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ABSTRACT

The progress of a novice ethnographic researcher is traced from problems associated with a pilot study through the production of a final draft of her dissertation--an observational case study. Focus is on the data analysis process, the development of conceptual maps leading to an emergent grounded theory, and writing the dissertation. Research questions center around the existence of teacher expectations and the subsequent effect that expectations may have for 4-year-old children's future school success. The study was conducted in a private day care center in a mid-sized university community in the southeastern United States. Three prekindergarten classes (54 children and 3 teachers) participated in the preliminary study conducted in April through June of 1990, and 3 teachers (1 from the original study) and 48 children participated in the dissertation study in August 1990. Many changes in the researcher's data collection and analysis procedures resulted from the preliminary study as her naive perspective and idealistic expectations about student-teacher interactions gave way to a more realistic approach, and the research questions were refined and modified for the dissertation study, along with a revised interview and observation process. Writing the dissertation and drawing up a conceptual map of the emergent theory clarified the findings that teachers of 4-year-olds do have expectations for behavior and academic performance, and do treat children differently according to their expectations. Three figures present the conceptual map as it developed. (SLD)

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Themes to Theory
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Themes to Theory:
A Data Analysis Process

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RUNNING HEAD: Themes to Theory

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Abstract

Beginning ethnographic researchers learn to become more careful and thoughtful investigators and writers through trial and error. While conducting a preliminary study and a six month observational case study, I struggled most with data analysis and writing the story of my findings. This article attempts to tell the story of my data analysis and writing processes with the hope that novice ethnographic researchers may learn from my mistakes and frustrations. A brief background of the study focus (i.e., teacher expectations for four-year-old children), the site and participants is shared. Three different conceptual maps derived during different stages of data analysis are the center of the article.

Themes to Theory: A Data Analysis Process

Ethnographic researchers are faced with many difficult questions during the course of designing a study, gaining entry, data collection, data analysis and the reporting of conclusions. As a novice ethnographic researcher, I was no exception to these difficult questions, in fact, I learned many valuable lessons about ethnographic research that I will share in this article. The purpose of this article is to tell the story of my research process from problems faced in a pilot study through the final draft of my dissertation. By sharing my concerns, problems, questions, decisions and thought processes, you, the interested ethnographic researcher, may have shared similar concerns or may be seeking a way to handle a problem you are currently experiencing. In this article, I will briefly describe my study subjects, site, and research questions. I will then discuss the preliminary study procedures and problems, and how the study redefined the direction of my dissertation study which examined teacher expectations for four-year-old children (White, 1991). The main focus of the article will be on the data analysis process, the development of conceptual maps which led to an emergent grounded theory, and the writing of my dissertation.

Purpose of the Studies

Teacher expectation research has been widely conducted with kindergarten children through college students (Ashton & Webb, 1986; Brophy & Good, 1974; Haynes & Johnson, 1983; Rist, 1970; Rutter, Maughan, Mortimore & Ouston, 1979). With the increased focus on early

childhood programs and the national trend of creating classrooms for four-year-old children in public schools (Mitchell, Seligson & Marx, 1989), the existence of teacher expectations and subsequent affect that expectations may have for four-year-old children's future school success was warranted. Since this area has not been studied, I felt it was necessary to begin exploration using ethnographic methods in order to answer broad questions about teacher expectations for young children.

The questions which guided the preliminary, study were: 1) Do teachers have expectations for four-year-old children? 2) If they do have expectations, are they positive or negative in nature? 3) How are the expectations transmitted? 4) What are the expectations based upon? 5) Are the expectations academic, social or emotional in nature? As you can see, the wording and meaning of these questions reveal how naive and inexperienced I was with ethnographic research. These questions changed dramatically during the study.

