Reflections on qualitative research in education

AUTHORS: Evelyn Almeida[1]

Andrea Rosero[2]

Wilson Chiluiza[3]

Diana Castillo[4]

ADDRESS FOR CORRESPONDENCE: evalmeida@uce.edu.ec

ABSTRACT

In this article, we analyze the nature of qualitative research with a particular focuson education, which provides a brief historical background on the evolution of qualitative research and some of the reasons why this approach represents a valid and rigorous methodology to study social phenomena. We analyze the role of the qualitative researcher in terms of the complexity of the observation process, subjectivity, and ethical issues. Qualitative data collection and analysis techniques are discussed in relation to particular approaches to the study of social concerns (e.g. ethnographies, action research), underlining the art of interpretation as a key component of qualitative research and ethical procedures to guarantee the reliability of results.

KEYWORDS: qualitative research; education; reflections; interpretation.

Reflexiones acerca de la investigación cualitativa en educación

RESUMEN

Este artículo analiza la naturaleza de la investigación cualitativa con un enfoque particular en el ámbito educativo. Se proporciona brevemente algunos antecedentes históricos sobre la evolución de la investigación social cualitativa y algunas de las razones por las cuales este enfoque representa una metodología válida y rigurosa para el estudio social. Se analiza el rol del investigador cualitativo desde la complejidad de los procesos de observación, la subjetivad recolección y análisis de datos cualitativo y asuntos éticos. Las técnicas de se discuten considerando enfoques particulares al estudio de los fenómenos sociales (v.g. la etnografía, investigación acción), enfatizando el arte de la

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[1] Universidad Central del Ecuador/Universidad de las Fuerzas Armadas (ESPE). Ecuador.

[2] Universidad Central del Ecuador. Ecuador. E-mail: aarosero@uce.edu.ec

[3] Universidad Central del Ecuador. Ecuador. E-mail: wpchiluiza@uce.edu.ec

[4] Universidad Central del Ecuador. Ecuador. E-mail: dacastillo@uce.edu.ec

interpretación como un componente clave de la investigación cualitativa y los procedimientos éticos para garantizar la validez de los resultados.

PALABRAS CLAVE: Investigación cualitativa; educación; reflexiones; interpretación.

INTRODUCTION

Qualitative social science has contributed to human development in a variety of aspects. Historically, qualitative researchers such as Becker, Geer, Hughes, and Strauss (1961) first found and analyzed data in quasi- experimental and quasi-statistical studies, which were mainly inspired by the natural sciences along with the so-called positivist paradigm. Since then, an increasing number of researchers have chosen to conduct their studies by using different ways to collect information. Such ways include collecting and/or working with text, images, or sounds, allowing the incorporation of different research methods such as ethnographies or case studies, data collection techniques like participant observation or interviews, and different ways to condense and analyze data as well as the diversity of theoretical and epistemological frameworks; consequently, qualitative research has become one of the most useful ways to actively locate the observer in different research sites.

Qualitative researchers study social aspects in their natural settings, attempting to make sense of or interpret phenomena in terms of the meanings people bring to them (Denzin & Lincoln, 2005, p. 3). Concerning education, qualitative research tends to focus on studying individuals, [students and teachers], and events in their natural settings (Tetnowski & Damico, 2001). These embraces both the broader sociocultural context, i.e., the ideological orientations of the speech community and the micro-level phenomena, which includes interactions in the classroom.

Contrary to any formal, objective, and systematic process in which numerical data are used to obtain information (Burns & Grove, 2005, p. 230), qualitative researchers tend to work more intensively with fewer participants, making research more personalized. The research often follows an inductive path that begins with few pre-conceived notions, followed by a gradual fine-tuning and narrowing of focus.

Mason (2002) depicts qualitative research as both exciting and challenging because it focuses on some fascinating debates, including the ability to research and discover truths or to represent the realities of others. When collecting data using observational techniques, researchers aim to provide careful descriptions of learners' activities without excessively manipulating the events in which the learners are engaged.

According to LeCompte (2000) qualitative research is a complex task therefore, this article aims to provide guidelines that will help understand what is involved in some of the key tasks that are part of qualitative research like collecting data,

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analyzing it, and interpreting it, which are not an easy task, and can be done through different means. Finally, the article explains the processes of transcriptions, condensing and processing data, making, and supporting convincing arguments to help the reader understand why this kind of research emerges and to be aware that there are benefits and risks when applying qualitative research.

