

Case Study Research

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Meet the Author

Patricia A. Hays earned an MA at the University of Illinois, a doctorate at Northern Arizona University (NAU), and is an associate professor in the Center for Excellence in Education at NAU. She was Director of Student Services and is currently a team instructor in the Integrated Secondary Teacher Education Program (I-STEP) in the teacher preparation program.

Dr. Hays' selected publications include a book chapter- *Education in the Year 2000* (1989) (with A. Cropper, P. Baron, & P. VerVelde); and two articles- *Evaluating Your Gifted Program* (1994) and *I-STEP and the Preparation of Middle School Teachers* (2000) (with D. Kain & K. Wunderlich). Her papers include *An Application of Holland's Theory to Gifted Minority and Underserved Eighth Graders* (1986) (with K. Karol & J. Flores), *Preparing Gifted Special Populations for Careers* (1988), *Early Career Planning for Gifted Youth* (1993), and *Problem Based Learning and the Gifted* (2000).

Dr. Hays received the Arizona Minority Education Access and Achievement Medallion Award (1991) and a Center for Excellence in Education and Phi Delta Kappa special award (1995 & 1997) for "outstanding service and contributions to education students."

Case study research can involve the close examination of people, topics, issues, or programs. These studies might explore student experiences in a law school, cheating at a community college, effects of school reform in a middle school, a special program for Gulf War veterans or countless other entities. These entities are known as particular cases unique in their content and character. Case studies are unlike ethnographies in that they seek to answer focused questions by producing in-depth descriptions and interpretations over a relatively short period of time, perhaps a few weeks to a year. Ethnographies tend to ask much broader questions, observe and explain practices and beliefs, and make cultural interpretations in studies that may last for as long as a year or more. And, unlike biographies and other historical research approaches, case studies investigate contemporary cases for purposes of illumination and understanding. In some instances, case studies are used to provide information for decision making or to discover causal links in settings where cause-effect relationships are complicated and not readily known, such as school reform or a particular government policy (Yin, 1994).

In traditional research such as experiments, generalizability is a clear and main objective where findings are expected to apply to other similar settings and populations. Generalization is not a goal in case studies, for the most part, since discovering the uniqueness of each case is the main purpose. Case study researchers examine each case expecting to uncover new and unusual interactions, events, explanations, interpretations, and cause-effect connections. Generalizability, however, is quite possible when based on several studies of the same phenomenon. Additionally, readers of these case studies often use their own experiences to give meaning to the case reports, using judgment to enhance their understanding of the case and comparing that to similar cases they have encountered. Unlike evaluation studies (see **Evaluation Studies** chapter in this text), case study research ordinarily leaves the determination of meaning and worth to the consumer or audience who may construct their own naturalistic generalizations by drawing on the information in the case study (Stake, 1995. p. 85).

At this point, why do you think someone might conduct case study research?

A Case Study Example

Case studies can be best understood by reading them. Excerpts of a case study will be used to provide the reader with a practical example. This case study was written by Granada and Lapan (no date)¹, an unpublished report based on earlier case studies conducted by Granada and hereafter cited as Granada (1997). The case is that of an implementation of a program for gifted minority students in the southwest United States. My involvement with this case work began when I became the co-director of a teacher training project funded by a Jacob Javits grant (1990-1993).² The goal of the project was to prepare teams of classroom teachers over a ten-week summer period to develop and implement programs of gifted education for under-represented populations in their schools. Additionally, each school that was involved served large numbers of ethnic

¹ A thoroughly revised version of this unpublished case study appears as Granada & Lapan (2001) in Henson .

² The project reported in this case study was supported under the Javits Act Program (Grant No. R206A90087) as administered by the Office of Educational Research and Improvement, U. S. Department of Education.

minority students. Each school involved agreed to send at least two teachers who would serve as the returning change agent team. Each teacher team, working closely with the school principal, was required to develop a site plan for the development and implementation of a program to serve gifted minority students. Sixty-three teachers received this training over a three-year period. Follow-up case studies of these attempts at implementation were conducted at several sites.

