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## Playing with Qualitative Research: Designing a Research Project with Diamonds and Venns

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## **Playing with Qualitative Research:**

### **Designing a Research Project**

#### **with Diamonds and Venns**

**by AnnaLynn Schooley**

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As a doctoral candidate at the "all but dissertation" point in a Marriage and Family Therapy program, I am struggling with the process of defining and executing a research project to complete my degree. My struggle is to make a transition from the class work projects that require a relatively short amount of time and labor to the overwhelming prospect of creating a multi-chapter book that will take a minimum of a year to complete. I need to find ways to help me structure my thinking so that my dissertation will have continuity.

Since I cannot keep the entirety of such a large project in mind at one time, I need ways to nail down parts of my research design so I can play with the details of another part. At the same time, I do not want things so set in concrete that I cannot adjust them if I need to do so. In order to work out some ideas for myself, I will present some conceptual tools that have been field tested by past graduates of my program as they completed their dissertations.

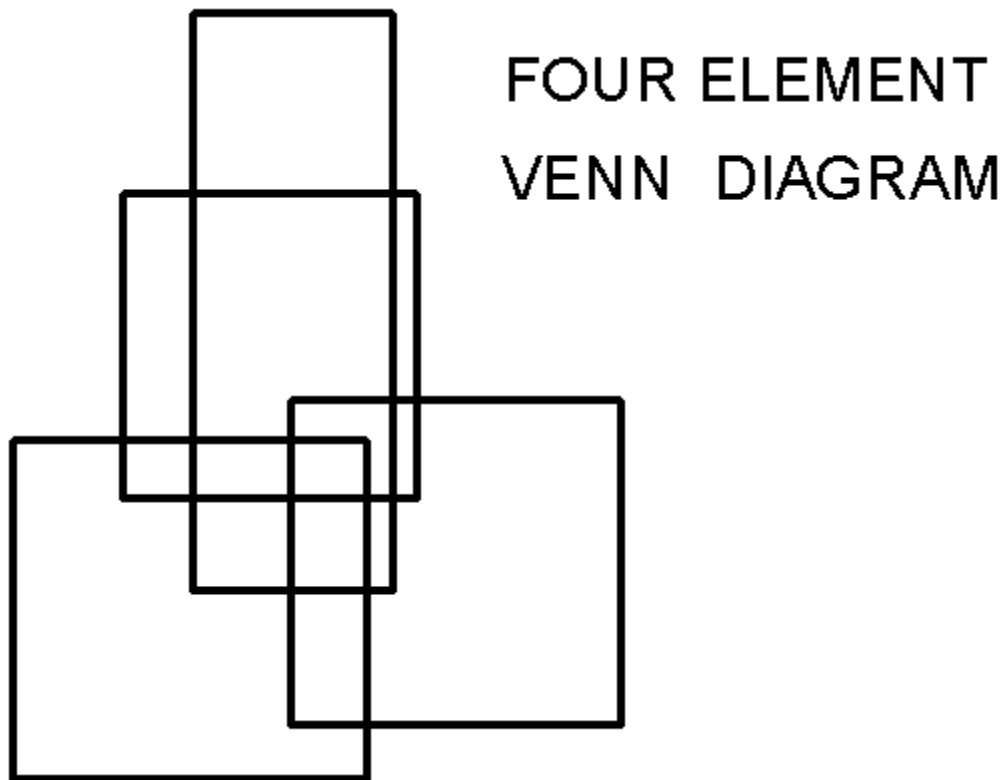
Similar tools are used in many fields. My father teaches computer programming. He has shown me how programmers work out their ideas using geometric shapes to represent the various decision points in a proposed program. Each individual part, indicated by a single circle or square, is linked to and constrained by the decisions that came before it and come after it. Such flowcharting then becomes the blueprint for the actual program. A programmer must write a detailed series of commands in a computer language for each of the squares and circles of the flowchart until the program is completed.

