Unit V

Developing

Research Objectives

Review of Previous Weeks

- The concept of research

- Importance of research

- Sources of documented research

- Finding previous [documented] research

- Finding current research

- Importance of reading previous research → review of literature

- Finding research problem(s)

Where you should be

- ✓ **Identified an area of research**

- ✓ **Compiled a preliminary directory of resources related to your research area**

- ✓ **Identified people, laboratories and/or departments involved with research in your area**

- ✓ **Narrowed down to a specific area of research**

- ✓ **Analyzed the literature on the specific area of research**

- **?** **Uncertainly identified a research problem to be addressed**

Outline for Today
Developing research objectives

1) What are objectives?

2) Why objectives?

3) Writing objectives

1) What are Objectives?

- **Research objectives are statements of what a study is expected to achieve at the end.**

Difference between Aims and Objectives

- **General Objective**
  - ➢ **General objectives describe what is expected to be achieved by the study in general terms (Aims).**

    - ✓ **Example: To improve the system speed of Farsi OCR systems.**

- **Specific Objectives**
  - ➢ **General objective usually divided into smaller, logically connected parts - the specific objectives.**

    - ✓ **Example: To propose a new technique for dataset size reduction, in a handwritten FOCR system, to speed up system training and testing.**

    - ✓ **Example: To propose a new technique for dimensionality reduction, in a handwritten FOCR system, to speed up system training and testing.**

2) Why Objectives?

- **Focus** the study (narrowing it down to essentials)
- **Avoid** doing work not necessary for understanding and solving the problem identified
- **Organize** the study in clearly defined parts or phases

- **When the study is evaluated, the results will be compared to the objectives. Hence, if the objectives have not been spelled out clearly, the research project cannot be evaluated.**

3) Writing Research Objectives

Objectives of study should:

– **Cover the different aspects of the problem in a logical sequence.**

– **Clearly phrased in operational terms, i.e. specifying exactly what you are going to do, where, and for what purpose.**

➢ **Use action verbs that are specific enough to be evaluated**
  - **e.g. to determine, to compare, to verify, to calculate, to describe, and to establish**

➢ **Avoid the use of unclear non-action verbs**
  - **e.g. to investigate, to understand, or to study**

Assignment 6:
Review of Literature in your Research Area

Objective:

To write a brief (approx. 4-5 pages) review of literature on the topic identified earlier

Approach:

1. Use the resources identified earlier (in Assignment 5), add new resources if necessary

2. Synthesize the information into a brief essay, containing
- **Introduction**
- **Body (arranged by themes, present evidence but use quotes sparingly)**
- **Conclusion / Summary (what is known about that area? what are the gaps, inconsistencies, suggestions, etc. in that area?**

Submit the above as an e-mail attachment to
<mashaygan2005@yahoo.com>

Assignment 7 :
Statement of Problem for Proposed Research

Objective:
   To write a brief (maximum 1 page) Statement of Problems on the proposed topic of research

Approach:
   1. Use the Review of Literature (in Assignment 6) to identify a gap, difference, etc.

   2. Describe this problem in 2 - 3 paragraphs
   - **Provide evidence – research, practical, literature**
   - **Present shortcomings of current situation**
   - **Describe audience – who will benefit, how they will benefit**

   3. Justify the problem with references to literature

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