Before You Graduate, Read this Book—Research Design: Creating Robust Approaches for the Social Sciences (Gorard, 2013)

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Abstract
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Keywords
Research Design, Research-Based Claims, Warrants, Social Science, Research Questions

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Before You Graduate, Read this Book –
Research Design: Creating Robust Approaches for the Social Sciences (Gorard, 2013)

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Overview

Research Design: Creating Robust Approaches for the Social Sciences (Gorard, 2013) addresses the need for well-conducted research studies. It comes from Professor Gorard’s experience, his appreciation for research done well, and his frustration with the current state of social science research. The book provides an easy-to-use design typology, as well as good practices and warnings, to help social scientists improve their research skills.

This is a book about research designs for social scientists. It is about strategies for research, the logic of research, and how to make convincing research-based claims. …why the elements of design matter, and how they can be used. (p. x)

Research Design is built around the social science research cycle shown in Figure 1. It could serve as either a textbook or reference. Each chapter starts with a summary of important topics, and ends with review exercises, notes for those exercises, and suggested readings. Rather than trying to summarize the contents, this review highlights three topics (Research Design; Claims and Warrants; and Sample Selection and Non-Responses). I hope they provide an appreciation of this well-considered, very useful book.

Research Design

In graduate school, one often hears discussion regarding whether a student intends to do quantitative, qualitative, or mixed methods studies. Research Design (Gorard, 2013) does an excellent job in explaining why such discussions are premature. The most fundamental issues are the definition of one’s research problem and the research questions to be answered. Qual/Quant considerations should fall out of a research design, not drive it.
There are no intrinsically good or bad research designs. The emphasis in research design is less on how to conduct a type of research than on which type is appropriate in the circumstances. (Gorard, 2013, p. 26)

Research designs do not presuppose theoretical lenses or data collection methods—research aspects that are often confused, “including by Creswell and Plano Clark (2007) who are really writing about methods issues not about research design” (Gorard, 2013, p. 6). Instead, design is about the fork-in-the-road choices involved in any study. Specifically, the cases (or participants) selected; their allocation to sub-groups; the time sequence of data collection; and any structured interventions. Toward that end, Professor Gorard uses a simple, but effective design typology (Table 1).
Table 1
Design Typology (Codes)

<table>
<thead>
<tr>
<th>Design Codes</th>
<th>Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>N,R</td>
<td>Non-Random and Random Samples</td>
</tr>
<tr>
<td>X</td>
<td>An intentional, designed Intervention</td>
</tr>
<tr>
<td>O</td>
<td>Data Collection Event</td>
</tr>
<tr>
<td>C,M</td>
<td>Groups of Cases (divided by a Cut-off Value; or by Matching)</td>
</tr>
<tr>
<td>[ ]</td>
<td>A Non-Standard Element (for instance, a disruption or regulatory change)</td>
</tr>
</tbody>
</table>


For instance, a study of the effects of implementing a new employee orientation program would have a design of:

\[ \text{N} \quad \text{O} \quad \text{for those hired before the orientation program started, and} \]
\[ \text{N} \quad \text{X} \quad \text{O} \quad \text{for the study group with orientation).} \]

Thus, having a control group (i.e., those without the intervention) enables comparison with those receiving the intervention. This enables the researcher to assess the effectiveness of the employee orientation program.

An expanded version might include subsequent meetings, training, or back-to-basics sessions to extend the study and assess its effectiveness. In that case, the research becomes comparative and longitudinal:

\[ \text{N} \quad \text{O} \quad \text{O} \quad \text{O} \]
\[ \text{N} \quad \text{X} \quad \text{O} \quad \text{X} \quad \text{O} \quad \text{X} \quad \text{O} \]

Note that this example does not define (or restrict) which types of data collection are used, details of the interventions, or what outcomes are desired. Those elements depend on the research questions to be answered (p. 18).

A [research] design can only be judged as more or less appropriate for the precise research question it is intended to answer. Therefore, all researchers must be aware of the power and relative merits of different designs, and they must be capable of appreciating work using any available method. (pp. 26, 27)

Research Claims and Warrants

One of the strengths of *Research Design*, is it discussion of research claims and warrants. These sections will be very helpful to the reader, and clearly show Dr. Gorard’s frustration with the current state of social science research.

“I have never encountered a researcher not interested in causal issues” (p. 59). But, too often, research that is properly descriptive becomes inappropriately explanatory due to its claims. Of particular concern are causal claims, both explicit and implied. Inappropriate
explicit claims include cases of over-claiming (cause-and-effect) based on insufficient data, as well as studies claiming causal inferences which are really studies of associations (p. 60).