What follows is material excerpted from one of these case studies (Granada, 1997). The reader should note that, as with most case studies, considerably more qualitative rather than quantitative data are collected and reported. Case study research can include both kinds of information.

The Situation

In the summer of 1991, fifteen potential change agent teachers arrived on the campus of Northern Arizona University to become participants in a training project funded by a Jacob Javits grant. The goal of the training project was to prepare teams of classroom teachers, over a period of ten weeks, to develop and implement programs of gifted education for under-represented populations in their school. These teacher teams faced ten weeks of intensive training including practice in teaching methods, lesson and unit development, and analysis of their own teaching. They would be expected to learn how to identify underserved minority gifted youth and to develop a faculty collaboration and program plan to implement upon their return to school in the fall. One particularly successful site was an elementary school in the southwest area of Arizona, an oasis in the middle of the desert regions near the border of Mexico. This is their story.

The Community

Agriculture, through irrigation of the desert area, was a part of the lifeblood of the economy. Drawn to the city, either due to the proximity of its location or the job opportunities that beckoned, were a significant number of Mexican families, representing more than 33 percent of the community's population (all Hispanics represented nearly 36%). The impact of the Mexican culture was prevalent throughout the area, most notably in the schools.

The School

The student population was relatively large, serving grades K-6, and portable classrooms were being used to accommodate growing numbers. Staff, including the principal, was primarily female, with several teachers at each grade level. An absence of diversity on the staff was quite obvious in relation to the student population. Only one of 40 staff members was Hispanic while the school had a 52 percent Hispanic enrollment. Socioeconomic diversity was very apparent as one drove around the neighborhood.

The school offered a gifted education program that was similar to many across the state. Intelligence and achievement tests were used as criteria for placement (state mandated), and the program focused on acceleration and enrichment. Very few minority students had been identified for this program.

The Players

The key players in the NAU project training were Melinda, a fifth grade teacher, Bart, a sixth grade teacher, and Kelly, the school principal. Melinda had not been teaching long, but her classroom was very organized and structured. Routines were well established and the room environment was quiet and orderly. Bart had taught at the

school for a few years, and was known for his success with challenging students. It was no surprise to walk into his classroom and find a large number of boys (and a few girls) who had the potential to be very disruptive. Bart's classroom was very different from Melinda's; noise was quite common and the approach used was somewhat structured. Kelly had been the building administrator for a few years and steered her faculty and staff smoothly and efficiently. You knew where you stood with Kelly, and she ran the business of school with fair yet demanding expectations.

Bart cared about his students, but gave the appearance that he wouldn't be extremely nurturing in the classroom. One must remember that nurturing takes many forms. Bart was actively involved in sports, both as a participant and spectator, and had "coach" ingrained in his personality.

Melinda was the organizer. Her quiet leadership was able to reign in Bart's spontaneity when decisions had to be made. Melinda was efficient and linear in many aspects of her life. She held high expectations for herself, for her students, and for those with whom she worked. A natural at nurturing, Melinda was also very perceptive about her students' special needs, and would do whatever was necessary to provide for her students or secure whatever they needed that she could not provide.

Kelly was a natural at being an administrator. She was a "no-nonsense" kind of decision maker when situations called for a "the buck stops here" kind of solution. Kelly also was an innovative instructional leader, and recognized many needs not being met in her school, exploring creative ways to meet those needs under the funding constraints of the district.

What kind of portrait has the case study painted for you? Can you picture the community, school, and the players involved? How can case study research add to our understanding?
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The Case: Part One - The Training

Early in the training, teams from each of the project sites were prepared for the curriculum and program planning that would take place as the training progressed. Units were to be designed by each team member that would cumulatively reflect an understanding of methods of teaching potentially gifted students, including materials that were culturally relevant to ethnic minorities found at each represented school. A site plan also was to be developed, in collaboration with the building administrator, that would outline a design of a gifted education delivery model that would identify and provide programming for underrepresented populations at each school. These site plans were highly specific to the needs of the school community and culture.