Site and participants. The study took place in a private, for-profit day care center located in a mid-sized university community in the Southeastern United States. Infants through kindergarten children from middle-class homes were served in this day care/preschool and kindergarten facility. The site was chosen because it was known in the community as having one of the most academically oriented pre-kindergarten programs which served four-year-old children. Three pre-kindergarten classes (54 children and 3 teachers) participated in the preliminary study which occurred from April-June, 1990. When I began the dissertation study at the same center in August, 1990, only one of the

original three teachers was still working at the center. There were 48 children in the four-year-old program. The one 'veteran' teacher had no formal degrees or training in early childhood education, but had taught at this center for three years. The other two teachers were recent graduates of an area vocational school child development program, and the study year was their first year as a teacher in an early childhood program.

Data Collection

Preliminary study. While conducting this preliminary study, I made many changes in my data collection and analysis procedures. During this period, I learned a great deal about my personal beliefs, biases and subjectivity and ways to deal with them before I began the dissertation study. I believe the process of conducting the preliminary study was an invaluable asset to my dissertation study data collection and analysis. The broad research questions cited earlier guided my beginning observations as I did not know what I was looking for or what I would find in each classroom. I realized that I had very high ideals about quality early childhood programs and I thought I had prepared myself for what I may find in a program that did not meet my standards. I had carefully and thoroughly written down my beliefs and biases before beginning the study, thinking that was enough. On the first day of data collection, I had to leave early because I was so upset by the interactions I witnessed. During the first few days, I was not able to stay the entire time because I was either furious with the teacher(s) for the way they treated the children, or I was extremely sad and left early to cry. On some days I felt a little of both. The preliminary study was an emotionally draining

experience for me and the part that upset me the most was the fact that this center was considered the best in the area!

The preliminary study lasted nearly nine weeks. I believed that a further, more in-depth study was warranted and that this center was the best place to continue the research. I spent the summer months getting emotionally prepared for my long six month stay from the end of August, 1990 through February, 1991. I chose not to include the pilot data in the dissertation study data or analysis because I believed the data were too contaminated by my personal feelings. I did not effectively separate my observations from my reactions. In order to combat this contamination possibility in the following study, I used a journal to record my personal feelings and reactions, and a field notebook to record interactions and behaviors during observation periods. By adding the journal, I believe I was better able to separate what I actually observed from what I thought should have happened or my judgments about a child or teacher. Field notes will never be free of subjective thoughts, but the journal was my attempt to keep my feelings and personal biases from infiltrating the data.

Dissertation study. The research questions which guided the new study were: 1) Do teachers have expectations for four-year-old children? 2) Upon what information are the expectations based? 3) What is the nature of these expectations? 4) How are the expectations relayed to the children? 5) Are the children aware of their teachers' expectations? 6) Are the children's perceptions of self similar to those of their teacher's perceptions of them? As you can see, the questions changed from those of the preliminary study as I realized that a few of the earlier questions did

not make sense, were vague, or were part of other questions. While conducting the earlier study, I became intrigued with the area of children's perceptions of teacher expectations. I felt that I needed to include the perceptions of all of the participants so the last two questions were added. Not long after I began interacting with the children, I discarded the last question which dealt with the similarity between children's self perceptions and the teacher's perceptions because most four-year-old children are not developmentally able to take the viewpoint of another person or to verbalize their perceptions clearly enough for me to understand. The data collection procedure for the dissertation study was as follows:

1. An open-ended interview was conducted with the first teacher. She was asked to talk about each child and tell me anything I would need to know in order to better understand interactions I may witness.
2. The interactions which occurred in this classroom were recorded into field notes. I stayed until I reached data saturation (i.e., until the information collected became redundant; Bogdan & Biklen, 1992).
3. The interview and observation process was repeated for the second teacher, and then with the third teacher.
4. I observed all of the children interacting as a whole group during learning center activities and recess.
5. Corroborating data such as teacher's rank ordering of children and student assessment results were obtained.
6. Open-ended exit interviews were conducted with each teacher. During this time, the teachers were asked to discuss any changed witnessed with each child, if any. They were also asked to predict each child's future kindergarten success.
7. I interacted informally with sixteen children over a period of one month. These informal sessions occurred during the morning free play

period during which time I played with the children and asked questions about rules and expectations.