DEVELOPMENT

Nature of Qualitative Research Design in Education

If one goes back to what the nature of qualitative research is, one will see that it had a social context, providing a voice to the people that were not commonly heard by analyzing their interactions under different circumstances. In the early 1900s, researchers started to analyze data through empiricism (Denzin & Lincoln, 2005). However, such a positivist perspective raised the question of ethical dilemmas and their implications in qualitative research. To overcome such ethical dilemmas different ideologies related to qualitative research such as feminism, postmodernism, critical race theory, and critical theory arose.

Qualitative research is seen "as an umbrella term that encompasses many ways to study humans" (Litchman, p. 5). Historically, qualitative research emerges from a necessity to empower and "give voice" to those people who have been marginalized by society (Bogdan & Biklen, 2007, p. 10). In this sense, the purpose of qualitative research is to analyze the interactions between people and their circumstances in different settings. This includes a social concern that embraces education, human services, poverty, social welfare, and urban life (Bogdan & Biklen, 2007, p. 13). Qualitative research also emphasizes on how power is distributed in a society, focusing on privileged groups and the people excluded from these groups.

Ethical Considerations

Knowledge of the dynamics of a social phenomenon can lead to both benefits and risks. Considering the fact of dealing with human subjects, there are always risks that come with findings and their publication. In this sense, Glesne (2015) considers that "voluntary, informed consent neither precludes the abuse of research findings nor creates a symmetrical relationship between researchers and researched, but it does invest research participants with control over their involvement in the inquiry" (p. 159).

Researchers must ensure the confidentiality of the data collected through observations and interviews, avoiding negative comments or early conclusions. Dialogue and collaboration between the researcher and the researched are pivotal before drawing conclusions and publishing findings. Miles, Huberman, and Saldaña (2014) heighten the importance of dialogue to guarantee confidentiality and advise researchers "to err on the side of protecting anonymity, if it has been promised, and to rely on dialogue and negotiation before the report is finalized" (p. 63). This is a matter of justice to avoid manipulation of vulnerable groups

while creating a balance between the benefits and the risks. An essential element of justice is reciprocity. In this sense, Glesne (2016) establishes that "qualitative researchers find a variety of ways to reciprocate, but whether what they give equals what they get is difficult, if not impossible, to determine" (p. 168).

Theoretical Framework for Qualitative Research

There are different ideologies related to qualitative research such as feminism, postmodernism, critical race theory, and critical theory. Postmodernists argue that there are conflicts that question the integrity of progress, opening a space for discourse analysis to understand language in different contexts. Researchers who have incorporated postmodernism tend to engage in experimental ethnography. Referring to critical theory, as Weiler (1998) states, researchers are interested in "how social values and organization get reproduced in schools and other educational institutions and how people produce their choices and actions in the society" (as cited in Bogdan & Biklen, 2007, p.23). It also focuses on how these institutions privilege groups of students.

Other significant contributions to CRT have been the studies of schooling and economy. For instance, Katz (1980) mentions that American education has not changed over the years and has been a matter of bureaucracy and privilege. Researchers influenced by CRT call their research ethnographic in the phenomenological mode as they attempt to understand the meaning of events and interactions to ordinary situations. It focuses on participant perspectives and the analysis of how these individuals see themselves in real contexts.

Qualitative research also focuses on symbolic interpretation as Bogdan and Biklen (2011) state, "The meaning people give to their experience and their process of interpretation are essential and constitutive, not accidental or secondary to what the experience is" (p. 27). Each person can perceive the world differently depending on their own background, experiences, and lifestyle.

For example, many qualitative researchers would say that there is not a single concept or reality; on the contrary, there are different connotations depending on the context and the person who sees it. In other words, there are multiple realities. Ethnographic approaches, for example, help to understand the beliefs, values, and culture of a specific group or community. As Openjuru (2009) states, "Ethnography is concerned with learning about and understanding different aspects of their people's daily lives, their values, meanings, norms and patterns, and doing this in a way that values them as equal partners in the research process." (As cited in Gebre, Rogers, Street, & Openjuri, 2009, p. 6).

However, ethnographies are complex approaches to interpreting and understanding reality due to the subjectivity and biases that researchers might bring with them. Emerson, Fretz, and Shaw (2011) notice the complexity of writing an ethnography and state that it is essential to first think about the audience. They suggest that ethnographers should develop a thematic narrative, including a topic or a question in general terms, to analyze it in the same way.