Melinda and Bart were very effective in the development of their site plan. Having full support and continuous communication with Kelly, their principal, they designed a plan that would focus on identifying students with potential in the areas of leadership and creativity. They both saw this as a need at their building and of the students they worked with. They determined that the most effective initial implementation of their design would be in two stages. Initially, they would go into classrooms at their assigned teaching levels (Melinda at fifth, Bart at sixth) and teach whole-class lessons that were designed to tap the creative and leadership talents of students. Together with the regular classroom teacher, they would begin collecting data

to help them determine which students might benefit from a gifted program focusing on leadership and creativity.

Phase two of their program implementation would be to jointly select students who had demonstrated potential in either the leadership or creativity area and meet with the identified students on a regular basis by pulling them out of classes at scheduled times (called a pull-out model in gifted education). Bart would work with sixth graders and Melinda with fifth. With the help of teaching colleagues, they would identify students from all of the classrooms (including their own) who were not currently a part of the traditional gifted program, with a particular sensitivity towards finding untapped talent among minority students, girls, and underachievers.

The Case: Part Two - Fall Semester, 1991

In August, the first order of business was an optional inservice/orientation with teachers whose students might be selected for participation in the program. An information session was held early one morning during “prep” week, with Melinda and Bart presenting an overview of the year ahead. The turnout for this optional session was reflective of site support. Much emphasis was placed in the presentation on the importance of the role of the classroom teacher. Bart and Melinda left the presentation enthused about the interest demonstrated by their peers.

The demonstration lessons would have a variety of targeted outcomes. Bart and Melinda would provide teachers with lesson models with the intention of motivating them to incorporate similar types of lessons into their daily teaching. Melinda shares what they had in mind as they began entering the classrooms to teach demonstration lessons.

We had two goals when we went in. One was to let the teachers see their children doing things in a different way, maybe creative way by teaching in a new way that maybe they haven't seen. Hopefully they would start to identify [for gifted] and maybe see students responding to us that they didn't see responding to them in class when they were using lecture or questions. And hopefully we would be able to, by going in and working with their classes, help identify by giving us a chance to observe their kids.

Although the intent of the demonstration lessons had been broader, Bart and Melinda chose to focus on the use of the lessons as a means of identification. The classroom teachers for the most part shared this perception, but with more depth than perhaps Melinda and Bart were aware of.

A fifth grade teacher, having experienced the lessons, recognized an expertise that Melinda and Bart now had in the identification of creative talent in kids. She recognized her own limitations, and was very pleased that the two were able to share this expertise with her.

The Case: Part Three - Spring Semester, 1992

Second semester brought a quick start to the planned pull-out program. This would be a real test of collaboration, support, and teamwork for Melinda and Bart. They planned on meeting with newly identified students on a regular, weekly basis. As the semester progressed, a few more students were identified, and students were involved in a number of projects in the pull-out that tapped both their creative potential and critical thinking. Students were sharing their enthusiasm for being in the program with

classmates and classroom teachers.

Two especially perceptive students in the program shared some interesting insights. The first, in response to being asked why the program was being implemented, responded:

Because they [Bart and Melinda] felt that there was a need to get something because there were a bunch of kids being neglected. Nothing was being done with them, and they were not even ever thought of that way [being gifted].

The second student recognized the extended benefits of being involved.

You do activities to make you feel not that you're more special than another person, but to bring out your ideas. That way you get a better understanding, and then when you go to your regular class you can participate more and express your ideas in a way someone wouldn't.

Why may it be important to obtain student views in a case study? Would you give these the same weight when reporting findings? Why or why not?
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Not only was the impact of the new program being felt at the building level, but Bart and Melinda's undertakings were being recognized throughout the district. Inservices were an additional opportunity for the novice change agents to spread the good word of their successful program. Melinda commented about a specific in-service opportunity she and Bart had the pleasure of being involved with.

