Strategies to Promote Validity in Qualitative Research

Taye Alamirew [*]

Introduction

Either due to the existing or the emerging trend of a wide variety of problems such as academic, social, cultural, psychological, economical, environmental and political, the search for better answers for important questions will probably always continue. With this regard, research is conducted and being conducted virtually in all fields of area particularly in social sciences to advance knowledge and solve problems through a thorough understanding, exploration, description, prediction, explanation, and discovering the phenomena humans face. Research is a careful, systematic, patient investigation that employs the scientific method, which seeks facts and relationships, following a research process that collects, analyzes and interprets data, while adhering to operating rules of legality, ethics and established research procedures (Mertler and Charles, 2005).

The debate about the research continuum (either quantitative, qualitative or mixed approach) to describe the reality as well as how to ensure trustworthiness of qualitative research data is an issue that revolves in the minds of novice researchers in particular. The strengths and weaknesses of qualitative and quantitative research are a perennial, hot debate, especially in the social sciences. The issues invoke classic 'paradigm war'.

 I am amazed how often we hear qualitative researchers applying their standards to quantitative research or quantitative researchers applying their standards to qualitative research. Each functions within different assumptions. Finding fault with one approach with the standards of another does little to promote understanding. Each approach should be judged on its theoretical basis.

[*]PhD Student, Department of Curriculum and Teachers Professional Development Studies, AAU; e-mail: taye03ee@gmail.com

Therefore, this article describes some features of qualitative and quantitative research paradigm and strategies that promote the validity of qualitative data or results through a thorough literature review. The reason for highlighting the features, assumptions and arguments is to increase the general level of understanding and appreciation of epistemological issues in social science research. Articulation of these assumptions should foster greater awareness of the appropriateness of different kinds of knowledge for different purposes.

What is Qualitative Research?

Qualitative research is one of the two major approaches to research methodology in social sciences. There is no universally accepted definition of qualitative research, because it is a field of enquiry rather than a single entity. Qualitative research is a broad term for a variety of research approaches, just as quantitative research is not a single entity but encompasses a variety of research designs, such as clinical trials and surveys. Creswell (1998) defines the term 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, analyses words, reports detailed views of informants, and conducts   the study in a natural setting. Denzin and Lincoln (1994) also see qualitative research as it 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.

The purpose of the various types of qualitative research is broadly agreed and involves the description and interpretation of human experience so that social situations or human experiences can be better understood (Powers

and Knapp, 1990). The key principles of such inquiry are: it is conducted in a natural setting by a researcher who is involved in and may be a part of the data collection process, that the data are usually in the form of words or pictures, not numbers, and that the analysis is inductive (i.e. variables, relationships and theories are constructed after reflecting on the data gathered rather than testing to see if the data support pre-established definitions and theory), focuses on participants' perspectives, and describes the results using expressive and persuasive language (Creswell, 1998).

Qualitative research involves an in-depth understanding of human behavior and the reasons that govern human behavior (Johnson and Christensen, 2004). Unlike quantitative research, which is characterized by objectivity, deductiveness, generalizability and numbers, qualitative research relies on reasons behind various aspects of behavior. Simply put, it investigates the why and how of decision-making, as compared to what, where, and when of quantitative research. Hence, the need is for smaller but focused samples rather than large random samples. A qualitative research categorizes data into patterns as the primary basis for organizing and reporting results. Qualitative research approaches began to gain recognition in the 1970s. The phrase 'qualitative research' was until then marginalized as a discipline of anthropology or sociology, and terms like ethnography, fieldwork, participant observation and Chicago school (sociology) were used instead (Bogdan and Biklen, 1982). During the 1970s and 1980s qualitative research began to be used in other disciplines, and became a dominant - or at least significant - type of research in the fields of women's studies, disability studies, education studies, social work studies, information studies, management studies, nursing service studies, human service studies, psychology, and others (Bogdan and Biklen, 1992). In the late 1980s and 1990s after a spate of criticisms from the quantitative side, new methods of qualitative research have been designed, to address the problems with reliability and imprecise modes of data analysis.