Data Analysis

After each field observation session (that occurred from two to three hours during the day), I reflected on the interactions and events witnessed and wrote my thoughts and feelings in the journal. The data, which were written in a field notebook, was retyped into the computer and printed out for easier analysis. (I did not use an analysis program but simply retyped the notes for clarity purposes.) As I collected data, I looked for key issues and recurrent events which became categories of focus. Data was collected to support these categories while I continued to look for new incidents (Glaser, 1978).

The data for each teacher and class of children were kept separate. I was interested in making several comparisons, one of which being the interactions between each teacher and the children. I was striving to develop a conceptual map, or an integrated diagram (Strauss, 1987) with categories and properties derived from the data gathered on each teacher. By developing a conceptual map, or diagram, I continued to ask questions, reexamine the data and develop new diagrams or maps. After each data collection period, I read and reread the data several times, developing categories for each piece of data. The constant comparative method of analysis (Glaser & Strauss, 1967) was employed. Upon rereading, some data were combined into a larger category with different aspects or properties to the category. For example, the teachers corrected behavior in two main ways; moving children to another location (e.g., asking a child to move) and using

physical contact or force to correct behavior (e.g., holding children's faces while talking to them or picking them up and moving them to another area). These two examples were properties under a larger category I named 'Correct Behavior Physically'. This process continued throughout data collection.

I was not only interested in the differences and similarities between the three teachers, but I also wanted to examine each child and how the children and all of the teachers interacted with him or her throughout the study, noting any changes. In order to do this, I made several copies of my computer printed data and began cutting apart all of the 'pieces'. With one copy, I cut apart all of the 'teacher' data, separating the pieces by teachers and placing the data in the appropriate category and property. With another copy, I cut apart all of the 'child' data and sorted by child. In some cases, more than one child was involved in the interaction, therefore I found the piece in another copy and included the interaction with the data for each child involved. This analysis procedure was especially useful when reporting conclusions, as I will discuss later.

While interacting with the children near the end of data collection, I began working on the final analysis. While analyzing the data, I had to keep in mind how I would report my conclusions in written form, but mainly how I was going to tell the story of each teacher well enough so the reader would understand the differences as well as the similarities among the teachers. This was the difficult part. I had "lived" with the teachers and the children for six months and I knew them very well, but I

was not sure if I would be able to tell their story accurately. So, the difficult and frustrating process began.

The Writing Process

Before I begin discussing how I reported my conclusions, I should describe the process of writing the literature review (i.e., Chapter Two). Before I began my preliminary study, I reviewed the teacher expectation literature which fueled my interest in the question of expectations for children younger than five. After my preliminary study, I felt it necessary to add the component of children's perceptions of teacher expectations (Weinstein, Marshall, Sharp & Botkin, 1987), which warranted another literature review. Because of this new interest in children's perceptions, I needed to find a way to tap into their ideas; therefore I began another literature search on interview techniques with young children and related problems (Hatch, 1990; Tammivaara & Enright, 1986). This review was included in Chapter Three (i.e., the methodology chapter of the dissertation). Before I decided on my interview approach to use, I piloted several methods with a group of four-year-old children, finding that the children and I were more comfortable when I simply interacted informally with them and asked questions in a play context. During the dissertation data collection, I began to notice differential treatment patterns emerging. I believed this was an important component to the data and conducted another literature review in the area of teacher differential treatment (Botkin & Twardoz, 1988; Weinstein, Marshall, Brattesani & Middlestadt, 1982). The reason I have explained all of these additional literature reviews was to make two points: 1) Additional literature reviews

conducted while in the field will enhance analysis (Bogdan & Biklen, 1992), and 2) I rewrote Chapter Two over a dozen times. Each time I thought it was completed, a new piece of data emerged which added another dimension to the study which needed to be reflected in the literature review. Wolcott (1990), in his inspirational guide Writing Up Qualitative Research, cited the wise words of Becker (1986) that encouraged me to rewrite until I 'had it right': "The only version that counts is the last one" (p. 21).