This is suggested since the development of categories and themes must reflect different points of view.

A general perspective of the inductive and reflexive nature of qualitative research is provided by Maxwell (2012). He considers that contrary to what is expected from a quantitative design, qualitative studies need "to construct and reconstruct" the research design. The main reason for this constant construction and reconstruction has to do with context. There is always the possibility of a reciprocal influence between the design and the context that might lead the researcher to make possible adjustments (Maxwell, 2012, p. 3).

In education, qualitative research can help teachers understand students, comprehend why they act the way they do, and even how they may interpret things. By knowing the reasons why students behave in certain ways, teachers can help them overcome their difficulties in language, education, and even their personal lives. Bogdan and Biklen (2007) talk about applied qualitative research for education. They analyze three categories: evaluation and policy research, action research, and practitioner research. The purpose of evaluation and policy research is to describe, document, or assess a planned change, and to provide information to decision-makers. In this type of research, it is necessary to take into consideration the amount of money that might be needed, and who is going to provide the funds. Action research is more practical and is directed to people who want to solve immediate problems and bring about social change. According to Bogdan and Biklen (2007), there are two kinds of action research. Participatory action research involves the participants designing and implementing a project for a change in their practice, whereas political action research involves people researching for social change.

Although both qualitative and quantitative methods are employed when doing research, it is necessary to review the application of the scientific method in education. "Educational research is the formal, systematic application of the scientific method to the study of educational problems" (Mills & Gay, 2016, p. 23). At this point, action research is typically focused on a particular issue or concern which is examined in a single question where a problem needs to be analyzed and solved.

Additionally, Lawrence Stenhouse once said, "It is teachers who, in the end, will change the world of the school by understanding it" (As cited in Takona, 2002, p. 57). Action Research also provides teachers with the opportunity to understand their process not only by repeating theory but also by encouraging them to reflect his or her own practice through meaningful applications. Teachers understand their process, examine new methods, and share new ideas with other colleagues they get involved in their own practice. "As teachers engage in action research, they are increasing their understanding of the schooling process" (Johnson, 1993, p. 3). Finally, the self-evaluation aspect of teacher research by educators is congruent with the present focus on constructivism.

The Role of the Qualitative Researcher

To begin qualitative research, researchers must be practical and think in terms of time, complexity, and resources. The definition of the researchers from Geertz is that a "researcher is a person who comes for a visit, a person who has come to learn, a person who wants to know what it is like to be them" (as cited in Bogdan & Biklen, 2007, p. 82). Qualitative researchers seek to gather a more comprehensive understanding of activities related to human behavior and the attributes that rule such behavior.

Therefore, researchers must gain their trust and make them feel comfortable; otherwise, investigators will not achieve their research goals. The researchers must develop intellectual and social skills to accomplish their goals. They should develop skills in "listening, remembering, balancing talking and listening, observing, recording data and making field notes" (Mason, 2002, p. 96).

Doing qualitative research is a challenging task. In the educational settings, the role of the researcher is essential because he or she acts as the "human instrument" of data collection, besides a qualitative researcher pays attention to the idiosyncratic as well as the pervasive, seeking the uniqueness of each case (Patton, 1990). Additionally, Lincoln and Guba (1985) revealed the importance, relevance, and uniqueness of human beings in the process of scientific research to achieve a better understanding of the phenomena.

These authors mentioned some researcher characteristics like the "sensitivity", "responsiveness" to process data or provide immediate feedback, the capability to interact with the situations, and "flexibility" to deal with atypical responses which, undoubtedly "make humans the most appropriate instrument for inquiries" (Peredaryenko, & Krauss, 2013, p.1).

Main characteristics

In contrast to quantitative researchers, who insist on the value of measuring outcomes, qualitative researchers center their attention on reasoning the way of what happens in an environment. The research focus is on participants and their interaction with a phenomenon in different settings as Rossman and Rallis (2003) stated, "Qualitative researchers go to the people; they do not extricate people from their everyday worlds" (p. 9). They recognized that these settings are complex, dynamic, and multifaceted.