Table 1: Features of Qualitative and Quantitative Paradigm

Point of comparison	Qualitative approach	Quantitative approach
Focus of research	Quality (nature, essence)	Quantity (how much, how many)
Philosophical roots	Phenomenology, symbolic interaction	Positivism, logical empiricism
Assumptions	Reality is socially constructed Primacy of subject matter Variables are complex, interwoven, and difficult to measure Emic (insider's point of view)	Social facts have an objective reality Primacy of method Variables can be identified and relationships measured Etic (outside's point of view)
Purpose	Contextualization Interpretation Understanding actors' perspective	Generalizability Prediction Causal explanations
Approach	Ends with hypotheses and grounded theory Emergence and portrayal Researcher as instrument Naturalistic Inductive Searches for patterns Seeks pluralism, complexity Makes minor use of numerical indices Descriptive write-up	Begins with hypotheses and theories Manipulation and control Uses formal instruments Experimentation Deductive Component analysis
Researcher Role	Personal involvement and partiality Empathic understanding	Detachment and impartiality Objective portrayal Tends to become subjectively immersed in the subject matter.
Sample	Small, non-random, theoretical	Large, random, representative
Research design	The design emerges as the study unfolds.	All aspects of the study are carefully designed before data is collected.
Data	Data is in the form of words, pictures or objects.	Data is in the form of numbers and statistics.
Analysis	Subjective - individuals' interpretation of events is important ,e.g., uses participant observation, in-depth interviews etc.	Objective – seeks precise measurement & analysis of target concepts, e.g., uses surveys, questionnaires etc.

Source: Bogdan and Biklen(1992); Lincoln and Guba(1985); Merriam (1988); Patton, (990) Eisner(991).

The Assumptions of Qualitative Designs

According to Merriam (1988) and Creswell (1994) qualitative researchers are concerned primarily with process, rather than outcomes or products and they are interested in meaning how people make sense of their lives, experiences and their structures of the world. They are the primary instrument for data collection and analysis. Data are mediated through this human instrument, rather than through inventories, questionnaires, or machines. Qualitative research involves fieldwork. The researcher physically goes to the people, setting, site, or institution to observe or record behavior in its natural setting. Such type of research is descriptive in that the researcher is interested in process, meaning, and understanding gained through words or pictures. The process of qualitative research is inductive in that the researcher builds abstractions, concepts, hypotheses, and theories from details.

In relation to qualitative inquiry, Marshall and Rossman (1980) argue that human behavior is significantly influenced by the setting in which it occurs; thus, one must study that behavior in situations. The physical setting, schedules, space, pay, and rewards and the internalized notions of norms, traditions, roles, and values are crucial contextual variables. Research must be conducted in the setting where all the contextual variables are operating.

Trustworthiness of the Research

In qualitative research, the requirements of validity and reliability are under enthusiastic discussion. There are interpretations that these traditional measures of reliability are not applicable at all in qualitative research because of the nature of the methods and epistemological assumptions of the research, which promote the uniqueness of the research. On the other hand, there are also demands for using the same criteria for qualitative and quantitative research when evaluating the trustworthy of the research. Between these poles are many different variations for justifying the results of the research. However, the issue of trustworthiness cannot be avoided whatever the epistemological approach of the research (Gibbs, 2002).

In theory, trustworthiness, i.e. credibility and validity of qualitative research, can be considered from two different perspectives depending on the epistemological foundation of the research and the epistemologically biased arguments of the evaluation. Ideally, both of the considerations are based on the same epistemological foundation. In many cases, the external evaluation of the trustworthiness of the research has a different epistemic basis than the analysis itself, which can be confusing.

The researcher can influence directly only the epistemological basis of the research, not the evaluator's bias, but of course, clear criteria stated by the researcher makes it more valid for the reader to evaluate the trustworthiness of the research. Therefore, it is very important that the researcher him/herself will set a clear basis for the evaluation.

Maxwell (1992) identifies five typologies of 'validity' as they relate to various stages of the research.

Descriptive Validity

Descriptive 'validity' is concerned with the initial stage of research, usually involving data gathering. The central issue is factual accuracy in the informational statements that describe what was observed and experienced - what Runciman (1983) refers to as 'Reportage.' The choice of language and selection of 'relevant data' are the greatest threat to 'validity'. Maxwell (1992) identifies many possible areas of error within this process concerning data selection and initial interpretative biases. The section concludes with the following statement: If different observers or methods produce descriptively different data or accounts of the same events or situations, this puts into question the descriptive 'validity' (and other types of 'validity' as well) of the accounts (Maxwell, 1992). This measure of 'validity' that Maxwell offers should be approached with some caution. Of course, stark differences in factual statements or events such as whether person 'A' was present or note during data gathering, appear a very fundamental error. However, what this rather blatant difference in description demonstrates is the highly

