How to arrive at good research Questions?

A
Paper presented in the seminar on
Modern trends in research methodology
on 11 July 2008

held at
Jamia Nadviyya Arabic College
Edavanna

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Identifying an area of research a topic, deciding on a problem, and formulating it in to a researchable question are the most important first steps of the research process. This is a very difficult stage in the whole research process, partly because most of the beginning researchers have to undergo this phase at a time when they are not highly aware of the process of research. This step nevertheless cannot be lightly taken, because success of further steps depends on selecting an appropriate problem. Good answers will be called for only by good questions.

Research: A Reflective process

Research is re-searching the knowledge. It is seeking and making of new knowledge, going beyond what is already known, up-dating and renewing it. The whole process is directed to the end - extension of the boundaries of knowledge. In order to extent the boundaries of knowledge one has to possess some amount of knowledge, and possess verified and vivified experience in the area of exploration. Research is a dialogical encounter between what one already possesses as experience or knowledge and the thought process, which illuminates the gap in the existing level of experience. Hence, research is a reflection on already existing knowledge and experience, in order to renew it, extend it, and improve it.

Identifying a research problem

There is no standard source or an established method for identification of a problem for research. Few books on research methodology elaborates the various process involved in problem selection and clarification. A good problem, a researchable and answerable one, is again a result of a reflective act. It results from a dialogical encounter between:

- Rationality and creativity
- Existing theoretical knowledge and difficulties that arise when one put to the theory practice
- Experts in the field and the scholar who does the research
- Practitioners of the knowledge in an area and those who try to build up the area through research, and
- Logical left hemisphere and creative right hemisphere of the brain.

Identifying the problem is a rational activity. It involves judging one's own strengths, collecting, organizing and relating the existing knowledge through reviews and having intellectual discourses with experts and practitioners in the field. It is a creative activity, too. It involves being able to extent the knowledge to practical life, seeing the implications of a field of knowledge to community life, being able to foresee the ways in which changes is other fields of knowledge affects one's own field, being imaginative to see the future life of the society, and its implication for the field of human enterprise where one wish to explore further. All these requires abilities such as analysis, logical thinking, sequential, systematic and orderly arrangement of ideas, formal methodical way of attacking problems, verbal and linear modes of thought, and such other tasks performed by left brain. In addition a researcher needs to be intuitive, spontaneous, random, diffuse, informal holistic, imaginative with an eye to see the unseen; in other words, he has to rely on the creative abilities of right brains as well. This dialogical encounter between what is known and what is new and unknown in arriving at and clarifying problem progress through three broad phases. They are 1) Selection of a research topic, 2) Identifying the problem, and 3) Stating and clarifying the problem by formulating the research questions.

Research topic→ problem→ research questions

Selection of research topic

It is researcher's prerogative than responsibility to select one's research topic. This is a very difficult stage in research, a phase when the scholars frequently depend on supervising teachers. This is a phase where researcher has to rely more on the expertise than creativity. A review of the research areas of their discipline using research abstracts and review journals will help in this phase. The criteria for selecting a topic are personal as well as academic.

The area of research selected must be interesting to the scholar personally. One has to be aware that research involves heavy investment in terms of time, effort, dedication, money and many other personal comforts. This will be possible only if the area is interesting to oneself. Further, it must be an area that arouses the intellectual curiosity of the researcher. The interest in the topic should not be a fad anyone can feel towards a newfound piece of knowledge. It is better if the selected topic is one in which the researcher had some previous experience, a topic in which one had some training. Further, different areas need different temperaments. The topic being selected and the work being required must be judged in terms of the personal characteristics, and weakness of the researcher. One must also consider the time, effort and money that need to be put into, in order to successfully complete the project and the personal capacity in these regards. The area must also be suitable to the vocational and career aspirations of the researcher. The possibility of further work in the area after the completion of the research must be taken in to account, such that the researcher can continue to work in the area, as researcher or expert, without necessitating a shift between academic pursuits and future vocational needs.

Academically, the topic selected needs to be novel, not a redundant one. It must be a significant area of research in the given discipline. The sources of date, the magnitude of work, researchability and ethical issues that may arise must also be thought of. The working conditions, amenities of the research centre will also influence the topic of your research.

Anyhow, the topic must not be too ambitious, too broad or too small, or a mere duplication of an already done work, must not lad to closed alleys and a topic beyond one's resources and talents.

Identifying the problem

After fixing on a broad topic of research, the researcher needs an in-depth review of the area, for being familiarized with the theoretical and practical dimensions of the new topic. Reading professional literature, identifying the gaps being pointed out by experts, and an alert mind that see the already done researches and their suggestions, etc will help build up expertise on the topic.

After gaining sufficient understanding of the area, one can have useful discussions with peers, faculty members and other experts. This can be done through techniques such as Brainstorming and Delphi technique. Based on these Relevance Trees, a Notebook of ideas or Concept Maps may be developed. This will help the researcher to gain deeper insights regarding the concepts involved in the area, to gain a holistic picture of the topic and help relate seemingly unrelated ideas, in new ways. Development of such visual themes will enhance the creative aspect of problem identification.

In order to come out with an original idea, a novel problem the following suggestions can be considered:

- Take your own time to brood on the area, at times going through the visual representation of the topic and then relaxing the mind to incubate.

- Never race with the time. Take your own time to review, develop pictures, and then think.
- Think effortlessly. Avoid frequently tread paths and adopt new links.
- Avoid thinking in terms of methods. Problems will help you identify methods than selecting a problem, which could be warped into the mould of fixed method.
- Never hesitate to come up with ideas that are outside the common logic.
- Try to associate seemingly remote and unconnected ideas. Try to redefine the concepts, their relations tools in the field, in new ways.
- Be sensitive to the problems around you, the deficiencies that are often overlooked because they have become part of our life.
- Never discard an idea, which seems to be ambiguous at first glance. Let it be in your thought for some more time.

After having fixed a problem, try to define all the terms precisely. If need be, conduct a pilot study to test your assumptions regarding the area. The final problem statement needs to be clear, concise and permitting identification of the key factors.

Formulating the research questions

After having stated the problem, try to raise the problem as a set of questions. Any problem needs to be amenable to modification into one or two contributory questions (optional), a main research question, and a few subsidiary questions. Attempting to raise question will help researcher to focus the thought. Being asked a question is being challenged. One becomes answerable. Therefore, refinement of questions leads to the operationalization of the research problem. Refinement of question goes on until the researcher feels that he can manage to find out the answer. This will help in concluding the research, putting forth your theses in a comprehendible and hence useful way.

Conclusion

Raising the research problems partly being a creative activity cannot be done in a prescriptive fashion. Every research problem has its own unique way of origination. It is the task of the researcher to attempt a sufficiently creative effort based on a broad base of experiences to go deep in the ocean of knowledge and pick up a new pearl that he can claim one’s own.