,

6. Class number (B, D, or P),

7. Subject

8. Language (English or Malay),

All the title of the dissertations will be checked against University of Malaya library's catalogs to ensure the subject headings assigned to them.

**REFERENCE DB**

REFERENCE DB contains detail of the references used within the dissertations. A smaller sample consists of 40% of the total dissertations from each class number are studied in detail with regard to references contained within it. This smaller sample consists of a total of 104 dissertations, 18 from class B, 17 from class D, and 69 from class P. From this sample, 40% of the total references in each sample dissertations were chosen randomly. Details of information of the references were input into REFERENCE DB. The details recorded are:

- Author of the book or article;
- Title of the book or article;
- Source of article (book title for book chapters or journal title, volume and number, year of publication for journal articles);
• Imprint (place of publication, publisher and year of publication);

• Country of publication

1 = United States and Canada

2 = United Kingdom

3 = Europe

4 = Asia (4a : Malaysia)

5 = Middle East

6 = Others

• Language of the book or article (Arabic, Chinese, English, Tamil, Indonesian, Malay, and Others);

• Format of the reference

1 = Books including monographs, encyclopaedias, dictionaries, and all other works not specially allocated to one of the other three forms;

2 = Journal articles were defined as articles published in journals and magazines;

3 = Conference papers included conference papers and occasional papers;

4 = Theses included Master's, Doctoral dissertation and academic exercise;

5 = Book chapters referred to monographic articles;

6 = Government documents referred to enactments, government files or meeting minutes and publications published by government ministries or government printers;

7 = Newspaper clippings referred to articles in newspapers cited by the authors;
8 = Others containing all the materials other than those mentioned above

(included unpublished materials).

• Subject of the book or article.

The field ‘Source of article’ was designed to enter information about monographic and journal articles, whereas the ‘Imprint’ field was allocated for publication details of books and other materials. The language of a cited material was defined by the language of its title, and the classification of a citation by format was dependent upon the method in which the citation was recorded.

It is assumed that a direct relationship exists between quantity (number of times cited) and the importance of the materials (Popovich, 1973). Consequently, if a material was cited more than once, it was counted separately. The same procedure was applied to journal and newspaper articles. Each journal or newspaper article cited was counted as one title, and each article in a journal was treated as a separate title. Citation with incomplete imprint details was excluded from the sample.

Output From The Databases

The database created would provide the following information:


2. The list of dissertation titles submitted within the discipline of Language, Literature, History and Religious studies (exemplified by class numbers P/D/B).
3. The list of dissertation titles by language (Malay/English/Others).

4. The list of dissertation titles by detail subject breakdown within each discipline.

5. The list of reference titles by type of documents (monographs, journals, theses, government publications, conference papers, newspaper clippings, archival materials, manuscripts, etc.) used by each dissertation under study.

6. A list of reference titles by language used in each dissertation.

7. A list of reference titles by geographical area.

8. A list of all authors’ names referenced (authors of references used).

9. A list of all journals titles used.

10. A list of all documents used by year of publication.

11. A list of reference in the reverse chronological order to determine the half life of the literature used.

The bibliometric toolbox will provide:

1. Ranking of references used according to the frequency of citation received.

2. Ranking of titles and authors frequently cited.

3. Ranking of documents by language used.

4. Ranking of documents by geographical distribution.
References:


