

Reporting Data for Research



**PRESENTED AT THE SUMMER SEMINAR
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**SPONSORED BY THE CENTER FOR
INNOVATIVE LEADERSHIP DEVELOPMENT**

**GARDNER-WEBB UNIVERSITY
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Pre-Assessment



**WHY ARE YOU HERE?
WHAT DO YOU ALREADY
KNOW?
WHAT DO YOU WANT TO
LEARN?**

6 Steps to Completing Your Dissertation



DRUDGERY



PROCRASTINATION



PANIC



DESPAIR



DRUDGERY



PRINTING

Definitions



DATA: factual information (as measurements or statistics) used as a basis for reasoning, discussion, or calculation

RESEARCH: investigation or experimentation aimed at the discovery and interpretation of facts, revision of accepted theories or laws in the light of new facts, or practical application of such new or revised theories



SCIENTIFIC INQUIRY

Six Guiding
Principles

*Scientific Inquiry
in Education,*
National
Research Council
(2001)

1. Pose significant questions that can be investigated empirically
2. Link research to relevant theory
3. Use methods that permit direct observation of the question



SCIENTIFIC INQUIRY

Six Guiding Principles

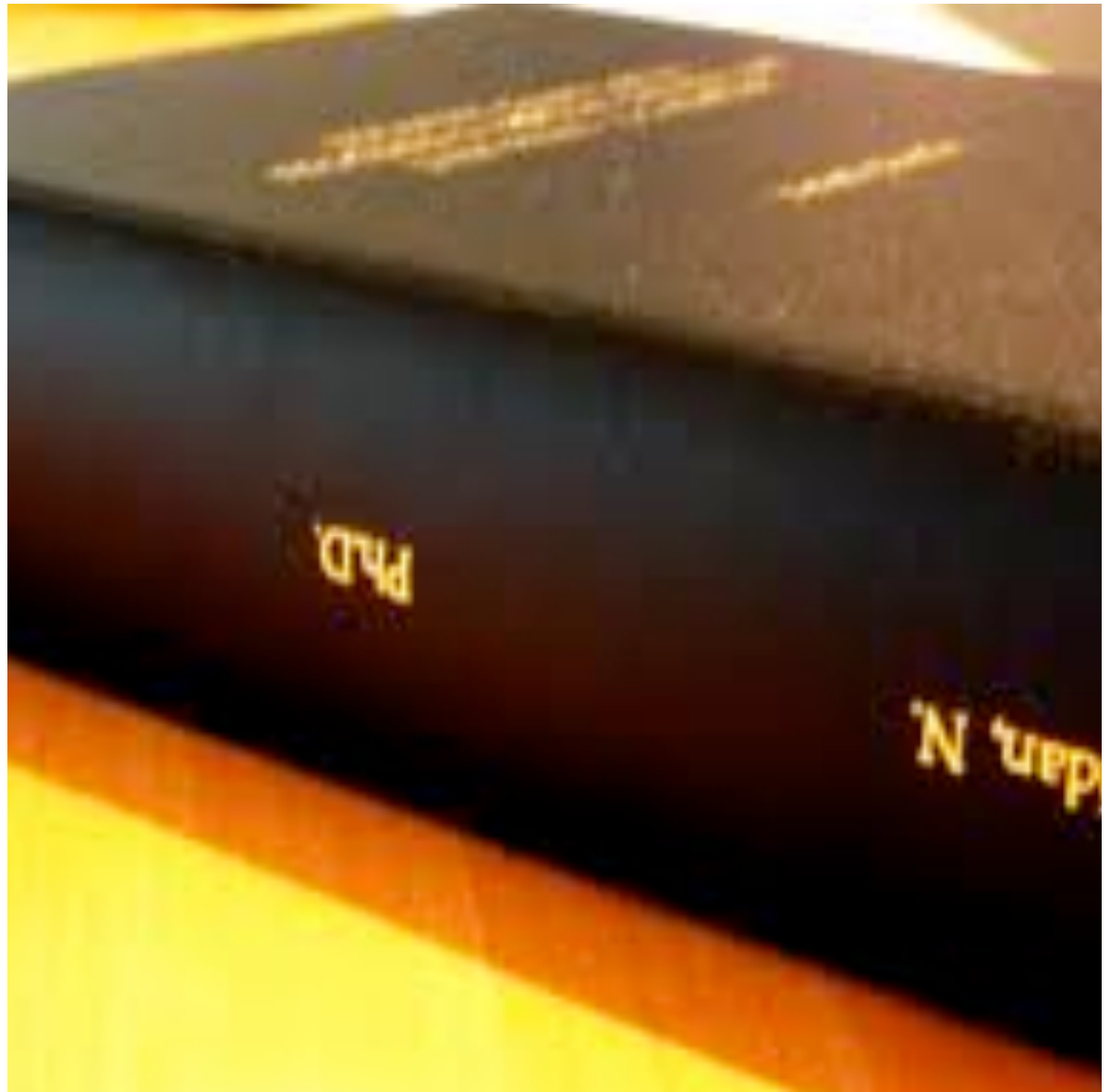
4. Provide coherent, explicit chain of reasoning
5. Replicate and generalize across studies
6. Disclose research to encourage professional scrutiny and critique