Like a complex computer program, the design of a qualitative research project is sometimes made easier by breaking it down into smaller components. When trying to fit the parts of a project together, a picture is not only worth a thousand words, but may become many thousand words. Miles and Huberman (1994) suggest using displays as a way of ensuring that each step in the data collection, methodology and analysis of a research project fits together to create a logical and cohesive whole. They state that "at the proposal stage and in the early planning and start-up stages, many design decisions are being made--some explicitly and precisely, some implicitly, some unknowingly, and still others by default" (p.16). While trying to entertain various research project ideas, I have found two "maps" that have been useful tools for playing with various design decisions: Venn diagrams and Chenail's Research Diamond. These conceptual tools assist me to evaluate the feasibility and coherence of a project design and guide me in the various steps of the research.

## Venns and Diamonds

Venn diagrams are a quick way to identify the major methodological and topical components that will need to be explored and explained in a project. Borrowed from set theory in mathematics, Venn diagrams are a visual display of partially overlapping circles or squares with several areas where each pair of figures overlap with one area where all the figures overlap. Each Venn square can represent a main topic area of literature (see Figure 1). The literature common to two or more areas will become the foundation for my new project, located at the junction of all the areas. This diagram can rapidly help me focus on the areas of a literature search I will need to place my work in the traditions and knowledge of my field. When in the myopic process of data collection, reduction and analysis, it is easy to forget to account for each major component. At each stage of my project, I can refer back to the Venn diagram to ensure I have not overlooked an area.