selective, reductive and subjective processes involved in all research. If researcher '1' failed to notice the presence of person 'A', while researcher '2' noted the presence of that particular person as an 'important' factor, then this discrepancy will undoubtedly raise some concerns. Of course, if the researcher is dishonest or lacks commitment to the work then the matter becomes one of integrity. In this case, most would agree that 'validity' has been compromised. However, if both accounts represent the conscientious efforts of the two researchers, rather than labeling the greatly differing accounts as evidence of reduced validity and unreliable measures, the discrepancies between them merely mark the multi-perspective experiences of researchers '1' and '2'. The 'inaccuracy' is an honest and valid account of the researchers' experiences of the 'realities' that exist within the events recorded.

This perspective acknowledges the essential role of the researcher within the research process and the events themselves. Of course, this would be far from acceptable within the quantitative paradigm, but within qualitative research, this would raise interesting questions worthy of investigation. Contrary to the assumptions governing quantitative research, qualitative methodologies have come to recognize that research into the lives, personalities and experiences of people involves the inevitability of contradiction and the existence of parallel and opposing truths within accounts. To 'cleanse' the data of these personally-oriented discrepancies involves further subjective action, since it would involve a degree of selection and choice.

Interpretative Validity

Interpretative validity refers to the degree to which the research participants view points, thoughts, feelings, intentions and experiences are accurately understood by the qualitative researcher and portrayed in the research report. Within the qualitative paradigm, interpretation is typically viewed as an inextricable (and, indeed, unavoidable) element of data collection. On these grounds, Maxwell's segregation of description and interpretation is not

only a false distinction, but effectively impossible. Interpretation is essentially couched within the rhetoric that the researcher uses to describe a situation and is mutually constructed between researchers and subjects. Quantitative researchers do much to disassociate themselves from such interpretations, yet these too are inevitable in their categorizations and selection of data. To imagine that any 'reasonable' (which can be justified by any kind of evidence present at one or more stages of the data) constructed interpretation could ever be proven to be invalid is almost unimaginable. Yet, in Maxwell's 'realist' approach to 'validity' (1992) he ultimately upholds that a 'valid' account "must respect the perspectives of the actors in that situation". What Maxwell asserts is that an account is only valid if the actors are able to confirm or recognize the findings of the research, in particular, he notes, where there is a chance that they may be disadvantaged by the results. Using this relativistic logic, a convicted rapist with a long history of convictions for sexual crimes, yet who protests that he is innocent of every charge, would have to be portrayed as an innocent victim of a series of miscarriages of justice. In fact, we have no choice but to adopt his own perspective as a test of the 'validity' of our interpretation of his actions. Regardless of the ethical implications of interpreting meaning from the observations of others, other than those that they would necessarily agree with, it is worth noting that an individual may often have no more 'valid' interpretations of their own actions than another might make.

Theoretical Validity

Maxwell comments that the previous two accounts of 'validity' depend on a consensus on the application of terms and that disagreements refer only to accuracy and not meaning. Maxwell continues to say 'theoretical validity' is a more 'abstract' analysis than the 'descriptive' and 'interpretive' 'validities' concerning the 'immediate physical and mental phenomena studied' (1992). Maxwell claims that theoretical 'validity' goes beyond the concrete and descriptive and concerns itself with the constructions that researchers apply to, or develop, during the research. This of course is a fallacy, as we have already established that a researcher's theoretical framework and

constructions, whether grounded theory or Meta- theoretical, intrinsically define both the recording and interpretation of the data at the initial stage of research. What is interesting about this typology is that this form of validity applies not only to the research itself, but to the mental and emotional constructs of the researcher. However, identifying one's own theoretical standpoint, or even categorizing it as essentially 'Marxist', 'Positivist', 'Sructuralist', 'Postmodern', 'Feminist' or any combination of any theories, would paradoxically necessitate further subjective theorization and prove futile.