A key distinction between quantitative and qualitative research must do with the extent to which the results can be generalized. Mason (2002) focuses on the production of well-formed cross-contextual generalities. How can qualitative research be generalized if it is based on specific circumstances with different individuals and purposes? Flick (2014) answers these questions when he mentions that it is not so much the number of cases that are studied (quantitative research), but rather the quality of the sampling. In other words, another form of generalization is not by the size of the sample, but the essence of the data

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collected and how it is interpreted and analyzed. The subjectivity of the researcher and of those being studied becomes part of the research process (Flick, 2014, p. 17). Therefore, the perception of the researcher, reflected through instruments for data collection such as notes and observation journals, is valid and reliable.

Qualitative and quantitative methods can be mixed in different stages of the research process. Flick (2014) mentions four designs; the first one is to work in parallel, using two methods (one qualitative and one quantitative) to accomplish two objectives of the same research. The second one is observation and the application of a survey. The third combination uses a qualitative method consisting of a semi-structured interview followed by a questionnaire assessed in a second quantitative phase. Finally, the fourth design involves a complementary field study including a survey followed by an experimental intervention. These combinations give the researcher the opportunity to be flexible to the necessities of the investigation.

Sampling and Selection

A key element in qualitative research is sampling and selection of cases. Mason (2002) states that there are two main reasons for involving sampling and selection in the research. One reason is because it is practical and considers limited resources, and the second reason is because it is a way to be focused on what the researcher wants to accomplish, since "qualitative research is very often about depth, nuance and complexity, and understanding how these work" (p.121).

A sample should have empirical and theoretical elements. It could be strategic, representational, or illustrative or evocative. It can contain people, organizations, texts, settings, objects, or events. The researcher will decide which cases may be sampled depending on the research questions, time, accessibility, and availability. In other words, sampling is not an easy task. Miles, Huberman and Saldaña (2014) point out that sampling is pivotal to draw appropriate conclusions. When dealing with within-case sampling and multiple-case sampling, there are three important aspects to take into consideration: (1) each case is part of the different layers of a context; (2) the sample can be determined if the researcher guides his/her study by "a conceptual question, not by a concern of representativeness"; and (3) as the study progresses, new samples may arise. Regarding multiple-case samples, they are representative cases for comparability. The samples then must provide appropriate answers to the research question(s) and they must lead to analytic generality, which increases the validity of the study.

Selecting participants is intrinsically related to the kind of research question the study aims to answer, which is additionally connected to the kind of instrumentation to be used. In this context, there are three conditions that researchers must consider before deciding how structured the instrumentation

will be: (1) little prior instrumentation is recommended when the field of work has not been explored; (2) lots of prior instrumentation can be used when the researcher knows the field of work and potential research questions have already been established; and (3) either choice highly depends on different aspects of the study (Miles, Huberman & Saldaña, 2014, pp. 38-39). According to Gustafsson (2017) benefits with case sampling are that they are not as expensive and time consuming as multiple case sampling. Case samplings are highly recommended when the writer wants to have a deeper understanding of the exploring subject. On the other hand, multiple case samplings are a good option when the writer wants to understand the similarities and differences between the cases and create a more convincing theory.

Observation

As Mason (1996) noted, observation usually refers to "methods of generating data which involve the researcher immersing in a research setting, and systematically observing dimensions of that setting, interactions, relationships, actions, events, and so on, within it" (p.60). In the study of L2, observations have been applied in a broad variety of studies, from real- life studies to common classroom observations. In fact, a useful way for research observations in education is that they give the researcher the opportunity to collect lots of data on students' behaviors and actions in a specific context for the researcher to get a deeper understanding of a situation.

Another key factor of observation is to establish its purpose. The worst thing that can happen is to spend much time and effort in gathering information from observation and end up realizing that the information is not sufficient for answering the research question. To generate knowledge that will help to discover the research puzzle, it is imperative to have an objective to focus on in the observation setting. As Mason (2002) says, "You must have at least some sense of what you are looking for in the setting, and some critical awareness of how that has informed what you have observed, and what you have found interesting and relevant" (p. 90).

Connected to observing essential aspects of reality, participant observation constitutes a method whereby the researcher embeds in the context of a social situation to study a particular phenomenon. The perception the researcher develops in the research site can be regarded as a close or distant process, and it depends on the kind of involvement the researcher has. There are three possible ways of engagement: observer, observer as participant, and the full participant (Glesne, 2015). In the case of the ethnographic researcher, deep understanding is crucial, since participant observation implies "making the strange familiar and the familiar strange" (p. 68).