The Conventional Dissertation

Chapter Four

Results or
Findings



Chapter Four Keys



- Write an introduction that includes the purpose of the study
- Display data by research question
- Develop charts and displays that report the data clearly
- Summarize the data, but do not conclude
- Follow APA format and style guide

QUAL/QUAN/MIXED?

Reporting should reflect your methodology.



Quantitative = More charts and graphs

Qualitative = More words, figures and diagrams



FIGURE 3. Observed distribution of teacher Washington Educator Skills Test-Basic score in fourth-grade classrooms by student free reduced-price lunch status

Next, Figure 4 plots the exposure rate to novice teachers for fourth-grade FRL students against the exposure rate for fourth-grade FRL students within the 25 largest districts in the state.¹⁴ Although the majority of districts fall above the 45-degree line—indicating the fourth-grade FRL students in those districts are more likely to be assigned a novice teacher than are fourth-grade non-FRL students—there are a number of districts below the 45-degree line. In other words, there is some variation across districts in terms of the inequitable distribution of novice teachers across FRL and non-FRL students.

Finally, the lower portion of Table 1 through 3 explains whether the teacher quality gap is higher in disadvantaged or more advantaged districts. Perhaps not surprisingly, we find that the distribution of low-quality teachers is more inequitable within the more disadvantaged districts. For example, in districts in the highest quartile of poverty in the state (most disadvantaged), FRL fourth graders are 2.48 percentage points more likely to have a novice teacher than are non-FRL fourth graders (see Table 1).

Distribution of Low-Quality Teachers Across All Student Indicators and Grade Levels

We now proceed to investigate teacher quality gaps for every combination of school level, student disadvantage indicator, and indicator of teacher quality. Table 4 presents the overall teacher quality gap for low-quality teachers as well as the decomposition into district, school, and classroom effects.¹⁵ The first three rows of results in Table 4 repeat the relevant results from Tables 1 through 3 about the distribution of novice, low-WAM, and low-WEST-9 teachers across various indicators of student disadvantage in fourth grade. The remaining rows present the analogous results for other grade levels and subjects.

We first focus on the teacher quality gap for each of the combinations.¹⁶ Across nearly every combination of school level, student disadvantage indicator, and indicator of low teacher quality,

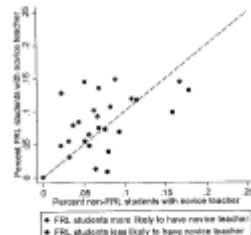


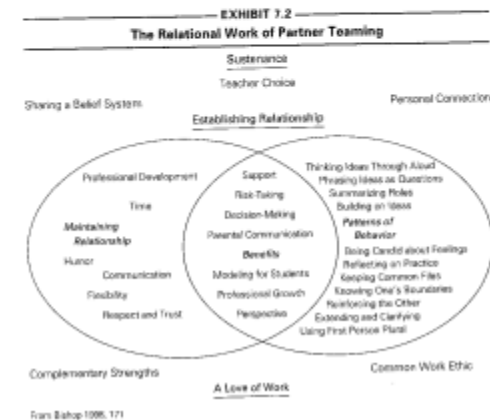
FIGURE 4. Exposure rate to novice teachers in fourth-grade classrooms by student free/reduced-price lunch status for large districts

the teacher quality gap is significant and positive, that is, disadvantaged students (regardless of definition) are more likely to have a low-quality teacher (regardless of definition) than are non-disadvantaged students in the same grade level. The only exception is the distribution of teachers with low conditional mean scores across students by performance in fourth-grade classrooms, across all indicators of disadvantage in sixth-grade algebra classrooms, and by performance in 7th-grade reading classrooms, in none of these teacher quality gaps is statistically significant.

It is also interesting to note the variability in the magnitude of the teacher quality gaps in Table 4. The highest gap is for the

assembly of information that permits conclusion drawing and action taking." Making an analogy to "you are what you eat," they claim that "you know what you display" (Miles and Huberman 1994, 11). Matrices, graphs, flowcharts, and other sorts of visual representations assist in making meaning of data, as well as in exposing the gaps or the areas where more data are needed. Data display is, therefore, another ongoing feature of qualitative inquiry. It can be a part of developing the research statement, data collection, analysis, and final presentation of the study.