Generalizability

Maxwell (1992) observes that the degree to which an account is believed to be generalizable is a factor that clearly distinguishes qualitative and quantitative research approaches. The ability to generalize findings to wider groups and circumstances is one of the most common tests of 'validity' for quantitative research and yet is considered to be of little, or even no, importance for many qualitative researchers. Maxwell also notes that sampling, a vital consideration in establishing the 'validity' of a statistical test, is usually purposeful in qualitative research as opposed to random. Qualitative research almost exclusively limits itself to 'internal' generalizations, if indeed it seeks to claim any form of generalizability at all. Quantitative research, on the other hand, attempts to deal with both 'internal and 'external' generalizations, referring to these as 'internal validity' and 'external validity' respectively (Maxwell, 1992). One possible explanation for this difference in the scope of the claims made by researchers is tied to the types of situations and phenomena that qualitative and quantitative researchers investigate. In a very general sense, qualitative research concerns itself with the meanings and experiences of the 'whole' person, or localized culture. On the other hand, quantitative research attempts to fragment and delimit phenomena into measurable or 'common' categories that can be applied to all of the subjects or wider and similar situations. Hence, quantitative research, whilst able to claim validity for wider populations and not just merely samples, is restricted to measuring those

elements that, by definition and distortion, are common to all. This raises the question of 'at what cost' are we exchanging accuracy for generalizability. Within the quantitative definition, an account may be judged 'valid', 'replicable' and 'stable' on the merits of its generalizbility. Yet, one could argue that generalization in itself is neither 'valid' nor accurate. It is likely that a 'generalizable' statement, whilst relating to all those to whom it is applied, may not actually describe the phenomena of any single case with any accuracy, in the same way that a mean average score need not be the same value as any of the numbers of which it is an average.

Evaluative Validity

As one would expect, this form of validity that Maxwell proposes refers to the application of an evaluative framework. Maxwell asserts that evaluative frameworks are similar in both qualitative and quantitative research and that many researchers make no claim to apply any evaluation to their research whatsoever (Maxwell, 1992). However, evaluation is not some conclusive statement that may or may not be tagged onto the end of a research report, thus determining the nature, outcome or 'reality' of that research. Similar to the issues raised in response to Maxwell's categorizations of 'interpretive validity, evaluation is an almost inescapable, and often unconscious, consequence of the research process itself. Recognizing that evaluation of some sort is an inescapable inevitability within research, enables the control of that evaluation, and offers a measurement of the research in terms of its overall 'validity.'

 Trustworthiness is an essential component of qualitative research. Findings should reflect the reality of the experiences. The basic question addressed by the notion of trustworthiness, according to Lincoln and Guba(1985) is simple: "How can an inquirer persuade his or her audiences that the research findings of an inquiry are worth paying attention to?" When judging qualitative work, Strauss and Corbin (1990) believe that the "usual canons of 'good science'…require redefinition in order to fit the realities of qualitative research". Lincoln and Guba (1985) have identified one alternative set of

criteria that correspond to those typically employed to judge quantitative work.

Table 2: Qualitative and Quantitative Criteria for Judging the Overall Trustworthiness of a Study

Criterion	Qualitative Approach	Quantitative Approach
Truth value	Credibility	Internal Validity
Applicability	Transferability	External Validity
Consistency	Dependability	Reliability
Neutrality	Confirmability	Objectivity

Smith and Heshusius (1986) sharply criticize those writers, like Lincoln and Guba, who they believe have adopted a stance of "detente" with rationalists. They are particularly incensed by Lincoln and Guba's use of "comparable criteria," which to their eyes look little different than the conventional criteria they supposedly replace. In either case, there must be a "belief in the assumption that what is known—be it an existent reality or an interpreted reality—stands independent of the inquirer and can be described without distortion by the inquirer". Smith and Heshusius claim that naturalistic research can offer only an "interpretation of the interpretations of others," and that to assume an independent reality is "unacceptable" for the qualitative researcher.

Their stance is a strong one, because the only reality it accepts is a completely mind-dependent one, which will vary from individual to individual; in other words, for Smith and Heshusius, there is no "out there". For these researchers, it would not be possible to choose a best interpretation from among the many available, because no technique or interpretation can be "epistemologically privileged". To maintain this stance would seem to negate the value of doing research at all, because it prohibits the possibility of reconciling alternative interpretations. Therefore, it is important to determine which criteria are consistent with the naturalistic paradigm, yet which allow for a declaration that "good science" has been carried out.