When I began to write Chapter Four (the results section of the dissertation), I was not sure how to organize all of the information and conclusions I had drawn. I had taken two graduate courses in qualitative research and methodology during my doctoral program, and three courses in quantitative research and methodology. Because there is no "correct way" or specific procedure to reporting qualitative conclusions, I reverted back to the quantitative way of thinking! Reporting the results by research questions seemed like the most logical way of addressing the conclusions. Figure 1 shows the conceptual map that was used to guide my writing of Chapter Four. All of the research questions were addressed. The dotted lines showed connections that I tried to make between the questions.

Insert Figure 1 here

This was extremely frustrating to me because it seemed like I was repeating myself over and over with each question, but I felt that I

addressed the results like I was 'supposed to'. I was about to turn in this chapter to my major professor when I realized that it just did not feel right to me. I was so frustrated because I was not sure what to do. I began asking people who had done ethnographic studies about their analysis and writing process, hoping to gain the insight and direction I needed. As soon as one person said the word "themes" to me, it all began to make more sense. I rushed home and began sketching a new conceptual map that addressed my findings by "themes" (see Figure 2).

Insert Figure 2 here

This frustrating process forced me to spend time away from my data and analysis so when I began thinking in terms of themes, the answer seemed so clear. I spent three days at the computer rewriting my findings. When I finished, my results chapter (i.e., Chapter Four) was now Chapters Four, Five, Six and Seven!

There were mainly three themes that were weaved throughout all of my research questions; how teachers relayed their expectations to children (specific behaviors), subsequent differential treatment and categories of children, and the accuracy of the teachers expectations for these different groups of children. Another theme dealing with children's perceptions was included. The creation of the conceptual map shown in Figure 2 was an exciting discovery for me. Everything fell into place and addressing the results by themes actually worked for me!

Another revelation occurred while I was presenting this new conceptual map, results, and my analysis process to an advanced qualitative research class. While I was waiting for my turn to speak, the professor was mentioning some key items for the class to look for in my study design, analysis and conclusions. She asked them to look for my 'core category' and its function in my conceptual map. A core category! I had forgotten all about a core category! How could I have done that? I was so embarrassed that I would have given anything to have left the room and cancelled the presentation. I did what I had to do: I admitted my oversight to the class and right then and there revised my conceptual map. The core category, the category by which all of the other categories and properties stem (Strauss, 1987), was obvious; how teachers relay their expectations to the children (i.e., teacher behaviors). None of the other findings would have been derived or would have made any sense if this category was not addressed first and fully. During that presentation, Figure 3 was born. The core category is at the top of the page and connections are made from that category to all of the other categories, or themes.

Insert Figure 3 here

Emergent theory. My qualitative research professor at The University of Georgia, Dr. Mary Jo McGee Brown, often said that a researcher should be able to tell the story of the study findings from the conceptual map. I kept those words in mind throughout this entire

process. When I developed Figure 3, I knew that the end was near. All of my findings, in one way or another, are included on Figure 3. The abbreviations, solid lines, and dotted lines probably do not make any sense to you at this point because the purpose of this article was not to focus on the results. Rest assured however, that I am very comfortable in discussing my study findings from this map. If I were to explain each theme, category and property to you, the map should be understandable. A conceptual map which explains it all or tells the story of the findings is an important goal of ethnographic research.

In the concluding chapter of my dissertation (i.e., Chapter 8), I addressed the emergent theory by summarizing the conceptual map components and connections. The theory is a substantive, grounded theory because it emerged from the interconnected data gathered in one particular study site (Glaser & Strauss, 1967). The previous four chapters in which I discussed the findings by themes, data were produced for every category and property cited, which 'grounded' my emergent theory. This factor is also extremely important in qualitative research; one must have evidence or data to support each claim.

Continuing Research

This investigation was the first of many that I will do in the area of teacher expectations for young children. I found that teachers of four-year-old children do have expectations for their behavior and academic performance. Children are treated differently as teachers have differential expectations. Four-year-old children are capable of perceiving, internalizing, and verbalizing their teacher's expectations.

