SKETCHING OUT THE RESEARCH PROCESS

You may go to any 10 scientists and get a different list / set of steps / order, regarding the research process. I would like to try the following system and ask you, over time, to evaluate how you feel this is working for the researcher in you. You’ll notice that a common theme (not to be ignored!) of reflection / refine and redesign is present. Never cease to reflect on what you are doing. Tougher? (Yep) Worthwhile? (Are you kidding? **YES!**).

1) Forming or Finding a Problem / Posing a Question

*General Literature Review / Prior Knowledge/Experience*

*Asking (Posing) / Recording Questions*

*Reflecting on your interests (writing down your thoughts)/ Refining your goal*

2) Producing a Focused Literature Review

*Understanding What Is Known/Unknown*

*Reflecting on quality/questioning / Refining your thinking / Refocusing your attention*

*Mastering Jargon*

*Recording and Reporting via an Electronic Log*

3) Hypothesis

*Null Hypothesis vs. Research Hypothesis*

4) Methodology

*Materials/Subjects/Timeline*

*Control/Variables*

*Operational Definitions*

*Consider (a) Test Run(s)*

*Repeated Trials*

*Reflecting / Refining / Redesigning when there is a need*

5) Data Collection

*Measurable Values / Observations*

*Recording Accurate Records / Dates / Times / Tests / Population*

6) Data Analysis

*Statistical Approach*

*Graphics*

*Reflecting upon meanings / Refocusing your thoughts as issues emerge*

7) Refine/Redesign /Retest

8) Conclusions

*Stating the results in light of the hypothesis’s accuracy*

*Reflecting on your work … your Next Best Step …Redesigns …*

*Writing an Abstract*

*Presentation*

*reflect / re-question / rethink /reconfigure / redesign / re-engage*

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