Brown (2004) also discusses those different ways in terms of what Newman and Benz (1998) called the qual-quant continuum. In general terms, *good quantitative research* (at one end of the qual-quant continuum) will be judged in terms of its reliability, validity, replicability, and generalizability, while *sound qualitative research* (at the other end of the continuum) will be judged in term of its dependability, credibility, confirmability, and transferability. Naturally, much of our research falls somewhere in between those two end points of the qual-quant continuum, or combines aspects of both.

In the following sections, conventional (quantitative) and naturalistic (qualitative) criteria will be discussed, with the goal of selecting criteria which are appropriate for judging the overall trustworthiness of a qualitative study.

Internal Validity versus Credibility

In conventional inquiry, internal validity refers to the extent to which the findings accurately describe reality. Lincoln and Guba (1985) state that the determination of such isomorphism is in principle impossible because one would have to know the precise nature of that reality and if one knew this already, there would be no need to test it. The conventional researcher must postulate relationships and then test them; the postulate cannot be proved, but only falsified. The naturalistic researcher, on the other hand, assumes the presence of multiple realities and attempts to represent these multiple realities adequately. Credibility becomes the test for this. Credibility relates to how the reconstruction of the researchers fits the realities and views the participants express in the process of the inquiry.

Credibility depends less on sample size than on the richness of the information gathered and on the analytical abilities of the researcher (Patton, 1990). It can be enhanced through triangulation of data. Credibility requires demonstrating, in one or more ways, that the research was designed to maximize the accuracy of identifying and describing whatever is being studied, especially as judged by the groups of people being studied. Credibility can be enhanced by using one or more of the following strategies:

prolonged engagement, persistent observation, triangulation, peer debriefing, negative case analysis, and/or member checking (Denzin, 1994).

That is, prolonged engagement involves investing sufficient time and persistent observation involves using adequate numbers of observations, meetings, interviews, etc. so that participants feel enough confidence and trust in the researcher to allow for adequate study of the cultural context and adequate checks for misinformation (Davis, 1992, 1995). Prolonged engagement is the investment of sufficient time to achieve certain purposes; learning the 'culture' of the participants, testing for misinformation introduced by distortions either of the self or of the respondents, and building trust with the participants (Lincoln and Guba, 1985). Source triangulation *involves* gathering data from multiple sources (e.g., people in different roles, like students, teachers and administrators) in order to minimize and understand any differences/biases held by people in various roles. And investigator triangulation involves using multiple researchers to interpret the data in order to minimize and understand any differences/biases the researchers may have. Location triangulation, on the other hand, involves gathering data at multiple sites (e.g., three different schools) in order to minimize and understand any differences/biases that might be introduced by the participants in each of the institutions. Peer debriefing involves the process of allowing a peer who is a professional outside the context and who has some general understanding of the study to analyze materials, test working hypotheses and emerging designs, and listen to the researcher's ideas and concerns (Erlandson et al., 1993). Negative case analysis *involves* intentionally searching for and analyzing examples of data or participants that contradict the overall interpretations in a study; and *Member checking* involves verifying the researcher's interpretations and conclusions with the various groups of participants themselves.

External Validity/Generalizability versus Transferability

In conventional research, external validity refers to the ability to generalize findings across different settings. Making generalizations involves a trade-off

between internal and external validity (Lincoln and Guba, 1985). That is, in order to make generalizable statements that apply to many contexts, one can include only limited aspects of each local context. Lincoln and Guba (1985) admit that generalizability is "an appealing concept," because it allows a semblance of prediction and control over situations. Yet they suggest that the existence of local conditions "makes it impossible to generalize". Cronbach (1975) discusses the problem that we cannot store up generalizations and constructs for ultimate assembly into a network. It is as if we needed a gross of dry cells to power an engine and could only make one a month. The energy would leak out of the first cells before we had half the battery completed. According to Cronbach, when we give proper weight to local conditions, any generalization is a working hypothesis, not a conclusion.

In the naturalistic paradigm, the transferability of a working hypothesis to other situations depends on the degree of similarity between the original situation and the situation to which it is transferred. The researcher cannot specify the transferability of findings; he or she can only provide sufficient information that can then be used by the reader to determine whether the findings are applicable to the new situation (Lincoln and Guba, 1985). Transferability involves demonstrating the applicability of the results (what was found in one context by a piece of qualitative research) of the study in one context to other contexts. As Lincoln and Guba (1985) point out, if there is to be transferability, the burden of proof lies less with the original investigator than with the person seeking to make an application elsewhere. The original inquirer cannot know the sites to which transferability might be sought, but the appliers can and do. The responsibility of the original investigator ends in providing sufficient descriptive data to make such similarity judgments possible.