**Figure 1**

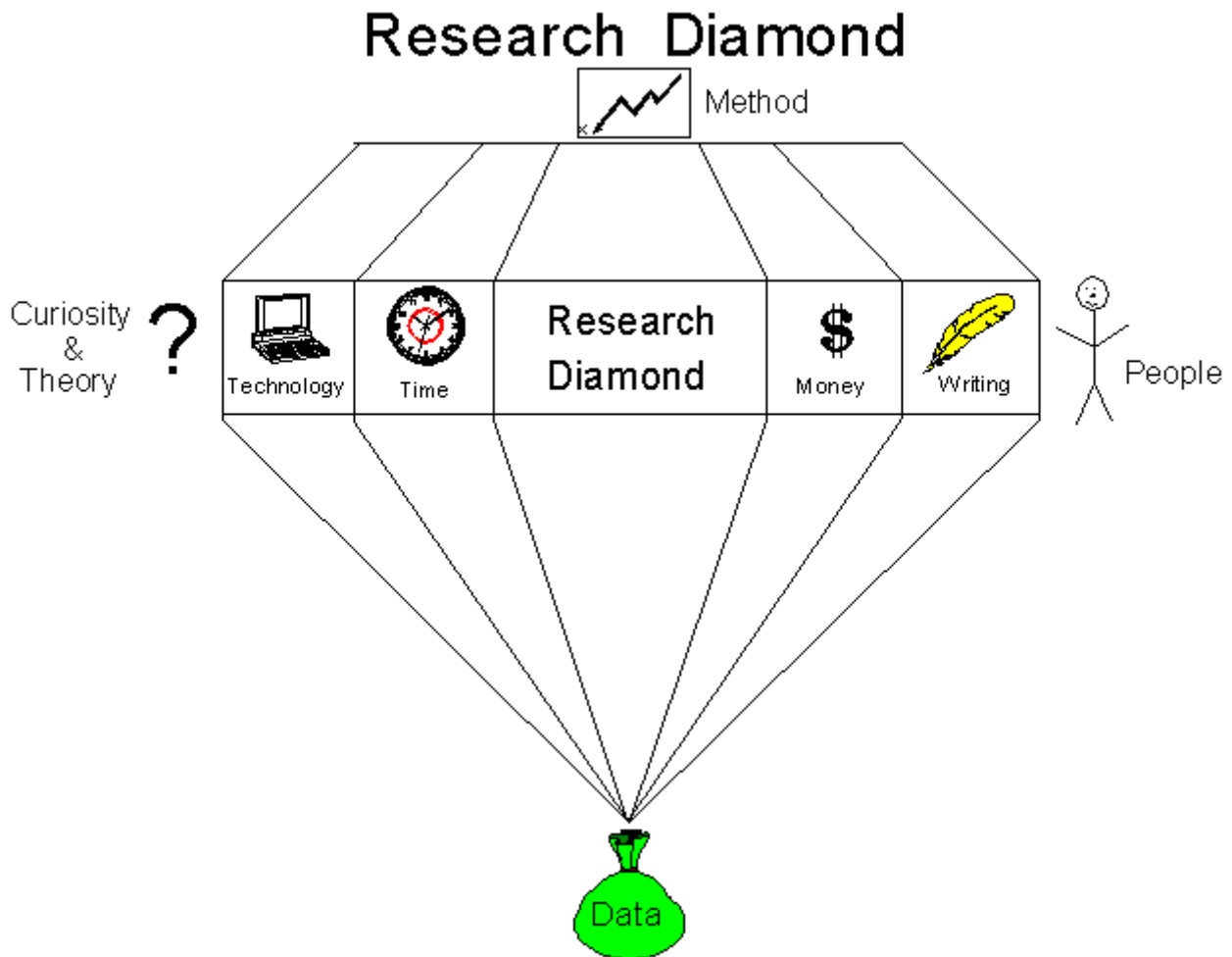


Initially, I will probably look at everything I can find in each broad area until I get a sense of what has been done by other researchers. As I select the broad topics that fill each Venn square, I will begin to narrow my focus to literature that addresses two or more of my broad interests until I have collected those writings that include all of my selected topics and select out literature that I now decide is irrelevant to my project. Once I have narrowed my search to the center of the Venn diagram, I still have virtually an unlimited number of possible projects that I can design.

I may need to make another Venn diagram to account for the more defined topic areas that resulted from my initial sorting through of the literature. This new Venn will represent a much smaller portion of the available literature constrained by the decisions made during the previous sortings. It will also depict a more clear and defined playing field in which I can design my research project.

A second map for playing with research decisions is Chenail's Research Diamond (see Figure 2). Each "point" of this eight "carat" diamond represents an area for consideration: data, method, curiosity and theory, technology, time, money, writing, and people. Each point must be accounted for in the final design and described in the text of the document. By accounting for each needed point of the project, I hope to reduce the chance of making unknowing or default decisions that could cause difficulties later in the actual execution of data collection and analysis.

Figure 2



Each point in the diamond may need to be considered at several levels and will be affected by every other point in the diamond. Consider the technology "facet." I must decide what technology I will use to collect data, such as audio or video tape, but this decision is constrained by many things: what additional equipment must I get to make and transcribe such recordings,

what can I afford to buy and what must I borrow, will I have the time to transcribe recording myself or will I need to find someone to do this for me and can I afford that, or will my informants even allow me to record them, which may force me to fall back on paper and pencil recording of data, which may prompt me to reconsider the whole thing. If I made the decision that using a scanner to input information into my computer will save me time, will I end up spending more time and money acquiring the equipment and figuring out how to use it?

I need to consider the amount of time I want and am able to devote to my project. Is there a time limit within which I must complete the research so I minimize the conflict with the various people involved: informants, advisors and intimates. Aside from the cost of the technology that may be involved, can I afford to devote all of my time to completing this project, or must I work to pay the bills and attempt to carve out time from a job to write my research?

My selection of methodology will similarly constrain and guide how I can choose other facets of the research diamond. If I have done my work in narrowing my focus using the Venn diagrams, I will know what has been done and what gaps in the field are ripe for me to fill. Even if I know a particular method of data collection and analysis well, I need to ensure that the method will address the research question about which I am curious.

The data that I will eventually analyze will have been created with particular technology, costing a particular amount of time and money, with a particular set of informants, using a particular method to answer a particular question. This process of decision making will occur several times as I then consider each facet of the diamond in respect to how I will analyze then write up the research project.

By holding some decisions stable, I can check the map for those decision points that will need to change to make the project feasible. This process of making decisions and testing out the constraints of each component allows me to play with the ideas without committing to anything. It is much easier to make major changes to the research design as mapped on the Venn diagrams and the research diamond than after I have already collected several hours of tapes or journal entries. Roadblocks and required equipment will also become more apparent when I plan out each step in a display.