The whole district had an afternoon in-service on the Hispanic culture. We got to do a presentation on our program there. Our focus was on minority gifted, targeting minority students for gifted programs. Quite a few teachers came to that one.

An air of confidence was very much present as the two shared their experiences among the network of project staff and participants. They became quite eager to share the story of their success and, specifically, the success stories of the students they were serving.

Bart and Melinda, beyond the immediate changes they saw in students and their teaching, saw changes in their roles at the building level. Relative to students, the pair saw their program as the first steps toward at least a preliminary impact on the gang problems that were facing their community. Identifying kids who could "get lost in the cracks and maybe not even finish high school" and recognizing and valuing their talents might have long-range effects. They also saw an impact on the teachers, and a rethinking as to what "giftedness" meant. Both also saw themselves being recognized as leaders in the building and in the district. The opportunities to serve as inservice presenters were new to each of them, but they quickly grew comfortable with the new roles. Melinda comments on her new role as "novice expert:"

Well this past year I wasn't content in just teaching a lesson. I wanted to plan more. I think it's frustrating when you don't have that time and, you know, it takes a lot of time to plan. I didn't throw things together as quickly. I really put a lot of thought into it. I spent a lot of time looking at other materials out there...talking to other teachers...showing them what I had...

giving them ideas, borrowing ideas from them. Before I went [to the training] I felt more like I just did it. [This year] I felt I pulled more from my staff to help out. We have a really cool staff and we've always shared and helped each other out. For some reason I felt that I was more available for the teachers. You know, provided more information, more input into things. Like when we would meet with the fifth grade teachers, I really felt I had a lot more input. They took a lot of my advice and I shared a lot with them. Before when we met, we just talked about what we were doing...Also I found teachers coming up to me and giving me things. "You'll like this," "Try this, I used this this morning and it's good." I was also getting a lot of materials from the teachers that I felt wasn't there before. I don't think that we didn't mean not to do that, we just never made a point of doing it.

Bart and Melinda, with the assistance of the teachers, began generating "waiting lists" of kids who were now being looked at in a very different way. In one specific instance, a classroom teacher was anticipating a future placement of a student who had just been moved into her classroom from an ESL setting. This was quite a new way for the building staff to look at a non-English speaking child, and credit for the heightened sensitivity stems back to Bart and Melinda.

Finally, the district itself was beginning to evaluate gifted education. Melinda offered this perception.

I think we've probably stirred them [district] up a little. I think we've gone in and we've asked questions that they couldn't answer. So I think they're looking at trying to answer those questions on change. It may be slow in coming, but they're aware that they've got to do something and I'd like to think that we've helped them become aware.

Melinda, Bart, and Kelly had a lot to be proud of as the year ended. A majority of their plan had been successfully implemented, they had been able to overcome the challenges of scheduling, and they had provided a special year for two groups of students. But they were all aware that, even as a threesome, they could not have done it alone. Melinda summed up what all agreed was the key to success.

I think you need support from your staff and administration to help with your plan. I think you need to start small and then build up toward big. I think if you take on too much too soon, you'll fail. I think having a team was great because you've been there to help each other out the whole way. You can ask each other questions like, "What are you doing?" and "How did this work?" "Have you tried this?" or you remind each other of things. Being in constant communication with others lets you know you're not alone.

What does this case study tell you about what contributes to implementing new programs in schools? What would you do with what you have learned from this case study?

In this case study Granada (1997) provides a picture of two teachers involved in a school change project and in particular what happened with these two teachers following their Jacob Javits training. How does someone like Granada go about conducting a case study? The rest of this chapter is intended to answer that question.

Doing a Case Study

Case studies are often viewed as an easy way to do research. All the researcher needs to do is make some observations and conduct some interviews and then write the story of what happened. As with most research approaches, case study work is actually quite demanding requiring reflective and very focused research efforts. Reflecting on the case study presented above, let us have a look at how these studies are constructed.