Implied claims are those with explanatory phrases (e.g., improved, assisted, led to, influenced, or produced) that are not consistent with either the research design or the results of the study. In addition, their implications are perhaps more insidious than those which are explicit. As Dr. Gorard, noted:

A journal issue that arrived on the day I was writing this chapter contained nine articles. Two were irrelevant; the other seven all used causal terms to describe their research. Yet none of the articles had a research design that made any attempt to identify the elements of a causal model. Once you realize the enormity of what is going on here, it is shocking. (p. 72)

To prevent such mistakes, researchers have a powerful, but underused tool: the research warrant; i.e., the step in the research logic that connects a research finding to a conclusion. In effect, a warrant explains why specific conclusions are legitimate. But its supporting evidence must have validity, and the presentation of the findings must have integrity” (pp. 44, 45).

Warranting claims can be a complex and lengthy iterative business. But this stage is essential if research users are to have confidence that they can act on research conclusions. (p. 47)

Sample Selection and Non-Responses

The author describes various sample types (random versus non-random; stratified, clustered, and opportunity). And while each type has some merits, his strong preference and recommendation is to use randomly selected samples whenever possible. Two good practices make the case.

1. Random sampling is free of the systematic bias that might stem from choices, made by the researcher or others (p. 79); and
2. Random samples randomize both the unknown and known characteristics of the sample. (p. 91)

In addition, all researchers would do well to consider one of Dr. Gorard’s most important warnings: “The battle against bias is never won” (p. 169).

Non-Responses

This is the first research text or article I have read that emphasizes the importance of non-responses. In statistics classes, students are reminded to code for non-responses so that they do not contaminate subsequent calculations. But, beyond making sure that the numbers are “pure,” non-responses are regarded thereafter as merely research footnotes. What is not addressed is how non-responses (and dropouts in longitudinal studies) directly affect research design and findings. Consider Non-Response Warning #1: “An incomplete random sample very soon becomes merely a non-random sample” (p. 80). So, your carefully planned and painstakingly conducted random sample might just have lost its randomness.

Well, OK. But, as long as the statistics are adjusted, that should be a minor issue. Shouldn’t it? Non-Response Warning #2: All statistical procedures are based on an
assumption of complete (100%) response. But, “All missing data are liable to bias the study findings, and we cannot know in which direction and by how much” (p. 87). In other words, “Non-response is not randomly distributed” (p. 88), which is Non-Response Warning #3.

Now, if the author’s point has not yet become clear, skip to the end of the review and turn in your pencils.

Warnings and Good Practices

As I read through Research Design, I noted a number of good practices and warnings throughout the book. I have extracted a few of each as examples.

Warnings

• Design is our protection against being misled like this by poor evaluation, inflated marketing claims, and the endemic but largely futile research about “perceptions.” (p. 133)
• Following the pattern “of so much sloppy and poorly-designed work that so conveniently and dangerously finds in favour of the prevailing theory of policy fashion.” (p. 138)
• It is quite common for interventions to work better in the pioneering study than in more general practice. (p. 130)
• It is alarming how often researchers attempt to make comparisons over time and place on the basis of one set of observations (and even more alarmingly are believed and cited favourably by others). (p. 146)

Good Practices

• Writing research questions (Section 3.6), including converting a problem into a series of puzzles each of which can be addressed using existing or feasible techniques. (p. 36)
• As a rule of thumb, decide on the sub-groups before conducting the research and keep these groups clearly labeled as such in the subsequent analysis. (p. 99)
• In the same way that research questions can evolve as a project unfolds, so can its design(s). Consideration of design at the outset is intended to stimulate early awareness of the pitfalls and opportunities that will present themselves, simplify subsequent analysis, and so aid solidly warranted conclusions. (p. 198)
• Develop a plan for an ideal study. Having planned, we can then consider the barriers we face … and either solve the problems and make compromises or decide that the study is not possible. Either way the result will likely be better than starting with a compromise. (p. 135)

Summary

“This new book is based on my own experiences…, it is for those who want to design their own research,…”suitable of new researchers, …and intended for a wide audience” (Gorard, 2103, p. x). This is, perhaps, the only area in which the reviewer disagrees with the author. I think Research Design might be overwhelming for a new research student, but
would be highly effective for a research capstone class. Having already reviewed academic articles and conducted small research studies within the safe environment of their classes, appreciation for Dr. Gorard’s advice, his approach, and his warnings would be better understood and greatly appreciated by those nearing graduation or dissertation work.

A focus on research design means that everybody wins – except, of course, anyone with a vested interest in the existing generally poor level of social science research. (Gorard, 2013, p. 203)

Therefore, before you graduate, read this book - *Research Design: Creating Robust Approaches for the Social Sciences* (Gorard, 2013).

**References**


**Author Note**

Following a thirty-year engineering and manufacturing management career, Michael Clancy returned to school in 2009 (first, in the D.B.A. program at Lawrence Technological University, Southfield, MI; now, in the Ph.D. – Technology program at Eastern Michigan University, Ypsilanti, MI) to fulfill a life-time goal of university-level teaching. Mr. Clancy’s research interests are 1) organizations as complex adaptive systems, 2) leadership studies, and 3) developing “a place to stand” in complex times. His education includes a M.S. – Mechanical Engineering, University of Michigan; a M.B.A., Saginaw Valley State University; and a B.S. – Engineering, Oakland University.

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