To put these maps into action, I will play with a research idea by walking through the maps and thinking out loud about each decision. As I design a project, the first decisions will limit the decisions that follow. When I stabilize some decisions, others will need to be changed because they no longer fit. This see-sawing between stabilizing and changing portions of the design will go on throughout the entire process until I move the project from a vague idea to a completed design. I use the structure of the maps to remind me of the parts to which I have not attended and to ensure all the parts are accounted for. Both maps also help me to focus on the first steps that I will take.

### **Proposal Project: Residential Treatment Facility**

I will start with a general interest in family therapy and larger systems. Three areas in which I have some background are community mental health agencies, foster care, and residential

treatment facilities. All three of these areas could be found in the overlap between the squares representing family therapy and larger systems. To investigate all the possible literature in this combined area would be prohibitive. However, if I limit the area of family therapy to a particular clinical model and the area of larger systems to a single type of agency, I might find too little information. If I consider one area broadly--family therapy--and one area narrowly--residential treatment facilities--I can approach the literature in the field with more focus.

With some areas stable, I ask myself "what part of family therapy in residential treatment facilities do I want to study?" I could look at how family therapy is done in a particular facility. It might be interesting to explore how families of children in a facility perceive the effectiveness of the family therapy they receive. I could design a research project to describe how a particular facility decided to incorporate family therapy into their program, or how they accomplished that transition. Since training and supervision are also of interest to me, I could offer to teach a family therapy model to the staff of a facility and document what happens, to either the evolution my training or the affects of the teaching on that facility. For any of these ideas, I need to go back to the Venn diagram and include the pertinent general areas.

As I work to narrow my topic focus toward the center of the Venn diagram, I remind myself that I am not yet wedded to any decision. With each circuit of the Venn diagram, making one area broader and another narrower, I come closer to forming a research question. At this point, I need to look at the literature that addresses any two, any three, and all four of the general areas. There may be ideas from what others have done that I want to incorporate into my design. Other writers and researchers often suggest needs for further study that may provide a direction that will fit for my project. Noting what they chose for each decision point can serve as a guide to the potentials and pitfalls of my own design. Once I have decided on the specific question, I can move on to other decisions. As the question or area of curiosity is one of the points on the research diamond, this can be the bridge between the maps. I can now begin to explore other points of the diamond to move toward a more fully developed research design.

I will start with the easiest points, time and writing, which are basically implicit: I need to write a dissertation in order to graduate, and I have four years in which to complete my degree before my course work is invalid. If I were only interested in producing an article, I would be more likely to select a smaller portion of the topic area or otherwise focus my decisions for a less work intensive project than would be expected of a dissertation or book. If I had unlimited time, I could consider a longitudinal study that would take more than four years to complete. If I were under contract by a federal or state agency to produce a study, I might have less time and would need to narrow the focus to specific, simple, quantifiable questions. Since I have four years and am expected to produce a large written document, I will leave myself open to selections on the research diamond that require appropriately significant amounts of time and effort while eliminating both the longest and shortest paths to a completed project.

I know I want to do qualitative research, so that aspect of the methodology is firm, but all the other points of the diamond will affect which specific qualitative method I select. Each decision I make is increasingly constrained by the limits of the previous decisions. Decisions about people, money, data, and technology are next.

My mother is a clinical director of a residential treatment facility for teenagers. Ignoring the ethical considerations of that dual relationship for the moment, I know I would have an excellent chance of gaining access to the people working for and served by her facility. Now I need to decide which people I want to study: staff, residents, the residents' families or some combination. To make this decision, I need to look at my curiosity/question point again. I could take a broad stroke approach and consider doing an ethnographic study as a participant/observer (Spradley, 1979), but that would require that I live near the facility and spend many hours hanging out with the staff and residents. Since Mom's facility is in a different state, ethnography is not a likely methodological choice at this point.