Selecting a Site

The researcher's purpose in case study research is not to study everything going on in the site, but to focus on specific issues, problems or programs. In any event, there must be boundaries set before the study begins. One way of bounding the study is through the use of research questions. These questions will continue to focus the researcher throughout the study. Yin (1994) talks about defining the "case," therefore the first step in bounding the case study is to decide on the case. The case can be about an individual, a group of people, a school, a school district, decisions about programs, a program implementation process, or an organizational change or other issues. And, of course, they could be about issues and programs outside of education. Once the case is defined, the unit of analysis needs to be determined. The unit of analysis is defined as where the researcher obtains the data for the case study. If the case study is about an individual, the individual is the unit of analysis. If the study is about a school district, the unit of analysis is the school district and its policies. These decisions are made at the same time the research questions are being formulated. In the Granada case study the decision was made to study two teachers at one school. Another decision to be made in the bounding process is the length of time for the case study investigation. Topics for case studies are dynamic topics that can be studied for years. In conjunction with determining the research questions, the definite times of the beginning and end of the study need to be set. If these times are not established in advance, there is a danger that the researcher may think that one more visit can get produce additional interesting data. This can go on forever and result in no useful conclusion to the study. The time length in the bounding of the Granada (1997) case study was one year. Of course, the story continued and still continues today.

Research Questions

Once the researcher becomes involved in the case study at the site, the researcher will be tempted to focus on other issues rather than those planned. At a school site location, for example, the principal may tempt the researcher with other problems the school faces or stonewall if the topic could result in a negative view of the principal or the school. The teachers in a school always have a current problem they are focused on which has nothing to do with the researcher's interests, so the researcher has to work to re-focus the teachers' attention on the topic of study. Observation in a classroom provides many temptations to draw the researcher's attention from the focus of the study. Each issue can appear to have a life of its own, drawing increasing attention as it becomes more complex

and intriguing. Stake (1995) feels the temptation to be drawn away from the topic of study is one of the most serious problems in case study research (p. 24).

The researcher needs to be entirely focused before beginning to collect data at the case study site, but at the same time, flexible enough to see answers to research questions when they were not expected. The research questions provide this focus. The research questions can only be developed with extensive reading. As Yin (1994, p. 9) points out: “Budding investigators think the purpose of a literature review is to determine the *answers* about what is known on a topic; in contrast, experienced investigators review previous research to develop sharper and more insightful *questions* about the topic.”

In Granada’s (1997) case study, he needed to be well-versed in the topics of change, change agents, use of teacher training to initiate change, giftedness, culture and education interaction, and giftedness and culture interaction. These are some examples of research questions Granada used to guide his study.

- Did the participants selected for the study change over the course of the school year during which a gifted program was to be initiated?
- If the changes in participants selected for the study took place, to what extent did those changes affect others?
- How effective were participants selected for the study as change agents?
- If the intended changes did not take place, what may have contributed to the lack of change.

Most case study researchers start with a general issue and, as background research evolves, the researchers try to generate a list of 15 to 20 questions focused on the issue. These questions then need to be pared down to a few questions to bound the study. As the researcher begins to work with the site, other questions may arise. The research questions must set the focus of the study, but the researcher needs to keep in mind that case study research is an evolving process. The researcher must be willing to allow questions to change and new ones to evolve as long as they relate to the focus of the study. An example given by Stake (1995) illustrates this. An original question was: What do the parents want from the music program? An evolved question was: What is the extent of disagreement across this music faculty regarding the teaching of music courses required of all students? The evolved question arose during teacher interviews. When case studies are conducted for examining innovative programs, the researcher needs to be able accommodate the program development.

When the program is implemented it frequently develops in a manner that was not anticipated by the practitioners. The practitioners often adjust the program when various aspects of the program do not work as planned. With this dynamic approach the researcher is able to adjust the research questions and still maintain the focus of the study (Patton & Westby, 1992).

Why might the development of well-researched and refined questions be important in case study research? What do you think could go wrong if the student questions were not carefully defined?

