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## Qualitative Content Analysis Research: A Review Article

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### ABSTRACT

*The importance of learning English as second or foreign language is a very demand of our globalized world. The fundamental benefit of qualitative research is its capability to provide complex textual descriptions of how people actually experience a given research issue. Compared with the growing but far from conclusive body of research on most EFL topics, few studies have examined the factors qualitatively, especially through content analysis. In order to fill the current gap, the paper offers a brief but broad overview of qualitative research. The writer explains some key concepts such as types of qualitative study, methods of data collection in qualitative study, qualitative content analysis, deductive versus inductive content analysis, and finally some methods of data collection in qualitative study.*

**Keywords:** Qualitative research, Qualitative content analysis, Inductive content analysis,  
D e d u c t i v e   c o n t e n t   a n a l y s i s

### 1. INTRODUCTION

Every type of research is affected by research paradigms or research philosophies. There are two major philosophical traditions, *positivism* and *post-positivism (naturalism)*. In educational research, the quantitative approach may be described as based on the positivism while the qualitative approach research is based on naturalism.

Rubin and Rubin (2012) state that:

*Positivists assume that reality is fixed, directly measurable, and knowable and that there is just one truth, one external reality. In contrast, naturalistic researchers assume that reality constantly changes and can be known only indirectly, through the interpretations of people; they accept the possibility that there are multiple versions of reality. People who are uncomfortable with such uncertainty are more likely to choose the quantitative paradigm with its assumptions of a single, measurable (countable) and knowable truth; people who can tolerate uncertainty are more likely to favor a qualitative paradigm with its acceptance of multiple perspectives of truth and constantly changing reality (p. 14).*

Positivism, as Lincoln and Guba (2000) stated, assumes there is a single, unbiased way to measure and view reality and was the dominant research paradigm during the early 20th century. In contrast post-positivism assumes that human nature is complex and multidimensional and seeks to understand people and the social and cultural contexts within which they live (Myers, 1997). Table 1 contrasts positivist and naturalist axioms.

**Table 1:**  
Contrasting positivist and naturalist axioms (beliefs and assumptions)

Axioms About	Positivist Paradigm (Quantitative)	Naturalist Paradigm (Qualitative)
The nature of reality	Reality is single, tangible, and fragmentable.	Realities are multiple, constructed, and holistic.
The relationship of knower to the known	Knower and known are independent, a dualism.	Knower and known are interactive, inseparable.
The possibility of generalization	Time- and context-free generalizations (nomothetic statements) are possible.	Only time- and context-bound working hypotheses (idiographic statements) are possible.
The possibility of causal linkages	There are real causes, temporally precedent to or simultaneous with their effects.	All entities are in a state of mutual simultaneous shaping, so that it is impossible to distinguish causes from effects.
The role of values	Inquiry is value-free.	Inquiry is value-bound.

Note. From "naturalistic inquiry," by Y. S. Lincoln & E. G. Guba, (1985)

## 2. QUALITATIVE RESEARCH

Qualitative research is a type of scientific research. Denzin and Lincoln (1994) define qualitative research as:

*Qualitative research is multi-method in focus, involving an interpretive, naturalistic approach to its subject matter. This means that qualitative researchers study things in their natural settings, attempting to make sense of or interpret phenomena in terms of the meanings people bring to them. Qualitative research involves the studied use and collection of a variety of empirical materials case study, personal experience, introspective, life story interview, observational, historical, interactional, and visual texts—that describe routine and problematic moments and meaning in individuals' lives (p. 192).*

Cresswell (1998) defines it as:

*Qualitative research is an inquiry process of understanding based on distinct methodological traditions of inquiry that explore a social or human problem. The researcher builds a complex, holistic picture, analyzes words, reports detailed views of informants, and conducts the study in a natural setting (p.15).*

Nunan (1992) draws a distinction between qualitative and quantitative studies. He suggests that:

*Quantitative research is obtrusive and controlled, objective, generalisable, outcome oriented, and assumes the existence of 'facts' which are somehow external to and independent of the observer or researcher. Qualitative research research, on the other hand, assumes that all knowledge is relative, that there is a subjective element to all knowledge and research, and that holistic, ungeneralisable studies are justifiable (p. 3).*

Reichardt and Cook (1979, as cited in Nunan, 1992) presented a table to illuminate the distinction between quantitative and qualitative studies.

**Table 2:** Terms commonly associated with quantitative and qualitative approaches to research (adapted from Reichardt and Cook 1979, as cited in Nunan, 1992, p. 4).

