The Research Roadmap Checklist

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All enquires to bwhitworth@acm.org
This checklist is at http://brianwhitworth.com/researchchecklist.pdf
The element details are explained at http://brianwhitworth.com/phdpubs-acis.pdf
An online version is being developed at: http://www.researchroadmap.org/

For each element below:

	Circle N/A (Not Applicable)
OR	**Rate** It 1 to 5 (Weak to Good)
AND/OR	**Check** it as Done

KNOWLEDGE ELEMENT	CHECK?
Overview	
O1. Collegiality. Does the research respect the scientific community by reading, referencing and building on other's work?	N/A _____ ☐
O2. Scientific thinking. Gives reasons before conclusions, and derives conclusions from what went before?	N/A _____ ☐
O3. Academic format. Are ideas connected together logically and consistently?	N/A _____ ☐
O3a. Does the introduction define the literature review topic?	N/A _____ ☐
O3b. Does the theory review lead to a research question?	N/A _____ ☐
O3c. Is the method appropriate for the research question?	N/A _____ ☐
O3d. Does the method create data that answers the research question?	N/A _____ ☐
O3e. Do the analysis conclusions address the research question?	N/A _____ ☐
O3f. Are the implications derived from the conclusions?	N/A _____ ☐
O4. Correct language. Are there language errors (spelling or grammar)?	N/A _____ ☐
O5. Opinion statements. Are there unjustified opinion statements that cannot withstand critical review?	N/A _____ ☐
Introduction	
I1. Title. Does the title describe the topic/contribution in an interesting way,	N/A _____ ☐

and invite the reader to read on?	
I2. Author(s). Are authors in contribution order, and could each present the publication at a conference?	N/A _____ ☐
I3. Abstract. Does the abstract state the paper's main purpose, results and implications?	N/A _____ ☐
I4. Problem. Is the practical problem the research addresses stated?	N/A _____ ☐
I5. Topic. Is there <u>one</u> topic, referred to consistently throughout the paper?	N/A _____ ☐
I6. Purpose. Is the research purpose stated in a single sentence within the first few pages?	N/A _____ ☐
I7. Publication type. Is publication type (e.g. review, proposal or empirical study) stated early, so readers know what to expect?	N/A _____ ☐
I8. Background. Does a brief background history introduce the research?	N/A _____ ☐
I9. Target audience. Is the target audience, who should read the paper, stated?	N/A _____ ☐
Theory	
T1. Scope. Are the research boundaries defined and remained within?	N/A _____ ☐
T2. Literature review. Is the literature reviewed and analyzed by issues (agreements or contradictions), not as a sequential list of other's research?	N/A _____ ☐
T3. Topic Construct/ Dependent Variable. Is the topic construct (or dependent variable), which the research is mainly about, clearly identified?	N/A _____ ☐
T4. Causal construct/ Independent variable. Are causal constructs identified, or is there causal confusion (between what is causing and what is being caused)?	N/A _____ ☐
T5. Conceptual framework. Is the conceptual framework the research will use stated, ideally with a diagram?	N/A _____ ☐
T6. Research question. Is the research question a single sentence (clear), with many possible answers (falsifiable), focused enough to allow feasible data collection (testable)?	N/A _____ ☐
T7. Research type. Is the chosen research type (exploratory, descriptive, correlational or explanatory) appropriate and feasible?	N/A _____ ☐
T8. Hypotheses*. Is each hypothesis argued for and stated individually?	N/A _____ ☐