Other writers use similar language to describe transferability, if not the word itself. For example, Stake (1978) refers to what he calls naturalistic generalization or generalizing on the basis of similarity in people, settings, times and treatments. Patton suggests that "extrapolation" is an appropriate

term for this process (1990). Eisner (1991) says it is a form of "retrospective generalization" that can allow us to understand our past (and future) experiences in a new way. Yin(1994) also argues that qualitative researchers, like commonly used by experimental researchers, can sometimes use replication logic; that is, the more times a research finding is shown to be true with different sets of people, the more confidence we can place in the finding and in generalizing beyond the original participants. Transferability can be enhanced by providing what is often referred to as *thick description* (i.e., giving enough detail so the readers can decide for themselves if the results are transferable to their own contexts). Thick description also "involves an emic perspective, which demands description that includes the actors' interpretations and other social and/or cultural information" (Davis, 1995). Marshall and Rossman (1980) note that transferability is the responsibility of the person seeking to apply the results of the study to a new context. It is the responsibility of the reader. In this way, the responsibility of the original investigator ends in providing sufficient descriptive data to make such similarity judgments possible (Davis 1992).

Reliability versus Dependability

Kirk and Miller (1986) identify three types of reliability referred to in conventional research, which relates to: (1) the degree to which a measurement, given repeatedly, remains the same ;(2) the stability of a measurement over time; and (3) the similarity of measurements within a given time period. They note that "issues of reliability have received little attention" from qualitative researchers, who have instead focused on achieving greater validity in their work (p. 42). Although they give several examples of how reliability might be viewed in qualitative work, the essence of these examples can be summed up in the following statement by Lincoln and Guba (1985): since there can be no validity without reliability (and thus no credibility without dependability), a demonstration of the former is sufficient to establish the latter.

Dependability involves accounting for all the changing conditions in whatever is being studied as well as any changes in the design of the study that were needed to get a better understanding of the context. Dependability can be enhanced by using overlapping methods, stepwise replications, and/or inquiry audits (Denzin, 1994). Overlapping methods use carefully planned *methodological triangulation*, or multiple data gathering procedures (e.g., observations, interviews, and questionnaires), in order to create overlapping (and therefore cross-validating) data. And *s*tepwise replications involve *time triangulation*; that is, gathering data on multiple occasions (e.g., at the beginning, middle, and end of a school year), which helps in examining the consistency of the data and interpretations over time. *Inquiry audits* involve enlisting an outside expert "auditor" to verify the consistency of agreement among data, research methods, interpretations, conclusions, etc. Where appropriate, confidence in the dependability of a study can also be improved by doing quantitative analyses like intercoder/interrater agreement coefficients or other reliability estimates.

Objectivity versus Confirmability

Conventional wisdom says that research which relies on quantitative measures to define a situation is relatively value-free, and therefore objective. Qualitative research, which relies on interpretations and is admittedly value-bound, is considered to be subjective. In the world of conventional research, subjectivity leads to results that are both unreliable and invalid. There are many researchers, however, who call into question the true objectivity of statistical measures and, indeed, the possibility of ever attaining pure objectivity at all (Lincoln and Guba, 1985; Eisner, 1991).

Patton (1990) believes that the terms objectivity and subjectivity have become ideological ammunition in the paradigms debate. He prefers to avoid using either word and to stay out of futile debates about subjectivity *versus* objectivity. Instead, he strives for empathic neutrality. Patton points out that while admitting that these two words appear to be contradictory; empathy is a stance toward the people one encounters, while neutrality is a stance toward the findings. A researcher who is neutral tries to be non-judgmental, and strives to report what is found in a balanced way. Lincoln and Guba (1985) choose to speak of the "confirmability" of the research. In a sense, they refer to the degree to which the researcher can demonstrate the neutrality of the research interpretations, through a "confirmability audit." This means providing an audit trail consisting of (1) raw data; (2) analysis notes; (3) reconstruction and synthesis products; (4) process notes; (5) personal notes; and (6) preliminary developmental information. With regard to objectivity in qualitative research, it may be useful to turn to Phillips (1990), who questions whether there is really much difference between quantitative and qualitative research:

Bad work of either kind is equally to be deplored; and good work of either kind is still—at best—only tentative. But the good work in both cases will be objective, in the sense that it has been opened up to criticism, and the reasons and evidence offered in both cases will have withstood serious

scrutiny. The works will have faced potential refutation, and insofar as they have survived, they will be regarded as worthy of further investigation.