For novice researchers, fieldwork can cause anxiety and uncertainty in the discussion of the essential points of different observations to try to reach agreement on what is allowed or not in any research site. This is a trust-building

relationship with participants, who must know and feel the researcher is not there to judge, but to learn and understand.

Visual and Documented data

Fieldnotes are of great variety and importance, and they must be treated carefully to protect the identity of participants. Deciding on the kind of notes the researcher will make also implies devoting as much time as necessary to clarify and reflect on the ideas that have been written down. It is also important that fieldnotes are descriptive and analytic to avoid being judgmental. "A solid, descriptive foundation of your data enables higher level analysis and interpretation" (Miles, Huberman & Saldaña, 2013, p. 162). A very useful advice is that researchers write down full fieldnotes before engaging in discussions and receiving feedback on them. According to Glesne (2015), research diaries are necessary to write down and analyze possible stereotypes, ethical issues, and frustrations the researcher may have.

Documental data and visual aids are a creative method to collect and generate data (Denzin, 1994; Mason, 2002). Smiths (as cited in Mason 2002) argues that visual data should not be thought in terms of what the camera records, but what the eye can see. This article agrees to this notion because there are emotions, thoughts, and feelings that the camera may not register. Additionally, the camera cannot capture what is going on behind it or around the scenario. Therefore, the use of field notes in addition to the visual aids would be a good combination for data generation. However, it is also important to take into consideration that producing and interpreting visual data can be time-consuming and labor intense. The researcher must be sure if it is worth using it.

Qualitative Interview

A qualitative or semi-structured interview should have specific features. For instance, there must be an interaction between the interviewer and the participant, where not only one talks or gives their opinion. It should be reactively informal so that participants feel comfortable to express their opinions and feelings, besides Schensul mentions, "The study populations are always chosen in relation to the study topic, and the reasons why they are chosen—that is, their expected contribution to the study—must be given as part of the study design" (As cited in Lapan, Quartaroli, & Riemer, 2012, p. 83). Consequently, the interview should be flexible and fluid. These characteristics will give the participants the opportunity to bring interesting topics to discussion. Once again, interaction is one of the key factors for a productive interview. As Mason (2002) said, "Meanings and understanding are created in an-interview, which is effectively a co- production, involving researcher and interviewees" (p. 63).

In relation to planning and conducting qualitative interviews, people may have the wrong impression about this type of interview. They may think that a qualitative interview is an easy task, and that there is no need for planning, but the reality is different. Holstein and Gubrium (as cited in Mason, 2002, p. 67)

stated that, "Good qualitative interviewing is hard, creative, active work". One effective way of making sure that the researcher is doing a good job is to pilot interviews in practice with selected individuals. In this way, the researcher will know what he or she did wrong and will correct it next time. Additionally, the researcher should help with the flow of the interview, should be sensitive to the interviewee, be a good listener, observe and pick up verbal and non-verbal cues.

Especially in the educational field, the qualitative researcher (teacher investigator) must be aware of his or her involvement into a learning process, and a learning experience in which the role of the researcher is not probing his or her knowledge but enhancing participation to understand a particular social/educational phenomenon. Therefore, the researcher must analytically consider "relationships, salience, meanings, and explanations" (Glesne, 2015, p. 134).

Transcription as a data generator

The process of transcription in qualitative research becomes an important part of data for the researcher. Therefore, it is imperative to understand the importance of a good transcription, the methods involved, and instruments that should be used. These types of transcriptions can be used in many academic disciplines, typically in the social sciences including education. Transcriptions are subjective and mainly depend on the researchers' ideology. Bucholtz (2000) states that "All transcripts take sides, enabling certain interpretations, advancing particular interests, favoring specific speakers, and so on." (p. 1440). Therefore, several aspects of transcriptions to consider include omissions, deletions, insertions, discourse style, discourse markers, coherence, orthography, syntax, and replacements. These aspects will modify the final transcript depending on what the transcriber wants. In addition, there may be difficulties that can limit the transcriber from doing a good job. For example, there could be noise that prevents clearly hearing what an interviewee said, and therefore can contribute to poor quality of the transcription, "the recording may be of low quality, the speaker may talk quietly or quickly, and background noise may cover the words" (Bucholtz, 2000, p. 1441).