Method	
M1. Methodology theory. Is any methodology theory covered only briefly?	N/A _____ ☐
M2. Qualitative vs Quantitative. Is a qualitative, quantitative or mixed-method approach used as appropriate?	N/A _____ ☐
M3. Pilot study. Are pilot testing changes in research method/tools reported?	N/A _____ ☐
M4. Research Design. Is the logic of how the method's data answers the research question explicitly stated?	N/A _____ ☐
M5. Control group*. Were subjects randomly allocated to the control group?	N/A _____ ☐
M6. Measurement. Is why constructs were measured the way they were discussed?	N/A _____ ☐
M7. Reliability. Is measurement reliability considered, e.g. by precedence, test-retest or split-half checks?	N/A _____ ☐
M8. Validity. Is measurement validity considered, e.g. by content, criterion and construct validity?	N/A _____ ☐
M9. Unit of research. Is(are) the unit(s) of research specified, i.e. what is one data gathering "case"?	N/A _____ ☐
M10. Procedure. Is the data collection procedure sequence described, with any tools used, e.g. introduction script?	N/A _____ ☐
M11. Task*. Is the subject task, and any instructions involved, described?	N/A _____ ☐
M12. Question design*. Are questions asked of subjects understandable, unambiguous, unbiased, answerable and not offensive?	N/A _____ ☐
M13. Response scale design*. Are subject response scales easy to use, exhaustive and sensitive?	N/A _____ ☐
M14. Sample generalizability. Is it argued why sample results generalize to the population, e.g. that the sample is unbiased, big enough and representative?	N/A _____ ☐
M15. Sample Size*. Is the sample is big enough for the question(s) asked of it?	N/A _____ ☐
M16. Replicability. Does the method give enough for another researcher to repeat it (e.g. provide scripts and tools)?	N/A _____ ☐
Results	
R1. Error type. Is the research rigorous enough (avoids Type I false claim errors), **and** sensitive enough (avoids Type II null result errors)?	N/A _____ ☐

R2. Data Conversion. Is how raw data was converted to descriptive data, and how missing values were handled, properly described?	N/A _____ ☐
R3. Demographics. Are sample demographics compared to population demographics?	N/A _____ ☐
R4. Information type. Is information analyzed correctly according to type (qualitative, interval, ordinal, or categorical)	N/A _____ ☐
R5. Descriptive summary. Is there a descriptive summary of the results (e.g. themes, or N, mean and variance) that is commented upon?	N/A _____ ☐
R6. Analytic statistics.* Are there analytic statistics for strength (e.g. Pearson's r, Eta, Gamma, Phi, Lambda) and significance (e.g. t-test, F-test, Chi-squared), based on data type?	N/A _____ ☐
R7. Assumptions. Are the analysis assumptions stated and handled?	N/A _____ ☐
R8. Findings. Is each conclusion argued individually, one at a time, from the results?	N/A _____ ☐
R9. Tables.* Do tables have a title at the top, row/column headings, and a reference in the text?	N/A _____ ☐
*R10. Frequency tables** Do frequency table percentages add up to 100% for each row, and is each row a different causal construct value?	N/A _____ ☐
*R11. Mean tables** Do mean tables show dependent variable cell means varying by row/column causal variables?	N/A _____ ☐
R12. Graphs.* Do graphs have a title, axis labels, and is the graph type (line, bar or pie) right for the information type?	N/A _____ ☐
R13. Summarize conclusions. Are the main research conclusions summarized in a numbered list, and related to the research question?	N/A _____ ☐
Discussion	
D1. Research Contribution. Is the value this research adds, apart from what others have done, stated clearly and well?	N/A _____ ☐
D2. Limitations. Are the limitations of the research honestly declared?	N/A _____ ☐
D3. Implications. Are probable and possible implications of the findings for both theory and practice discussed?	N/A _____ ☐
D4. Future research. Are future research possibilities suggested?	N/A _____ ☐
D5. Acknowledgements. Is any help from others acknowledged?	N/A _____ ☐
D6. References. Do the references reflect the quality, breadth and recency of the publication?	N/A _____ ☐

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Final Points	
F1. Is the research relevant? – Useful to others? (*Introduction, Discussion*)	N/A _____ ☐
F2. Is the research rigorous? –Scientifically correct? (*Method, Results*)	N/A _____ ☐
F3. Is the research generalizable? –Widely applicable? (*Theory, Discussion*)	N/A _____ ☐
F4. Is the research logical? – Consistent and logical sequence of ideas? (*All*)	N/A _____ ☐
F5. Is the research well written? – Interesting and understandable? (*All*)	N/A _____ ☐

Other comments:

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