Qualitative Research	Quantitative Research
-Advocates use of qualitative methods concerned with understanding human behavior from the actor's own frame of reference	-Advocates use of quantitative methods seeks facts or causes of social phenomena without regard to the subjective states of the individual's
- Naturalistic and uncontrolled observation	-Obtrusive and controlled measurement
-Subjective	-Objective
-Close to the data: the 'insider' perspective	-Removed from the data: the 'outsider' perspective
-Grounded, discovery-oriented, exploratory, expansionist, descriptive, and inductive	-Ungrounded, verification-oriented, confirmatory, reductionist, inferential, and hypothetical-deductive
-Process-oriented	-Outcome-oriented
-Valid: 'real', 'rich', and 'deep' data	-Reliable: 'hard' and replicable data
-Ungeneralisable: single case studies	-Generalisable: multiple case studies
-Assumes a dynamic reality	-Assumes a stable reality

Mack , Woodson, Macqueen , Guest, and Namey (2005) outlined the major differences between quantitative and qualitative methods in Table 2.

The key difference between quantitative and qualitative methods is their flexibility. Generally, quantitative methods are fairly inflexible. With quantitative methods such as surveys and questionnaires, for example, researchers ask all participants identical questions in the same order. The response categories from which participants may choose are ‘closed-ended’ or fixed. The advantage of this inflexibility is that it allows for meaningful comparison of responses across participants and study sites. However, it requires a thorough understanding of the important questions to ask, the best way to ask them, and the range of possible responses.

Qualitative methods are typically more flexible – that is, they allow greater spontaneity and adaptation of the interaction between the researcher and the study participant. For example, qualitative methods ask mostly ‘open-ended’ questions that are not necessarily worded in exactly the same way with each participant. With open-ended questions, participants are free to respond in their own words, and these responses tend to be more complex than simply ‘yes’ or ‘no’. In addition, with qualitative methods, the relationship between the researcher and the participant is often less formal than in quantitative research. Participants have the opportunity to respond more elaborately and in greater detail than is typically the case with quantitative methods. In turn, researchers have the opportunity to respond immediately to what participants say by tailoring subsequent questions to information the participant has provided.

**Table 3:**  
Comparison of quantitative and qualitative research approaches

	Quantitative	Qualitative
General framework	Seek to confirm hypotheses about Phenomena	Seek to explore phenomena
	Instruments use more rigid style of eliciting and categorizing responses to questions	Instruments use more flexible, iterative style of eliciting and categorizing responses to questions
Analytical objectives	Use highly structured methods such as questionnaires, surveys, and structured observation To quantify variation  To predict causal relationships  To describe characteristics of a population	Use semi-structured methods such as in-depth interviews, focus groups, and participant observation To describe variation  To describe and explain relationships  To describe individual experiences  To describe group norms
Question format	Closed-ended	Open-ended
Data format	Numerical (obtained by assigning numerical values to responses)	Textual (obtained from audiotapes, videotapes, and field notes)
Flexibility in study design	Study design is stable from beginning to end  Participant responses do not influence or determine how and which questions researchers ask next  Study design is subject to statistical assumptions and conditions	Some aspects of the study are flexible (for example, the addition, exclusion, or wording of particular interview questions)  Participant responses affect how and which questions researchers ask next  Study design is iterative, that is, data collection and research questions are adjusted according to what is learned

### 2.1 Types of Qualitative Studies

Ary, Jacobs, and Razavieh (1996) categorized qualitative research into two major and one minor category. They included the major categories as: *participant observation* and *non-participant observation*. In participant observation, the researcher him/herself is a part of group under study while in non-participant observation; the researcher observes but does not participate in the activity being observed. They mentioned two other approaches that can be used as part of participant observation studies or case studies, or they can be used by themselves. The following Table illustrates the types of qualitative studies.