Another important aspect to consider in the process of transcribing the data for further analysis deals with ethics. Knowing that transcriptions can and are indeed part of the transcribers' ideology, it is the transcribers' duty to try to be as objective as possible so that the information obtained from transcription is reliable enough. As noted previously Bucholtz (2000), transcription can represent power in a way that can persuade people and distort meaning. LeCompte (2000) argues that qualitative research is more complex because it may deal with incomplete or biased data because in most of the cases the researcher works with human beings. The author proposes a tactic and formative theory that guide the behavior, explain the past, and predict what will happen next. Additionally, Jones, Nasir, and Peele-Eady (2011) offer some advice for researchers. They suggest building relationships with key personnel and stakeholders and to

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reciprocate in ways that the community finds value. They also suggest researchers to be aware of power and privilege, and to work hard to establish high levels of trust with the participants. (Jones, Nasir, & Peele-Eady, 2011, p.221).

Elinor Ochs (1969) in her chapter Transcription as Theory offers explicit examples of how to transcribe children's communication, which are very useful especially for novice transcribers and teachers who want to begin doing research. Ochs explains the layouts, formats, biases as well as the differences between transcriptions in which data come from adults and children, cultural influences, representations of non-verbal behavior, and symbols used in transcriptions. It is necessary to analyze the context in terms of its setting, time, and conditions to have a clear picture of what is going on in the conversation. This process should be reflexive, i.e., researchers must be conscious that transcriptions affect a specific community in a positive or negative way. When transcribing a text, qualitative researchers must keep the voice and intentions of the interviewees. However, the purpose of the study should guide the way the researcher uses data and interprets information, a process that requires a conscious application of techniques and ethical procedures to avoid misconceptions, assumptions, and biases.

Condensing and processing qualitative data

Several techniques are used to analyze and draw conclusions, such as participant observations, in-depth interviewing, reviewing documents, and first-person accounts. One of the aims of qualitative research is to obtain participant perspectives and points of view on how they perceive the world. As Blumer (1969) states, human experience is mediated by interpretation. Therefore, qualitative research is about interpreting a social reality (Bogdan and Biklen, 2007).

A key task for the researcher is to condense the wealth of data collected through a categorization or coding process. Miles, Huberman and Saldaña (2014) provide a series of methods for generating codes according to different purposes and needs. These methods are elemental, affective, literary and language, exploratory, procedural, and grammatical. Concerning pattern codes, the authors define them as "explanatory or inferential codes, ones that identify an emergent theme, configuration, or explanation" (p. 86). Researchers can use their code lists to generate patterns that emerge from analyzing "First Cycle" codes and determining what they have in common. Once these patterns exist, the use of narrative descriptions and visual displays is highly recommended.

Additionally, Miles, Huberman and Saldaña (2014) note that writing down reflections during fieldwork "can strengthen coding by pointing to deeper or underlying issues that deserve analytic attention" (p. 94). This is a fundamental suggestion since researchers can omit the relevance of what has been observed if not written down. Analytic memos can be used to register such information. Due to our short-term memory, having our reflections written down during

fieldwork can help us consider key aspects that need more data collected to be fully investigated. Therefore, this strengthens the process of coding and further analysis.

There are some key concepts that researchers must consider when condensing and analyzing qualitative data (Miles, Huberman & Saldaña, 2014):

1. Clustering can be regarded as a way to group data and conceptualize patterns; that is, to condense (not to reduce) data. It is recommended to pay attention to the metaphors that participants use, and the different meanings embedded in these metaphors.

2. Counting refers to a technique to avoid biases by means of analyzing the reoccurrences of a phenomenon. This technique allows categorization, generation of themes and the analysis of variables.

3. Enhancing trustworthiness can be better understood by analyzing the factors that weaken the validity of a qualitative study such as holistic fallacy, elite bias, personal bias and going native.

4. Triangulation of data sources is connected to trustworthiness. It is by means of triangulation that researchers can draw more reliable conclusions about a social phenomenon under study.

The Art of Interpretation

After generating or collecting data, all the information could be overwhelming for a researcher. The researcher could feel lost, not knowing where to start to analyze data. Therefore, categorizing and organizing the information in a way that makes sense when reading it again is crucial. Denzin (1994) in his chapter about the Practices and Politics of Interpretation discusses new ways of writing with the premise that social life and its reports are social constructions. He works with three interpretative practices: the new civic, intimate, and literary journals. He incorporates critical ethnography, action research, journalism, and qualitative research.