In recent discussions with Mom, she has been interested in incorporating systemic family therapy into the facility's clinical philosophy. If I focus on a training/consulting question, I could stabilize several points on the diamond. The facility might be willing to pay for my transportation on a quarterly basis for my services as a trainer and consultant. Mom would provide bed and board. Assuming I could get leave from my job to spend long weekends at the facility every three months or so, I would have the money and time points for data collection somewhat covered.

I have read some literature about residential facilities using systemic family therapy ideas with all the staff and residents (Schultz, 1992). I could focus on the staff as research subjects and study how they perceive their jobs and their relationships with the children in the facility. Depending on the methodology I select, I might look at how the staff report about their jobs before and after training, how they experience the process of the facility changing clinical philosophy, or how they work with the children as a result of the training in systemic family therapy. In any case, I seem to be moving toward interviews as my principle data collection method. I imagine that I will need tapes and recording equipment to capture the interviews with staff that will comprise the bulk of the data for the project.

The exact methods for data collection and analysis are still open for revision. My research question will determine the sort of interviews I will have with my informants and the type of data I will collect. As I swing around the research diamond again, I need to ask myself how long each interview should take (time), what will my informants be willing to tell me (people/data), and what recording media can I use (technology/money). How I design the interview format will depend on what I must keep stable and what is open for change. The amount of time I can spend with each informant will constrain the data created, and, therefore, the analysis to follow.

Before I collect data, I must decide how I plan to analyze what I collected. The analysis of taped interviews generally requires that they be transcribed. Time factors will constrain to what level of detail I can transcribe the interviews which will constrain the methods available to analyze the data. Depending on whether I am interested in what people say about a topic or how they talk about it, I will need to adjust the collection methods I use and the type of interview template (Weiss, 1994) I create. Each of these decisions affects which analysis methods I select to make sense of the data I gather.

As money runs out and people move on, I may have to reevaluate the style and structure of the document I write if I find I have too much information for an article or not enough for a



dissertation. With each alteration to fit my methods to my research question, I will need to reconsider costs, time, technology requirements and subjects.

I will propose each of the eight points of the research diamond and see what shape my design begins to take. I have four years to complete the project (time), and the final document will be a dissertation (writing). I will provide six months of training (time) in solution focused family therapy (theory) to the staff (people) with periodic consultation. When this is concluded, I will interview (method/data) at least ten staff members of one unit (people) at the residential treatment facility. The interview formate will be focused on the changes the staff notice in their work with the resident children (research question).

The interviews will be done in a reflecting team (Andersen, 1991) style with half the group observing while the other half are interviewed. The groups will then exchange places so that all are interviewed (method). I would like to triangulate this data with interviews with the supervisors and some of the children (method). The group interviews will be done two times with a three month interval between them (time). All interviews will be taped (technology) and transcribed for later analysis (time/money). In the analysis portion of the project, I will look for both common themes and exceptions in how the staff perceive the effects of the training on their daily interaction with the resident children (method).

As I begin the actual data collection process, I will probably find new problems in one or more of my design decisions. This will send me back to the Venn and diamond maps to rethink and rearrange the pieces of the puzzle. If I fail to check the fit of the other pieces after a change in one, I risk stumbling over these gaps at later and more critical moments. Consistent with the recursive nature of qualitative research, selecting the various points will send me around the research diamond several more times before and during the actual data collection process before all the decisions gel into their final form in the written document.

The topic areas for the Venn diagram will also need to be revised to account for the decisions I have made on the research diamond. Nevertheless, I can proceed with more confidence and less panic because I am beginning to get a picture of this project, as the puzzle pieces fit together. There is still no short cut to designing a qualitative research project, but rather than become overwhelmed with the enormity of this task, I can map out each component, utilizing Venn diagrams and the research diamond, to display what I have and what I still need to explore. Such maps will serve throughout the project to ensure that each component is considered no matter how many changes I make along the way.

The experience of walking through and playing with a research design will also allow me to bring more confidence to subsequent projects. As others before me have successfully completed dissertations and other research projects utilizing Venns and diamonds, perhaps this ramble through design maps will be useful to others as a method of providing structure to their design decisions.

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### **Author Note**

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