**Table 4:**

Types of qualitative research (approaches to qualitative research)

<p><b>Ary, Jacobs, and Razavieh (1996)</b></p>	<ol style="list-style-type: none"> <li>1. <b>Participant observation</b></li> <li>2. <b>Non-participant observation</b> <ul style="list-style-type: none"> <li>• <b>Naturalistic observation</b></li> <li>• <b>Case studies</b></li> <li>• <b>Content analysis</b></li> </ul> </li> <li>3. <b>Two other types of qualitative studies</b> <ul style="list-style-type: none"> <li>• <b>Focused interview</b></li> <li>• <b>Ethnographic research</b></li> </ul> </li> </ol>
<p><b>Hancock (2002)</b></p>	<ol style="list-style-type: none"> <li>1. <b>Phenomenology</b></li> <li>2. <b>Ethnography</b></li> <li>3. <b>Grounded theory</b></li> <li>4. <b>Case studies</b></li> </ol>
<p><b>Nunan (1992); Johnson (1992)</b></p>	<ol style="list-style-type: none"> <li>1. <b>Ethnography</b></li> <li>2. <b>Case studies</b> <ul style="list-style-type: none"> <li>• <b>Interaction analysis</b></li> </ul> </li> </ol>
<p><b>Cresswell (1998)</b></p>	<ol style="list-style-type: none"> <li>1. <b>Biography</b></li> <li>2. <b>Phenomenology</b></li> <li>3. <b>Grounded theory</b></li> <li>4. <b>Ethnography</b></li> <li>5. <b>Case studies</b></li> </ol>
<p><b>Marton, 1981; Strauss , 1987; Foucault, 1980; all cited in Freeman (1995)</b></p>	<ol style="list-style-type: none"> <li>1. <b>Phenomenological ethnography (Marton, 1981)</b></li> <li>2. <b>Grounded theory (Strauss 1987)</b></li> <li>3. <b>Positionality (Foucault, 1980)</b></li> </ol>

It seems that Ary et al., (1996) do not distinguish much between types with methods of data collection in qualitative studies. Interview and observation are methods of data collection rather than types of research.

## 2.2. Methods of Data Collection in Qualitative Research

Data collection is a key aspect of every research. Inaccurate data collection can impact the results of a study and ultimately lead to invalid results.

Different authors provided various classifications for methods of data collection in qualitative studies. Table 5 illustrated a detailed classification of data collection methods.

**Table 5:**  
Methods of data collection in qualitative studies

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Woods (2006)	-Observation -Interviews -Questionnaires
Atkinson & Ramanathan (1995)	-Observation -Interviews -Written documents -Recordings
Bolderstone (2012)	-Participant Observation -Document or text review -Interviews -Reflection from participants (such as diaries)
Cresswell (2003)	-Observation -Interviews -Documents -Audiovisual materials

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### 3. CONTENT ANALYSIS AS A TYPE OF QUALITATIVE STUDIES

Content analysis is one out of different approaches to research. It can be done both quantitatively and qualitatively. Content analysis has been primarily used as a quantitative research method until recent decades. Berelson (1952, as cited in Berg, 2009) suggests that content analysis is "objective, systematic, and quantitative" (p. 241).

Many current studies use qualitative content analysis. Hsieh and Shannon (2005) defined qualitative content analysis as "a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns" (p.1278).

Zhang and Wildemuth (2009) suggest that, comparing qualitative content analysis with its rather familiar quantitative counterpart can enhance our understanding of the method in three ways. First, the research areas from which they developed are different. Quantitative content analysis is used widely in mass communication as a way to count manifest textual elements. By contrast, qualitative content analysis was developed primarily in anthropology, qualitative sociology, and psychology, in order to explore the meanings underlying physical messages. Second, quantitative content analysis seems to be more deductive, intended to test hypotheses or address questions generated from theories or previous empirical research. By contrast, qualitative content analysis is mainly inductive, grounding the examination of topics and themes, as well as the inferences drawn from them, in the data. In some cases, qualitative content analysis attempts to generate theory (as a basis for grounded theory). Third, the data sampling techniques methods required by the two approaches are different. Quantitative content analysis requires that the data are selected using random sampling or other probabilistic approaches, so as to ensure the validity of statistical inference. By contrast,

samples for qualitative content analysis usually consist of purposively selected texts which can inform the research questions being investigated. Finally, the products of the two approaches are quite different. The quantitative approach produces numbers that can be manipulated with various statistical methods. By contrast, as Berg (2001) initially states, the qualitative approach usually produces descriptions or typologies, along with expressions from subjects reflecting how they view the social world. By this means, the perspectives of the producers of the text can be better understood by the investigator as well as the readers of the study's results. Qualitative content analysis pays attention to unique themes that illustrate the range of the meanings of the phenomenon rather than the statistical significance of the occurrence of particular texts or concepts.