Before I can make generalizations based on these findings, more research is needed. I am currently replicating the procedures of this study in two pre-kindergarten (four-year-old children) classrooms which are housed in public schools. One teacher has 20 years of experience and holds a bachelor's degree in elementary education. The other teacher has 7 years of experience and holds a master's degree in early childhood education. I will make several comparisons with the data collected from this study: between these two public school teachers, and between these teachers and the three teachers in the private preschool. My grounded theory will continue to grow and change with the new findings and comparisons. Further investigations into adult-child interactions in preschools and day care centers with two- and three-year old children are being planned. I hope to pinpoint specific teacher behaviors and practices which relay expectations to children, and subsequent child reactions and behaviors.

I have attempted to tell the story of my data collection, analysis and writing processes used during an observational case study into teacher expectations for four-year-old children. By giving you a glimpse of my thought processes, I hoped to spark a new thought that may lead you in a new direction with your research.

References

- Ashton, P.T., & Webb, R.B. (1986). Making a difference: Teachers' sense of efficacy and student achievement. White Plains, NY: Longman.
- Becker, H.S. (1986). Writing for social scientists: How to start and finish your thesis, book or article. Chicago: University of Chicago Press.
- Bogdan, R.C., & Biklen, S.K. (1992). Qualitative research for education: An introduction to theory and method (2nd ed.). Boston: Allyn and Bacon.
- Botkin, D., & Twardoz, S. (1988). Early childhood teachers' affectionate behavior: Differential expression to female children, male children and groups of children. Early Childhood Research Quarterly, 3, 167-177.
- Brophy, J.E., & Good, T.L. (1974). Teacher-student relationships: Causes and consequences. New York: Holt, Rinehart & Winston.
- Glaser, B. (1978). Theoretical sensitivity: Advances in the methodology of grounded theory. Mill Valley, CA: Sociology Press.
- Glaser, B., & Strauss, A.L. (1967). The discovery of grounded theory: Strategies for qualitative research. Chicago: Adeline.
- Hatch, J.A. (1990). Young children as informants in classroom studies. Early Childhood Research Quarterly, 5(2), 251-264.
- Haynes, N.M., & Johnson, S.T. (1983). Self- and teacher expectancy effects on academic performance of college students enrolled in an academic reinforcement program. American Educational Research Journal, 20(4), 511-516.
- Mitchell, A., Seligson, M., & Marx, F. (1989). Early childhood programs and the public schools: Between promise and practice. Dover, MA: Auburn House.
- Rist, R.C. (1970). Student social class and teacher expectations: The self-fulfilling prophecy in ghetto education. Harvard Educational Review, 40(3), 411-451.

Rutter, M., Maughan, B., Mortimore, P., & Ouston, J. (1979). Fifteen thousand hours: Secondary schools and their effects on children. Cambridge, MA: Harvard University Press.

Strauss, A.L. (1987). Qualitative analysis for social scientists. Cambridge, MA: Cambridge University Press.

Tammivaara, J., & Enright, D.S. (1986). On eliciting information: Dialogues with child informants. Anthropology and Education Quarterly, 17(4), 218-238.

Weinstein, R.S., Marshall, H.H., Brattesani, K.A., & Middlestadt, S.E. (1982). Student perceptions of differential teacher treatment in open and traditional classrooms. Journal of Educational Psychology, 74, 678-692.

Weinstein, R.S., Marshall, H.H., Sharp, L., & Botkin, M. (1987). Pygmalion and the student: Age and classroom differences in children's awareness of teacher expectations. Child Development, 58, 1079-1093.

White, K.A. (1991). Teacher expectations for four-year-old children: A qualitative analysis. Dissertation Abstracts International, 52(6), 2020-A (University Microfilms No. 91-33, 547).

Wolcott, H.F. (1990). Writing up qualitative research. Newbury Park, CA: Sage.