As you begin to conceive your research by working on the research statement and plans for data collection, data displays help you to identify the elements of your study. Expect the displays to change as you learn more. After data collection has begun, urge Miles and Huberman (1994), create diagrams that reflect some risk; that is, use one-directional arrows that indicate potential cause and effect. Doing so forces you to begin to theorize about the social phenomenon under study. Exhibit 7.2 "The Relational Work of Partner Teaming" is an example of a thematic data display by Penny Bishop (1998, 171). She created the diagram as a way to help her understand and present the major concepts evolving through her inquiry into effective partner team teaching in middle schools.



What about tables and figures?



- Look backward: What charts, tables, figures or graphs will help answer your research questions?
- Look forward: What charts, tables, figures or graphs will explain your findings?
- What figures will tell your story?

A figure can graphically convey the coding and themes found in qualitative research.



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DESIGNING QUALITATIVE RESEARCH

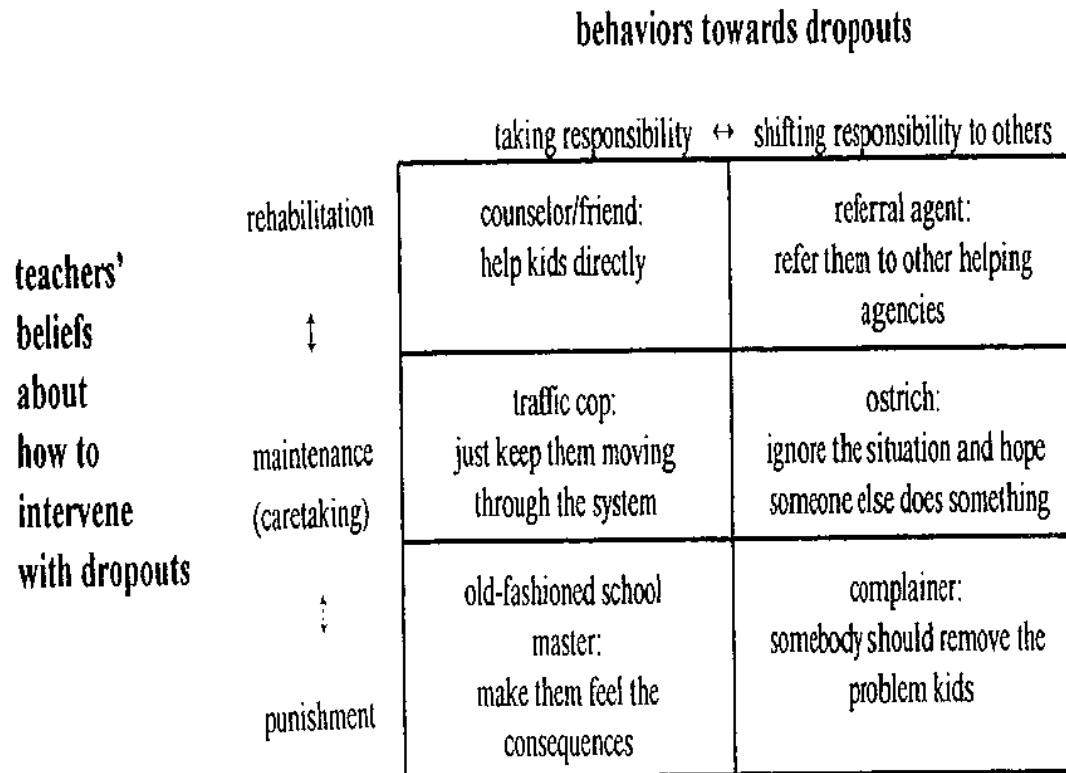


Figure 5.2. An Empirical Typology of Teacher Roles in Dealing With High School Dropouts

Quantitative data charts and figures may be included in the body or saved for the appendix.

