

Conducting Pilot Studies

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A pilot study can be used as a “small scale version or trial run in preparation for a major study” (Polit, Beck, & Hungler, 2001, p. 467). Baker (1994) noted that “a pilot study is often used to pre-test or try out (pp. 182–183) a research instrument. Baker found that a sample size of 10–20% of the sample size for the actual study is a reasonable number of participants to consider enrolling in a pilot. Although a pilot study does not guarantee success in the main study, it greatly increases the likelihood.

A pilot study may address a number of logistical issues. As part of the research strategy the following factors can be resolved prior to the main study:

1. Check that instructions are comprehensible;
2. Check that investigators and technicians are sufficiently skilled in the procedures;
3. Check the wording of a survey;
4. Check the reliability and validity of results.
5. Check the statistical and analytical processes to determine if they are efficacious.

Pilot Study for Survey Validation

Before the final form of the survey or questionnaire is constructed, it is useful to conduct a pilot study (or *dress rehearsal*) to determine if the items are yielding the kind of information that is needed. The term *pilot study* is used in two different ways in social science research. It can refer to so-called feasibility studies, which are "small scale

version[s], or trial run[s], done in preparation for the major study" (Polit, Beck, & Hungler, 2001, p. 467). It is also used to refer to the pretesting, or trying out, of a particular research instrument or research procedures (Baker, 1994, pp. 182-183). One of the advantages of conducting a pilot study is that it can give advance warning regarding weaknesses in a proposed study. These include: where research protocols might not be followed, or whether proposed methods or instruments are inappropriate or too complicated. De Vaus (1993) advised researchers to "check to see if there are any ambiguities or if the respondents have any difficulty in responding" (p. 54). Surveys are pilot-tested to avoid misleading, inappropriate, or redundant questions. Pilot-testing ensures that a research instrument can be used properly and that the information obtained is consistent. Fink and Kosekoff (1985) suggested that when pilot-testing look out for a failure to answer questions, respondents giving several answers to the same question, and written comments in the margin. These may be indications that the instrument is unreliable and needs revision.

Administering the survey personally and individually to a small group of respondents is a good way to proceed with your pilot study, but the pilot could also be conducted electronically or through other means. Well-designed and well-conducted pilot studies can inform the researcher on the research process and about likely outcomes. It is important to report the findings of the pilot studies in detail. This usually appears in chapters 3 or 4 in the dissertation. Explain the actual improvements made to the study design and/or the research process as a result of the pilot findings. If no changes were made, this, too, needs to be reported. Data from the pilot should NOT be included with data from the main study.

The pilot instrument should invite comments about the perceived relevance of each question to the stated intent of the research. It would also be beneficial to provide a means for the respondent to suggest additional questions that the researcher did not include. Check out <http://sru.soc.surrey.ac.uk/SRU35.html> and <http://www.uis.edu/ctl/writing/documents/ctlths7.pdf> for more information on pilot studies.

Excerpt from a Delphi Study

A pilot study panel consisting of 6 experts was drawn from across the United States that met the study protocol. The main modified Delphi study consisted of a panel with 27 experts from African American studies and from the field of special education who were also drawn from across the United States. According to Simon (2006), the Delphi method is used to structure group communication so that a panel of experts can deal with a complex problem using a future-oriented view. The literature revealed the complex nature of the problem of this study. Additionally, the literature revealed the wide scope of the problem of the overrepresentation of African American boys in special education as persisting for decades and also in schools throughout the country. The modified Delphi technique provided an opportunity to examine this complex national problem with use of experts from around the nation because it allowed experts from a range of geographic locations to participate in structured communication through the researcher in an online format.

Data Collection for the Pilot Study

Round 1 of the pilot study included the participation of 6 experts. Three of the experts were from the field of African American studies and 3 from the field of special

education. The recruitment of participants consisted of contacting 158 experts from throughout the country. The first group of potential participants consisted of authors of the articles or books reviewed in chapter 2. The second group consisted of experts who have presented at national conferences. The pool of contacts was expanded with the use of snowballing using participant referrals. Finally, university departments of African American studies and special education were contacted to secure participants for the pilot portion of this study. The demographics of participants in the pilot study can be viewed in Table 1.

Demographics of Experts in Pilot Study Rounds 1, 2, and 3

Subject	Gender	Race	Specialty	Region	Professional affiliation	Published	Presenter
001	Male	Black	Ethnic studies	Southwest	University	Yes	Yes
002	Male	White	Special education	Midwest	Public school	Yes	No
003	Female	White	Special education	Midwest	University	Yes	No
004	Male	Black	Ethnic studies	Midwest	Presenter	Yes	Yes
005	Female	Black	Special education	Southeast	Author	Yes	No
006	Male	Black	Ethnic studies	Northeast	University	Yes	Yes

The pilot participants provided consent and lead to the inclusion of 10 open-ended seed questions for Round 1 of the main study. The additional questions:

- 1. What are the major factors contributing to the problem of African American male students being the most overrepresented group in special education programs in nearly every state?*
- 2. What are some strategies that have been successfully implemented by school districts to address this problem?*
- 3. What new resources could school districts acquire to begin to address this problem?*
- 4. What curriculum and instructional methods could provide a more successful learning experience for African American male students?*
- 5. What type of preschool programs are needed to help African American male students get a good start?*
- 6. What factors are preventing further implementation of strategies to address this problem?*
- 7. What should be the role of federal and state government in providing solutions to this problem?*
- 8. How can IDEA be altered to address the overrepresentation of African American male students in special education?*
- 9. What are the future consequences for African American male students who are in special education in the K–12 public school system?*
- 10. What cultural factors contribute to the problem of the overrepresentation of African American males in special education programs?*

References

- Cochran, WG, & Cox, GM. (1992). *Experimental Designs* (2nd Edition). New York: John Wiley & Sons.
- Altman, DG. (1991). *Practical Statistics for Medical Research*. London: Chapman & Hall
- Baker, T.L. (1994), *Doing Social Research* (2nd Edn.). New York: McGraw-Hill Inc.
- De Vaus, D. A. (1993). *Surveys in social research* (3rd ed.). London: UCL Press.
- Festing, MFW., Overend, P., Das, RG., Borja, MC., & Berdoy, M. (2002). *The Design of Animal Experiments*. London: Royal Society of Medicine Press NC3Rs, 2006.
- Fink, A., & Kosekoff, J. (1985). *How to conduct surveys: A step-by-step guide*. Beverly Hills, CA: Sage.
- Lancaster, G., Dodd, S., & Williamson, P. (2004) Design and analysis of pilot studies: recommendations for good practice. *Journal of Evaluation in Clinical Practice* 10(2): 307-12.
- Polit, D.F., Beck, C.T., & Hungler, B.P. (2001). *Essentials of nursing research: Methods, appraisal, and utilization* (5th ed.). Philadelphia: Lippincott.
- Ruxton, G. & Colegrave N. (2006) *Experimental Design for the Life Sciences* (2nd edition). Oxford: Oxford University Press.
- Simon, M. K. (2011). *Dissertation and scholarly research: Recipes for success* (2011 ed, p. 159.). Seattle, WA: Dissertation Success, LLC. <http://dissertationrecipes.com/>