Figures

Figure 1. Conceptual map by research questions

Figure 2. Conceptual map by emergent themes

Figure 3. Conceptual map by emergent themes with core
category defined

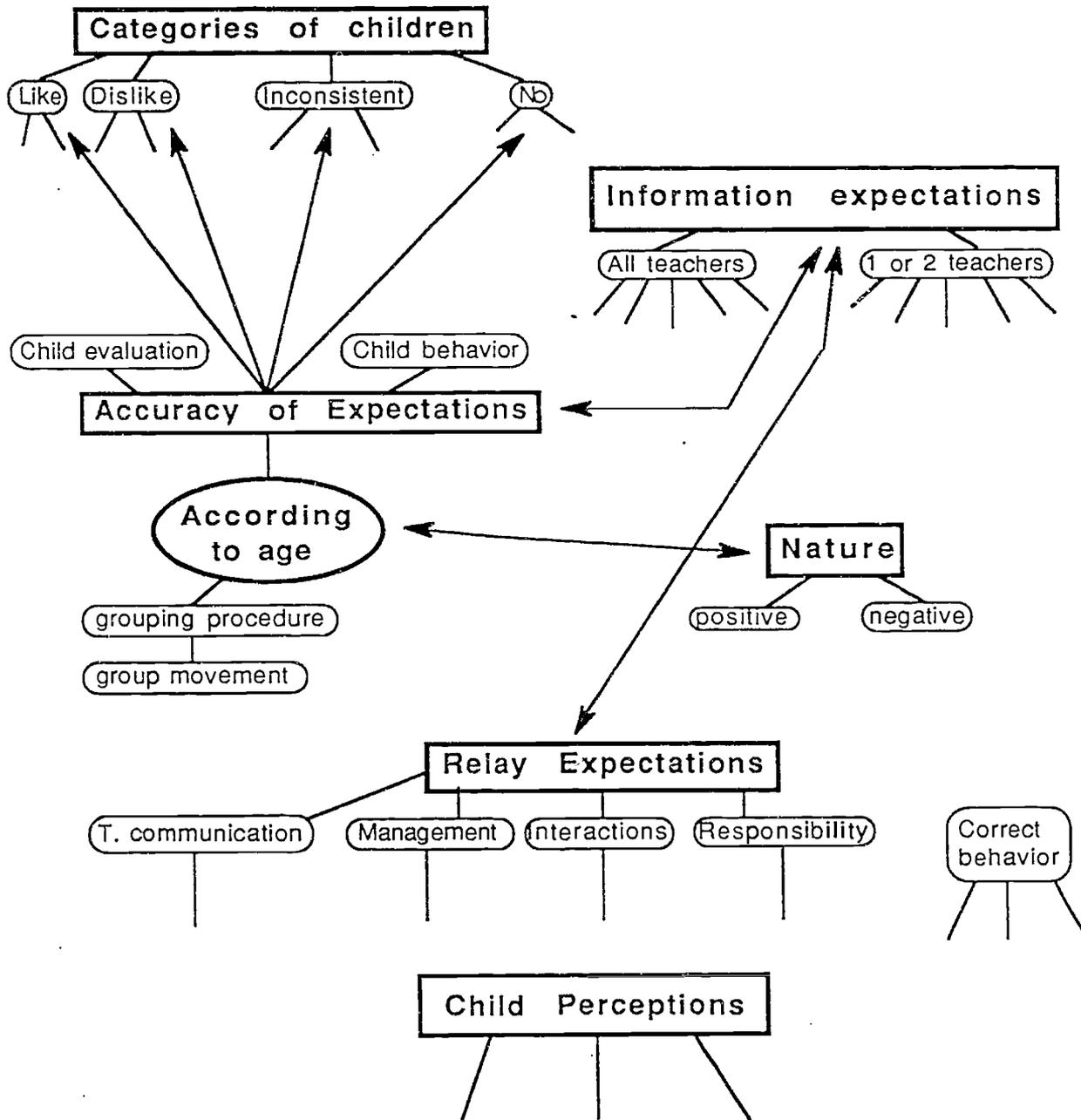


Figure 1. Conceptual map by research questions

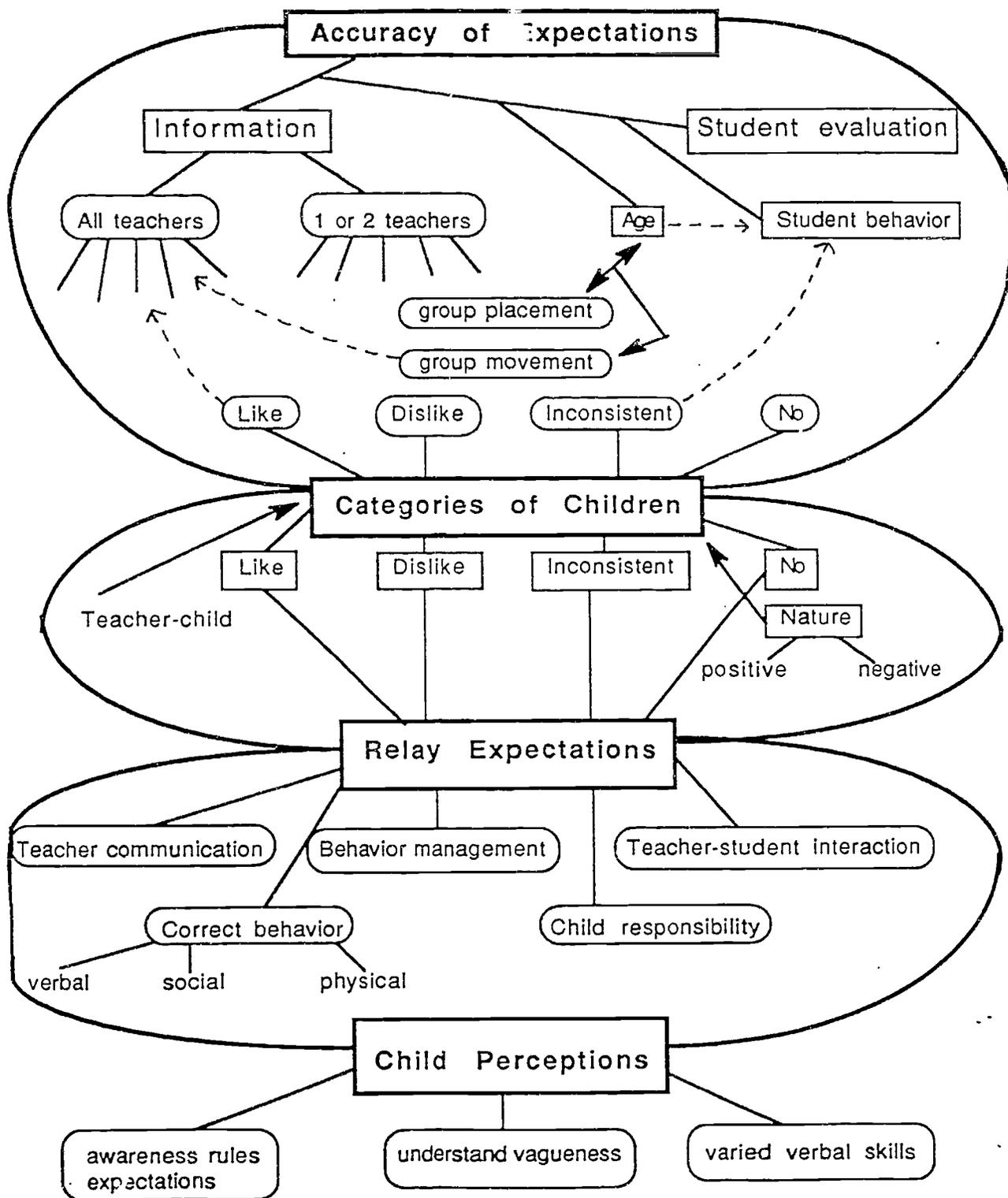