There is an artistic and rigorous process in the generation of new knowledge from documents, transcriptions, and visual data, which implies that the researcher should have certain skills to process the data, to understand, interpret, and analyze it. A tool that could help every researcher is computer technology. Mason (2002) and Bogdan and Biklen (2007) mention the use of CAQDAS, which could be used by researchers to facilitate data analysis. Even though there are different computer programs and text analysis packages that are used for coding and categorizing qualitative data, they do not "do" the analysis for the researcher (Basit, 2003). The major advantages of computer programs are that they help the researcher in the way they code, categorize, retrieve, and collate the data in a short period of time.

Analyzing qualitative data involves determining the relevant categories and their relationships constant comparative (Glaser & Strauss, 1973), which will help the

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researcher answer the research questions. Before proceeding to the analysis, it is necessary to subdivide, code, and categorize the data. After coding, condensation, distillation, grouping and classification are necessary. Coding can range from a single-word code to full paragraphs. Coding depends on the researcher and what makes sense to him or her to find commonalities, differences, patterns and structures in the data. Then, the investigator creates themes for further analysis and interpretation. It may be useful to identify two distinct phases in data coding: one focusing on meanings inside the research context and the other concerned with what may be meaningful to outside audiences (Gough & Scott as cited in Basit, 2003, p. 144). This distinction may be beneficial for the novice researcher to identify what it is the researcher wants to get when coding, including what kind of meaning and information is being sought.

Making convincing arguments

According to Mason (2002) making arguments is a relational process in which researchers construct perspectives and interpretations taking into deep account the position of those who are being presented with the argument and the foundations where the argument grounds. The author argues that a convincing argument demands the ability of the researcher to demonstrate to others the appropriateness of their arguments. Thus, their construction, communication and substantiation are key to make convincing arguments.

Additionally, Mason (2002) states that there are different kinds of arguments that the researcher must take into consideration before making convincing arguments. There are arguments about how social phenomena, relationships, and processes have developed. Other arguments are the ones that explain how something works or is constituted. There are also comparative, causation, and prediction arguments. The researcher can make arguments in four ways. The first one is by arguing evidentially, where the researcher collects data that constitute the evidence. The researcher can also argue showing interpretations that should be appropriate and valid for the researcher and the audience. The other possibility is trying to convince the audience by making them understand his or her point using experiences and illustrations. Finally, the researcher can argue reflexively or multivocally by showing sensitivity to interpretations. Mason (2002) considers that when the researcher makes an argument, he or she constructs a perspective, develops an interpretation, and elaborates an analysis using a relational process. The arguments made by the researcher must be convincing to the audience. The arguments must support and substantiate the claims made by the researcher.

The big question is how to make our arguments convincing. Data researchers select for their arguments must be creative and imaginative. The data, instruments, methods, and arguments must be reliable, accurate, precise, relevant and valid (Mason, 2002). Something important to take into consideration is that the validity of interpretation "is contingent upon the end product including

a demonstration of how that interpretation was reached" (Mason, 2002, p. 191). Another key factor for making arguments is the generalizations that a researcher can make based on his or her analysis and explanations. One way to do so is by arguing that there is no reason to say that the analysis presented is atypical. Other ways are to produce an analysis to frame questions, base the generalizations on the accuracy, rigor and objectivity of the analysis, and make comparisons in different contexts to produce cross-contextual generalities.

Writing the results of any research study implies considering language as a powerful tool to engage or evoke a response from our audience. In addition, Miles, Huberman & Saldaña (2014) consider that "the genre(s) you select for telling your research story should be the most effective one(s) for presenting an account that is persuasive yet provocative, emotionally rich yet factually grounded, and analytically rigorous yet elegantly presented" (p. 332).

Consequently, when writing conclusions, one must be as clear as possible to avoid ambiguity. In the case of an ethnographic study for instance, researchers must consider that it tells a story that can be caught on completely as it were by perusing the movement of explanatory thoughts and fieldnote selection. "Each section with its theme, points, and discussion of excerpts moves the reader further along toward the conclusion with its more finely tuned thesis" (Emerson, Fretz & Shaw, 2011, p. 237).

