Tips for Graduate Research Supervisors

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Tip Number 3 – Define Basic Steps in the Research Program

Step	Function	Description
1	Literature Review	The literature review provides background historical and current information on the field of interest. It identifies seminal findings and events; key researchers in the field; gaps in knowledge, controversies and disputes in knowledge and approaches, and potential future research directions. In structured research programs, a research student needs to demonstrate that his/her research hypothesis and directions from research arise from systematic reviews of the work of learned peers in the field, rather than as random ideas.
2	Formulation of Hypothesis	The research hypothesis is derived from a formal understanding of the gaps in knowledge which have been identified as a consequence of the literature review. The key objective is to ensure that the hypothesis is *open* and does not predispose/skew the research to a particular outcome.
3	Development of a Methodology	The methodology is the sequence of steps taken in order to substantiate the reasons for putting forward the hypothesis and then testing that hypothesis in a systematic and impartial manner, without necessarily having cognizance of the end result.
4	Design of Instruments/ Experiments to Evaluate Hypothesis	A series of instruments/experiments needs to be developed systematically in order to formally determine the validity of the hypothesis. Typically, these instruments/experiments would need to conform with normally accepted practice in the particular field – and the basis for them may need to be substantiated through the citation of independent, published scholarly work.
5	Analysis of Results/Findings	A systematic and fair (impartial) analysis of the findings needs to be presented to address the hypothesis.
6	Local Peer Review of Results/Findings	Research findings/results need to be presented for peer evaluation at a local level, within the center, institute, department or faculty to validate or repudiate the outcomes.

7	External Peer Review / Publication	Once a local peer review is completed, the research findings need to be presented to a larger audience – either through publication in scholarly, reviewed journals or conferences, in order to achieve independent validation/repudiation of outcomes.
8	Evaluation of Strengths / Limitations of Research and Results/Findings	The research student's project is generally only one small element in a chain of research in a given field. The research student needs to critically self-evaluate his/her research and identify shortcomings, weaknesses, etc. as well as strengths. The significance of the research student's contribution within the much larger chain of research in the field also needs to be determined.
9	Documentation of Research Program and Findings	The research work needs to be presented within a detailed document – dissertation/thesis – for assessment and defense as well as for the purposes of creating a historical record of the research and findings.