Data Sources

Once the research questions have been determined, sources of data for each question should be determined. The case study researcher as a qualitative researcher needs to provide for triangulation (e. g., multiple sources of data and multiple methods for each question). Yin (1994) states that a major strength of case studies is the opportunity to use many different sources of data. In Granada's (1997) study he used an interview with the principal, separate interviews with the two teachers, classroom observations, interviews with students, and the school plan document created by the two teachers during the summer training. This is an excellent example of seeking multiple sources and multiple methods. Not all of these sources of data were used to answer each research question, but each research question did have multiple sources of information as well as different methods to obtain the data. When initially planning a case study some researchers create a chart listing each research question and the planned data collection methods and sources. For example using a research question from Granada's (1997) study, the following chart could be developed.

Research Question	Possible Methods and Sources of Data
Were the participants effective as change Agents?	Interviews with participants
	Interviews with school principal
	Interviews with other teachers in the school
	Examination of the school plan document

The use of multiple methods and multiple sources as forms of triangulation makes case study findings not only more comprehensive, but also more complicated because so many perspectives are represented. And finally, all categories of data need to be reviewed by the researcher as possible data sources (Yin, 1994). A review of some categories of data follows.

How does triangulation work and what contribution does it make to case study validity?
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Documents and Records

Examples of documents that might be used are letters, memoranda, meeting minutes, proposals, progress reports, grant applications, action plans, curriculum plans, lesson plans, and articles appearing in the media (in print or on tape). Examples of archival records that might be used are organizational charts, budgets, census-type data collected about the site such as students in free or reduced cost lunch program, ethnic population distribution of a school, personal records such as calendars, telephone notes, and e-mails.

All of these documents and records were written for a different audience, so accuracy of the information needs to be verified, even with the census-type data. These sources of data can be used to collaborate or elaborate data from other sources. They are also valuable in suggesting directions for interviews and observations. In the Granada (1997) study he reviewed the summer training the two teachers had participated in, the site action plan the teachers developed, and original agreements made among the grant directors, the school principal, and the two teachers. These provided directions for his on-site interviews and observations.

Interviews

Interviews are one of the richest sources of data in a case study and usually the most important type of data to be collected. Interviews provide the researcher with information from a variety of perspectives. Yin (1994) states that:

Overall, interviews are an essential source of case study evidence because most case studies are about human affairs. These human affairs should be reported and interpreted through the eyes of specific interviewees, and well-informed respondents can provide important insights into a situation. They can provide shortcuts to the prior history of the situation, helping you to identify other relevant sources of evidence. However, the interviews should always be considered *verbal reports* only. As such, they are subject to the common problems of bias, poor recall, and poor or inaccurate articulation. Again, a reasonable approach is to corroborate interview data with information from other sources. (p. 85)

Early decisions need to be made if the interviews will be open-ended, focused and with individuals or small groups of people. These are important decisions and final decisions will be based on the interviewer's style preference, length of time for the study, and the research questions. For example, group interviews offer more data from more individuals in less time than a single interview. Confidentiality, however, is sacrificed. As you read in his case study, Granada (1997) relied heavily on interviews to provide information. His important source interviews were conducted repeatedly with the same principal and teachers throughout the school year." He also interviewed students and other teachers.

Direct Observation

Observations are another important source of information in case studies. This is especially true in case studies involving classrooms or schools because the interaction of individuals cannot be understood without observation. Early decisions need to be made about observations including the number to be made and whether the observer and observed feel the researcher has received an accurate picture of the situation. Another

decision involves whether to use observational protocols or more informal data collection. Observational protocols point the observer in specific directions and usually require tallies of different types of observed behavior. These tallies are a source of quantitative data. Deciding this often depends on purpose and study questions. Granada (1997) conducted several classroom observations of each teacher. He used both qualitative data of a general descriptive nature and quantitative data of a specific nature related to gifted education.