Confirmability is concerned with establishing the fact that the data and interpretations of an inquiry were not merely figments of the inquirer's imagination. It entails full revelation of the data upon which all interpretations are based, or at least the availability of the data for inspection. In other words, the reader of the research report should be able to examine the data to confirm the results or interpretations. In quantitative research, reliability means that the same tests should produce the same results. For qualitative researchers, this kind of replicability is impossible to realize because the research design is so flexible and the research findings are produced by constantly changing interactions between researchers and participants. Therefore, as Guba and Lincoln (1989) states far from being threats to dependability, such changes and shifts are hallmarks of a maturing - and successful - inquiry. But such changes and shifts need to be both tracked and trackable (publicly inspectable).

Confirmability is sometimes enhanced by using *audit trails* (a "residue of records stemming from inquiry", Lincoln and Guba, 1985, p. 319). According to Denzin (1994), confirmability builds on audit trails and involves the use of written field notes, memos, a field diary, process and personal notes, and a reflexive journal. Clearly, thorough record keeping and preservation of data for potential inspection are crucial to this strategy. Some researchers will append their data (including transcripts, instructions, etc.) to their report, or at least include crucial examples for inspection by the reader. Naturally, if the reader can inspect the data, the interpretations and results will be maximally confirmable. Auditing in qualitative research is analogous to a fiscal audit. Schwandt (1997) states that auditing is a procedure whereby a third-party examiner systematically reviews the audit trail maintained by the inquirer. In the case of qualitative interview research, the audit trail includes recorded materials such as cassette tapes, interview transcripts, interview guides, lists of interviewees, lists of categories and hypotheses the researcher used while analyzing the data, notes about research procedures, and so on. Lincoln and

Guba (1985) claim that even for a complex project, a week to ten days will be sufficient to complete auditing. However, that may sounds too expensive for our readers, most of whom may be novices, and they might be relieved to see what other researchers have written: The researcher's work in preparing an "audit trail" and the auditor's analysis, with its very detailed procedures, are at least as expensive. We should probably expect that detailed documentation and auditing will continue to be restricted to high-stakes studies, or to those in which the researcher has a special interest in documentation or auditing as such (Huberman and Miles, 1994).

Huberman and Miles (1994) also warn that this sort of re-analysis through auditing "raises questions about invasion of privacy and about potential harm to informants" (p. 440). In spite of these risks and limitations, simpler types of auditing could be useful tools for improving the quality of qualitative research

Conclusions

Valid and convincing researches can be done by applying quantitative, qualitative or mixed approaches unless methodological and resources constraints matter. What is more, qualitative researchers should use the following strategies so as to enhance the trustworthiness of the study.

Table 3: Strategies to use Qualitative Technique

Strategy	Criteria
Credibility	Prolonged and varied field experience
	Time sampling
	Reflexivity (field journal)
	Triangulation
	Member checking
	Peer examination
	Interview technique
	Establishing authority of researcher
	Structural coherence
	Referential adequacy
Transferability	Nominated sample
	Comparison of sample to demographic data
	Time sample
	Dense description
Dependability	Dependability audit
	Dense description of research methods
	Stepwise replication
	Triangulation
	Peer examination
	Code-recode procedure
Confirmability	Confirmability audit
	Triangulation
	Reflexivity

References

Bogdan, R. C., & Biklen, S. K. (1982). **Qualitative Research for Education: An Introduction to Theory and Methods**. Boston: Allyn and Bacon, Inc.

Brown, J. D. (2004). *Research Methods for Applied Linguistics: Scope, Characteristics, and Standards.* In A. Davies & C. Elder (Eds.), *The* **Handbook of Applied Linguistics** (pp. 476-500). Oxford: Blackwell.

Creswell, J. W. (1994). **Research Design: Qualitative and Quantitative Approaches.** Thousand Oaks, CA: Sage Publications.

Creswell, J. W. (1998). **Qualitative Inquiry and Research Design: Choosing among the Five Traditions.** Sage Publications, London

Cronbach, L. J. (1975). *Beyond the two Disciplines of Scientific Psychology.* **American Psychologist**, *30*(2), 116-127.