### **3.1 Deductive versus Inductive**

Every scientific research can be done quantitatively or qualitatively either in deductive or inductive way. The type of research and reasoning depends highly on the purpose of the study. Content analysis, as a specific type of research, may be used with either qualitative or quantitative data; furthermore, it may be used in an inductive or deductive way. Deductive content analysis is used when the structure of analysis is operationalized on the basis of previous knowledge and the purpose of the study is theory testing (Kyngas & Vanhanen, 1999). It starts out with broad theories and suppositions and then systematically tests their implications. Inductive content analysis moves from the specific to the general, so that particular instances are observed and then combined into a larger whole or general statement.

Qualitative content analysis uses inductive reasoning, by which themes and categories emerge from the data through the researcher's careful examination and constant comparison. But qualitative content analysis does not need to exclude deductive reasoning (Patton, 2002). Generating concepts or variables from theory or previous studies is also very useful for qualitative research, especially at the inception of data analysis (Berg, 2001).

Hsieh and Shannon (2005) discussed three 'approaches' to qualitative content analysis, based on the degree of involvement of inductive reasoning. The first is *conventional* qualitative content analysis, in which coding categories are derived directly and inductively from the raw data. This is the approach used for grounded theory development. The second approach is *directed* content analysis, in which initial coding starts with a theory or relevant research findings. Then, during data analysis, the researchers immerse themselves in the data and allow themes to emerge from the data. The purpose of this approach usually is to validate or extend a conceptual framework or theory. The third approach is *summative* content analysis, which starts with the counting of words or manifest content, then extends the analysis to include latent meanings and themes. This approach seems quantitative in the early stages, but its goal is to explore the usage of the words/indicators in an inductive manner.

## **4. INTERVIEW AS A METHOD OF DATA COLLECTION**

Interview, as a data collection instrument, has three common types: Highly structured, semi-structured, and unstructured (Nunan, 1992; Hancock, 2002). *Unstructured* or in-depth interview has very little structure at all and it is mainly guided by the responses of the interviewee rather than the agenda of the researcher. The interviewer discusses a limited number of questions and frames the questions on the bases of the interviewee's previous responses. Since the interviewer has little or no control over interview, the direction of interview seems to be relatively unpredictable. *Semi-structured* interviewees, sometimes referred to focused interviews, involve asset of open-ended questions. He/she has a general idea of where he or she wants the interview to go, and what should come out of it, but does not enter the interview with a set of predetermined questions. The interviewer has enough freedom

to probe the interviewee to elaborate on the original response or to follow a line of inquiry introduced by the interview. In structured interviews, the interviewer asks the same questions in the same way, and a tightly structured schedule of questions is used in advance, very much like of a questionnaire.

The kind of interview one researcher chooses is mostly determined by the nature of research and the degree of control the interviewer wishes to exert. One major benefit for interview, according to Bolderstone (2012), is that "the interviewees can express their viewpoint, in private, without a framework imposed by the researcher" (p. 68). She further stated that semi-structured and unstructured interviews are two methods of directing interviews which are directed through three methods of *face-to-face* interviews, *group interviews* such as focus groups, and two remote interviews of *telephone interviews* and *e-mail or internet interviews*.

Patton (2002) summarized three types of interview as:

1. Informal conversational interview ( they are natural and spontaneous)
2. General interviews (they are more structured than informal)
3. Standardized open-ended interview (they are extremely structured).

Qualitative researchers rely quite extensively on in-depth interviewing. To distinguish the qualitative interview from, for example, a journalist's or television talk-show interview, we might speak of its width instead of its depth (Wengraf, 2001).

#### **4.1 Advantages and Disadvantageous of Interview**

Interviews have particular strengths. An interview yields data in quantity quickly. When more than one person participates (e.g., focus group interviews, discussed later), the process takes in a wider variety of information than if there were fewer participants—the familiar trade-off between breadth and depth. Immediate follow-up and clarification are possible. Combined with observation, interviews allow the researcher to understand the meanings that everyday activities hold for people. Bolderstone (2012) talks of interviewee's privacy as a key advantage of interview. That is, the interviewees can express their viewpoint, in private, without a framework imposed by the researcher

Interviewing has limitations and weaknesses, however. Interviewees may be unwilling or may be uncomfortable sharing all that the interviewer hopes to explore, or they may be unaware of recurring patterns in their lives. The interviewer may not ask questions that evoke long narratives from participants because of a lack of expertise or familiarity with the local language or because of a lack of skill. By the same token, he/she may not properly comprehend responses to the questions or various elements of the conversation. And at times, interviewees may have good reason not to be truthful (Wengraf, 2001).

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