All of these sources of data are usable in a case study. In developing the plan for the study the researcher will need to determine which sources of data are feasible. Many times this feasibility is determined by the amount of money to support the length of time the study will be conducted. Case studies can be conducted over time with the researcher visiting the site to collect data for a few days at a time over a school year, or the researcher can spend one-to-three weeks at a site collecting data each day to complete the study. It is most important that the researcher remember that triangulation requires multiple sources of data and multiple methods in answering each question. Findings in case studies are more likely to be trusted as true because of the use of triangulation of methods and sources. This triangulation also addresses any problems with construct validity (Yin, 1994). In case study research, construct validity refers to the extent answers to study questions are considered to be accurate representatives of the case.

Gathering Data

Gathering data begins when the background reading/research and planning begin. Everything read and discussed has influence on the researcher. Even before the formal data collection the researcher must visit the site to establish understandings between the researcher and those being studied on how the research will be conducted. Some of these understandings are:

- what is the purpose of the study
- how the study will be conducted
- how will confidentiality be established
- who or what will be observed
- who will be interviewed
- what documents need to be available for review
- who will review preliminary findings to verify the information
- who will receive the case study final document

Adding to all of this, the researcher tries to establish trust and rapport with those at the site. The initial personal contact should begin to allow the researcher to establish empathy with the individuals in the study. Establishing empathy is necessary for the researcher to be able to understand the feelings and experiences of individuals being observed and interviewed. Patton and Westby (1992) feel “the capacity for empathy...is one of the major assets available for human inquiry into human affairs” (p. 11). If, over time, the researcher can establish a growing level of empathy between the researcher and those being studied, this relationship will provide the researcher with growing access to

information. Those being studied will allow more open, true-to-life experiences in observations and provide more open, honest dialogue in interviews. Depending on the sites selected these trust-building meetings may need to be held with people in a variety of positions. In the case of a school, the central administrative level must agree, the principal must agree, and the teachers must agree. Agreements also may need to be obtained from the teachers' union and school site council or Parent Teacher Association. During all of these negotiations the researcher is developing some beginning understandings about the site and is informally collecting data. In Granada's (1997), study, even though he knew the two teachers well from the summer training, he had to establish his role as data collector and establish an open relationship with the principal.

What is your definition of the term "empathy"? What makes its development so vital in case study work? What are the implications of being to empathetic in case study work?

Understanding the various power arrangements is essential in comprehending how a school operates. Since case studies are often viewed as a form of evaluation, the researcher must always keep in mind the natural tension that is created by the fact that someone is being studied. Also, if the researcher is observing in classrooms, it is important to remember that most teachers only experience when they are being evaluated. Depending on each teacher's experience, observation of the classroom may be viewed positively or negatively, but in any case, it is usually viewed with apprehension.

Each day after the data is collected, the researcher needs to review what information has been collected and how various pieces of information need to be verified. Most researchers keep a diary of the day's events or begin writing the case study. Most important at this point is reflection. Stake (1995) argues that expertise in case study work comes largely through reflective practice used in doing case studies. Granada (1997) spent numerous days over one school year at the site collecting data. Each evening he would review his interviews and observations from that day deciding which questions needed to be asked during the next day's interviews to verify or clarify his understandings. For example, in an interview with the principal, she talked about an upcoming in-service the two teachers were planning. Earlier in the day Granada had interviewed one of the teachers who had not mentioned the upcoming in-service. As he reviewed his notes at the end of the day (knowing he would interview the other teacher the next day), he made plans to ask the teacher about the in-service, to learn about their thinking during that experience.

Analyzing and Interpreting the Data

At this point the case study researcher is faced with reams of data. Sorting out the data and making meaning can be likened to solving a mystery. The researcher acting as detective must search through the clues (data) to follow threads of evidence (patterns of consistency in the data) to a final decision. Reflection becomes as important for the researcher as it would be for the detective. Patterns that emerge when all the data are reviewed are important, but occasionally a single occurrence provides meaning and makes sense of all the patterns. Therefore, good case study researchers do not rely on repeated instances as the only means to reveal meaning.