Implication of qualitative research in the classroom

The following section presents several examples of the importance and findings of qualitative research in the educational field and, more specifically, in language learning. In education, the role of teachers, administrators, students, and parents is vital in society; therefore, it is imperative to analyze all the aspects involved in the learning and teaching process. Qualitative research lights up and help teachers and researchers solve educational problems.

Starting with the definition and importance of education, Dewey (1916) acknowledges that experience is the beginning of learning and that inquiry is fundamental to its development. In fact, Dewey defined the educational process as a "continual reorganization, reconstruction and transformation of experience" (p. 50). When learning a foreign language, teachers become qualitative researchers who must be aware of the linguistic patterns that learners already have to effectively expand their potentials.

Concerning academic English, Fillmore, and Snow (2000) define it as the linguistic proficiencies that students need to be successful in the different subjects taught in school. These linguistic features appear in textbooks and they have the lexicon, syntax, meanings, and intentions proper to each subject. The development of an academic register in the classroom is like the development of registers in society. A register can be defined as a continuous construct since neither language nor speakers are static. Therefore, a register is a semantic phenomenon that develops within a community, and that connects situations

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with linguistic features (Biber & Finegan, 1994; Lukin et al., 2011). Therefore, the development of academic registers is pivotal in educational settings since they determine students' success or failure in later school years and after high school. Teachers are responsible for developing academic registers that entail the language and the content that learners need to make sense of concepts and allow them to deal with cognitive problem-solving tasks. In this sense, qualitative research techniques are essential in the classroom to understand learners, their learning styles, there and help them develop academic registers more deeply.

Regarding Second Language Acquisition (SLA) and bilingualism, In the United States of America, students who speak other languages rather than English have become focus of qualitative research. During the last few decades, the percentage of immigrants living in this country has increased and the conception of SLA and bilingualism has changed. Regarding SLA, Firth and Wagner (1997) point out a predisposition to focus research on the analysis of errors rather than the analysis of learning potential. The terms nonnative speaker, interlanguage, fossilization, and pragmatic failure are some clear examples of negative assumptions about second language learners (SLLs). Some research studies underestimate SLLs and how they communicate since "meaning and social interaction have been viewed as essentially separate and discrete entities" (Wagner 1997, p. 289). These negative terms in SLA are the result of an implicit assumption that native speakers possess a linguistic competence that is "constant, fully developed, and complete" (Wagner 1997, p. 292). Therefore, there is a need to study regard SLA in different context and especially as a social phenomenon.

Regarding qualitative research in the classroom, Zwiers, O'Hara, and Pritchard (2014) recognize the complex nature of diverse classrooms and argue that academic language and literacy skills depend on three fundamental pillars: using complex text, fortifying complex output, and fostering academic interactions. Academic English learners (AEL) are part of diverse classrooms. Their opportunities for delving into the richness of language and meaning depend on the strategies teachers use for this purpose. Teachers need to provide comprehensible input to allow learners access to language and content as a whole while challenging them to develop thinking skills. Furthermore, language as a social construction requires qualitative researchers/teachers who aim to understand learners' cognitive and linguistic processes, expand learners' potentials, and reconstruct the concept of language learning.

CONCLUSIONS

There is a necessity of creating new ways of writing culture and making qualitative research central to the working of a free democratic society (Denzin, 1994), in this sense this article offers some insight especially for new researchers, who are interested in analyzing their praxis in a global perspective supporting their critical thinking in our educational system (Agnello & Reynolds, 2020). Quantitative research can be conducted in different ways, and this paper covers some of the issues regarding data collection, analysis of the data, sampling,

making convincing arguments, management, and some implication in the classroom. Qualitative research is most appropriate when the researcher wants to become more familiar with the phenomenon of interest, to achieve a deep understanding of how people think about a topic and to describe in detail the perspectives of the research participants. It can also help researchers to access the thoughts and feelings of research participants, the different kinds of evidence that is generated by qualitative methods can facilitate development of an understanding of the meaning that people give to their experiences.

Since the experiences of the teaching and learning process cannot always be counted and measured, qualitative research can be used in education practice research to explore how students feel about their experiences; researchers need to understand what they really mean to students and teachers. Furthermore, in this field, qualitative research can be used by researchers to explore a variety of questions and problems and the understanding of these issues can help teachers to adapt teaching theories to match the individual needs of students.

Finally, qualitative research produces valuable and distinctive insights into education, when suitable qualitative research methods are selected to address a particular problem, and when the proper standards of empirical accuracy are met.

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