Davis, K. A. (1995). *Qualitative Theory and Methods in Applied Linguistics Research.* **TESOL Quarterly***, 29,* 427-453.

Denzin, N. K. (1994). *The Art and Politics of Interpretation.* In N. K. Denzin & Y. S. Lincoln (Eds.), **Handbook of Qualitative Research** (pp. 500-515). Thousand Oaks, CA: Sage.

Denzin, N. K., & Lincoln, Y. S. (Eds.). (1994). *Handbook of Qualitative Research.* Thousand Oaks, CA: Sage. Eisner, E. W. (1991). **The Enlightened Eye: Qualitative Inquiry and the Enhancement of Educational Practice.** New York, NY: Macmillan Publishing Company.

Erlandson, D. A., Harris, E. L., Skipper, B. L. & Allen, S.D.(1993). **Doing Naturalistic Inquiry: A Guide to Methods.** Newbury Park, CA: Sage Publications.

Gibbs,G.R.(2002). **Qualitative Data Analysis. Explorations with Nvivo. Buckingham.** UK: Open University.

Glesne, C., & Peshkin, A. (1992). **Becoming Qualitative Researchers: An Introduction.** White Plains, New York: Longman.

Huberman, A. M., & Miles, M. B. (1994). *Data Management and Analysis Methods.* In N. K. Denzin & Y. S. Lincoln (Eds.), ***Handbook of Qualitative Research*** (pp. 428-444). Thousand Oaks, CA: Sage.

Johnson and Christensen (2004). **Educational Research: Quantitative, Qualitative and Mixed Approach** (2nded). Boston: Pearson education, Inc

Kirk, J., & Miller, M. L. (1986). **Reliability and Validity in Qualitative Research.** Beverly Hills: Sage Publications.

Krefting, L. (1991). *Rigor in Qualitative Research: The Assessment of Trustworthiness.* **The American Journal of Occupational Therapy, 45**(3), 214-222.

Marshall, C. & Rossman, G. (1980). **Designing Qualitative Research**. Newbury Park, CA: Sage.

Maxwell, J. A. (1992). *Understanding and Validity in Qualitative Research.* **Harvard Educational Review***, 62*(3), 279-300

Merriam, S. B. (1988). **Case Study Research in Eeducation: A Qualitative Approach.** San Francisco: Jossey-Bass.

Mertiler,C. & Charles,C. (2005). **Introduction to Educational Research** (5th ed.). Boston: Pearson education, Inc.

Newman, I. & Benz, C.R. (1998). **Qualitative-Quantitative Research Methodology: Exploring the Interactive Continuum.** Carbondale: Southern Illinois University Press.

Lincoln, Y. S. & Guba, E. G. (1985). **Naturalistic Inquiry**. Newbury Park, CA: Sage.

Patton, M. Q. (1990). Qualitative Evaluation and Research Methods (2nd ed.). Newbury Park, CA: Sage Publications, Inc.

Phillips, D. C. (1990). *Subjectivity and Objectivity: An Objective Inquiry*. In Eisner and Peshkin (Eds.) **Qualitative Inquiry in Education: The Continuing Debate** (pp. 19-37). New York: Teachers College Press.

Powers, B.A. & Knapp, T.R. (1990). **A Dictionary of Nursing Theory and Research**. Sage Publications, London.

Runciman, W. G. (1983). **A Treatise on Social Theory: The Methodology of Social Theory** (Vol. 1). Cambridge: Cambridge University Press.

Schwandt, T. A. (1997). **Qualitative Inquiry. A Dictionary of Terms.** Thousand Oaks, CA: Sage.

Smith, J. K. & Heshusius, L. (1986, January). *Closing down the Conversation: The end of the Quantitative-qualitative Debate among Educational Inquirers.* **Educational Researcher**, *15*(1), 4-12.

Spradley, J. P. (1979). **The Ethnographic Interview.** Fort Worth, TX: Harcourt Brace Jovanovich College Publishers.

Stake, R. E. (1978). *The Case Study Method in Social Inquiry*. **Educational Researcher**, *7*(2), 5-8.

Strauss, A., & Corbin, J. (1990). **Basics of Qualitative Research: Grounded Theory Procedures and Techniques.** Newbury Park, CA: Sage Publications, Inc.

Yin, R. K. (1994). **Case Study Research Design and Methods.** Thousand Oaks, CA: Sage.