The research questions must be kept foremost in the researcher's mind. They are the threads to be followed. There will be many pieces of interesting and exciting data that do not relate to the research questions in any way. This data needs to be set aside while the researcher focuses on the research questions. The intention of a case study is to answer questions, not to provide a complete picture of the site. Using the research questions as a guide, all of the data needs to be taken apart while the researcher is looking for relationships and then reassembled to tell the story of the case. This process requires data reduction as the data is analyzed with the purpose being to sort, focus, and reorganize data that allows for drawing final conclusions. Most researchers develop a system for sorting and categorization that results in a coding system. The sorting, re-sorting, organizing and reorganizing, labeling and relabeling of data should lead to a set of categories that answer the research questions in a meaningful, thick description that provides a summarization.

Sometimes a pattern of important information that adds to the complete description of the case is revealed while collecting or analyzing the data. The research questions developed prior to the collection of data did not anticipate this information. These unexpected or unintended results need to be addressed in the analysis of data. For example, in Granada's (1997) study there was very strong support by the other teachers in the building and the school principal. This was unanticipated. Certainly the two teachers expected support, but not to the degree revealed by Granada.

This is very inductive work. It can be thought of as a series of puzzles to be worked through with the researcher going back and forth through the data with an idea searching for substantiations of the idea.

How would you organize and sort through data from a case study? Are you familiar with any computer programs that can assist in this task?

Writing the Final Report

Experienced case researchers suggest that much of the writing should be done during the data collection stage (e.g., Stake, 1995; Wolcott, 1990; Yin, 1994). This is more difficult for novices, but some parts can easily be done early such as the site description and the explanation of how the study was done. The researcher needs to clearly understand who the audiences are for this research. For example, in a school setting writing for administrators and writing for teachers or even parents can each require a different writing and presentation style. There are a variety of styles the final reports can follow but all must include certain parts.

Near the beginning of every case study there needs to be a rich description of the site. If case study research recognizes the individuality and uniqueness of each case, there must be a clear understanding on the part of the reader regarding what this place is like. This might be called a unique sense, a visual image, and a personality of place. Granada (1997) has such a description near the beginning of the case study. Since the two individual teachers are an important part of his study, he spends more time trying to acquaint the reader with these main players than describing the physical setting of the site.

Since much of the collected data is analyzed through the researcher's lens, the researcher needs to provide information concerning the researcher's perspective and relationship to the case. Was the researcher hired to conduct a case study? Is this a subject the researcher has studied during a life-long career or is this a study where the researcher is only familiar with the subjects through documents which have been provided? The audiences need to understand the researcher's role and perspective if they are to accept the findings.

When the final report is in draft form an important procedure needs to be employed. The researcher should provide the case study participants with a copy of the draft and ask them to corroborate or question any of the information or assumptions that have been drawn. Not only is this a professional courtesy, but is part of the validity process referred to by some researchers as member checking. Often case researchers will type out interview results and member check those with corresponding interviewees soon after the interview is done. Sometimes the researcher will find there is a misunderstanding in the description that can be eliminated by using more explicit language. Other times there is definite disagreement between the researcher and the participants on the researcher's assumptions or interpretations. Some researchers decide to eliminate the assumption, while others keep the report as it is but publish the participants' opinions as part of the final report. If there is a disagreement about information in the case study, the researcher needs to re-work through the issue. This may mean searching for data to corroborate the information in question. In this search, participants may remember information that was not shared with the researcher originally. This process of member checking not only increases validity but adds to the overall comprehensiveness of the case study.

Case study research can be all-consuming for the researcher. Since it is an in-depth study it is highly personal. As stated at the beginning, case study research results in a wonderful story to read, but it is not quick and easy research to conduct. Indeed, many case study researchers talk and think about the difficulties and stress of conducting case study research (Granada, 1997; Stake, 1995; Yin, 1994).

In your estimation, how is case study research distinct from other approaches discussed in this volume? What reasons might you have for conducting this kind of research? What challenges would you find in designing and implementing this research approach? Would you want to do case study research? Why or why not?

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