Figure 2. Conceptual map by emergent themes

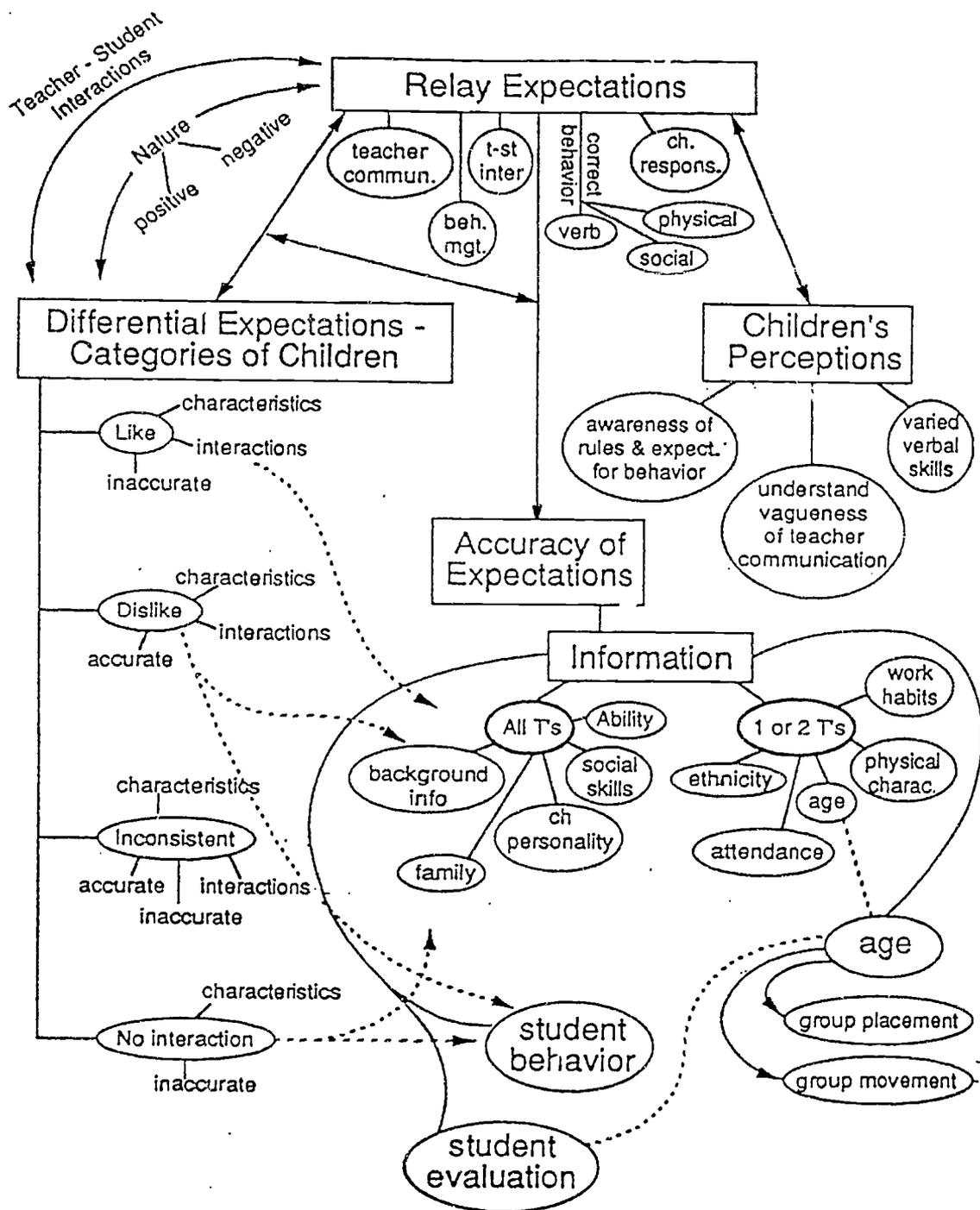


Figure 3. Conceptual map by emergent themes with core category defined