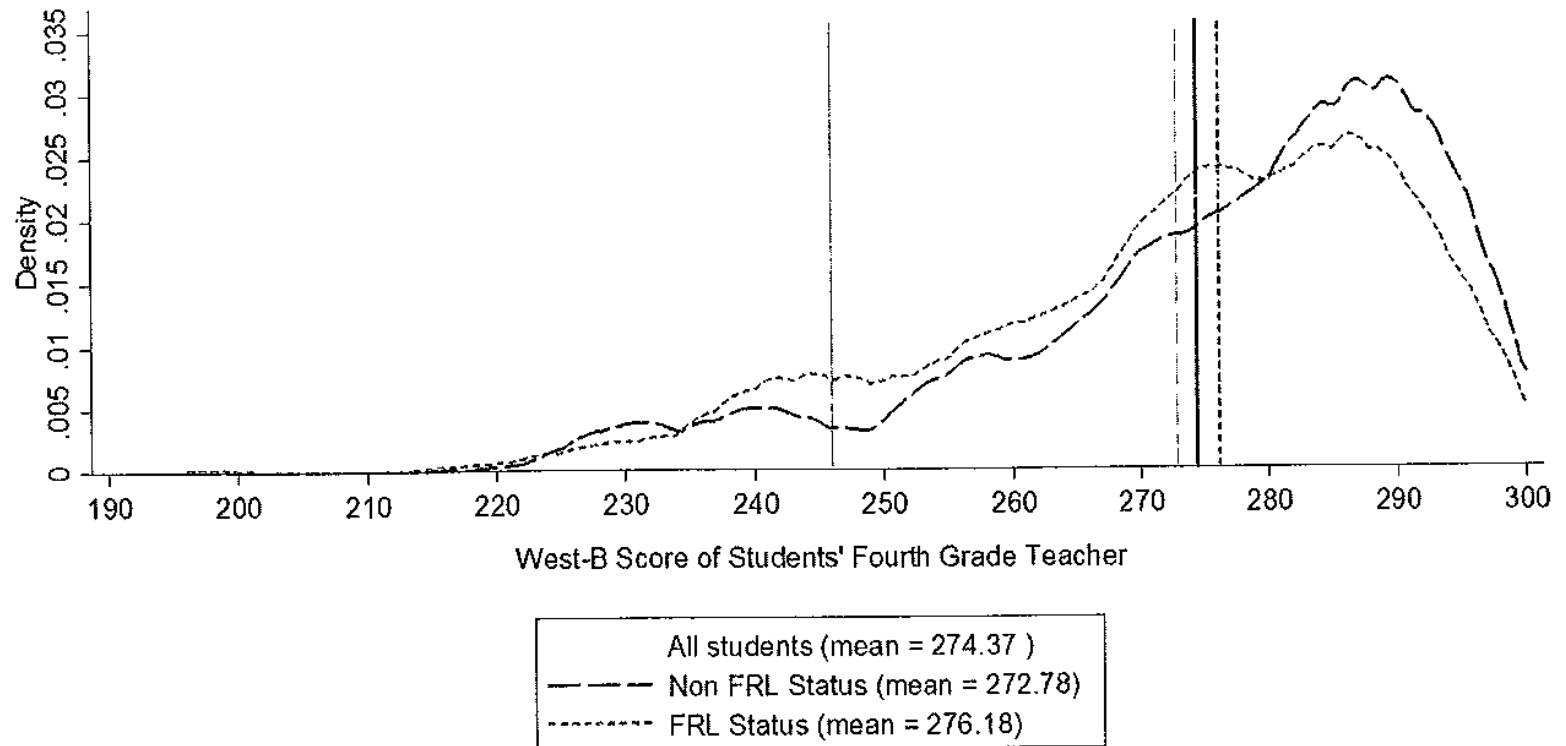


FIGURE 3. Observed distribution of teacher Washington Educator Skills Test-Basic score in fourth-grade classrooms by student free/reduced-price lunch status

Clear reporting of significance



Table 1

Pearson correlations for main study variables

	Time watching TV	Cholesterol	CRP
Cholesterol	.371*		
CRP	.341*	.886*	
TAG	.312*	.858*	.981*

Note. CRP = C-Reactive Protein, TAG = Triglyceride, * = statistically significant at $p < .05$ level.

Basic descriptive statistical displays add to reporting for all methods of research .



Group Statistics

	gender	N	Mean	Std. Deviation	Std. Error Mean
engagement	Male	20	5.5589	.29190	.06527
	Female	20	5.2999	.39339	.08797

Physical Activity Level

Dependent Variable: coping_stress

Physical Activity Level	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Sedentary	4.151	.530	3.064	5.239
Low	5.879	.467	4.920	6.838
Moderate	7.123	.496	6.106	8.140
High	7.505	.530	6.418	8.593

Mean = 5.015

Mean = 7.314

Recommended Length



- Dan Butin in The Education Dissertation recommends that findings be about 30% of your completed dissertation.
- This is where you are reporting your important findings! You should have a lot to say here!

APA Style



**CONSULT APA FOR
“DISPLAYING RESULTS”
USE CORRECT FORMAT
AND FOLLOW
GUIDELINES FOR
DISPLAYS**

GWU Style Guide



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The best way to understand dissertations is to read them!



Write successive drafts

Choose data displays with a purpose



- **FIND YOUR VOICE AND A STYLE THAT MATCHES YOU (THE WRITER) AND YOUR PURPOSE**
- **CHOOSE DATA DISPLAYS THAT WILL TELL YOUR STORY CLEARLY AND ANSWER YOUR RESEARCH QUESTION(S)**
- **SEND TO YOUR CHAIR FOR FEEDBACK**

Good luck!



Write on!