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Validity and reliability in qualitative research. Applicability and challenges in the socio-cultural and post-colonial context of research

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Validity and Reliability in Qualitative Research: Applicability and Challenges in the Socio-Cultural and Post-Colonial Context of Research

Abstracts

EN

The validity of the data collected in qualitative research is one of the important but complex affordances in determining the quality of research. A good data collection instrument enables the researcher to interpret and generalise the findings of his research in an appropriate way. While in quantitative research the micro-terms and criteria that relate to validity are strictly defined, in qualitative research these concepts relate to explanation and description, that is, whether the explanation corresponds with the description. This article intends, in the light of validity criteria – whether it's the use of multiple methods or the multi-treatment of research data (triangulation criterion), the selection of a representative sample in order to maximise the variety of representations of the phenomenon by the subject (research corpus construction criterion), or the performance of an objective analysis of the facts through rich and detailed description (clear and rich description criterion), among others – to discuss their applicability in qualitative research, taking into account the post-colonial perspective of scientific research and the factors that may affect their use, such as social, cultural and others.

DE

Die Validität der in der qualitativen Forschung gesammelten Daten ist einer der wichtigen, aber komplexen Faktoren, die die Qualität der Forschung bestimmen. Ein gutes Datenerhebungsinstrument ermöglicht es dem:der Forscher:in, die Schlussfolgerungen seiner:ihrer Forschung in angemessener Weise zu interpretieren und zu verallgemeinern. Während in der quantitativen Forschung die Begriffe und Kriterien, die sich auf die Validität beziehen, genau definiert sind, beziehen sich diese Konzepte in der qua-

litativen Forschung auf die Erklärung und Beschreibung, d. h. darauf, ob die Erklärung für die Beschreibung angemessen ist. Das Ziel dieses Artikels ist es, im Lichte der Validitätskriterien – sei es die Verwendung mehrerer Methoden oder die mehrstufige Behandlung der Forschungsdaten (Triangulationskriterium), die Auswahl einer repräsentativen Stichprobe, um die Vielfalt der vom Subjekt gegebenen Darstellungen des Phänomens zu maximieren (Kriterium der Korpuskonstruktion) oder die Durchführung einer objektiven Analyse des Sachverhalts durch eine reichhaltige und detaillierte Beschreibung (Kriterium der klaren Beschreibung, reichhaltige und detaillierte Beschreibung), unter anderem – deren Anwendbarkeit in der qualitativen Forschung zu diskutieren, unter Berücksichtigung der postkolonialen Perspektive der wissenschaftlichen Forschung und der sozialen, kulturellen und anderen Faktoren, die ihre Anwendung beeinflussen können.

PT

A validade dos dados colhidos em pesquisas qualitativas é uma das etapas importantes mas complexas na determinação da qualidade da investigação. Um bom instrumento de colecta de dados permite ao pesquisador interpretar e generalizar as conclusões da sua pesquisa de uma forma apropriada. Enquanto na pesquisa quantitativa os micro-termos e critérios que se relacionam com a validade estão rigorosamente definidos, na pesquisa qualitativa estes conceitos relacionam-se com a explicação e descrição, ou seja, se a explicação se encaixa na descrição. Este artigo, pretende à luz de critérios de validade – quer no uso de múltiplos métodos bem como multitratamento dos dados da pesquisa (critério de triangulação), pela selecção da amostra representativa com o intuito de maximizar a variedade de representações do fenómeno pelo sujeito (critério de construção do corpus de pesquisa) ou pela realização de uma análise objectiva dos factos através da descrição rica e detalhada (critério de descrição clara, rica e detalhada) entre outros – a discutir a sua aplicabilidade na pesquisa qualitativa tomando em consideração a perspectiva pós-colonial da pesquisa científica e dos factores que possam afectar o seu uso, tais como, os sociais, culturais entre outros.

JA

質的研究で収集されたデータの妥当性は、研究の質を決定する際の重要だが複雑な要素のひとつである。よいデータ収集の道具を用いれば、研究者は適切な方法で研究の知見を解釈し、一般化することができる。量的研究において妥当性に関するミクロな関係項と指標が厳格に定義されているのに対し、質的研究ではこれらの概念は説明と叙述に関連したものとなっている。すなわち、関係項や指標は、説明が叙述に

対応しているかどうかに関連する。本稿では、妥当性の概念に照らし、複合的な方法の活用、研究データの多元的検討（トライアングレーションという基準）、行為主体がかかわる現象の代表性の多様さを最大化するための代表サンプルの選定（研究コーパス構成という基準）、豊かで詳細な記述を通じた事実に対する客観的分析の提出（明確で詳細な記述という基準）などの有無を検討する。これらにもとづき、質的研究での活用可能性について議論する。その際、学術研究に備わったポストコロニアルな視点と、社会的・文化的要因やその他の要因など、質的研究の活用に影響を与える要因をあわせて検討する。

Introduction

One of the biggest problems with using validity concepts in qualitative research is that the techniques used in this approach are diverse. In qualitative research, the researcher often combines a variety of techniques ranging from interviews, observation, and surveys, in order to gain a deeper insight into the phenomenon he or she intends to study. Focusing on this deep insight is premised on the understanding that people interpret facts and phenomena in the process of symbolic interaction and culture (Jardim & Pereira 2009; Serpe & Stryker 2011; Carter & Fuller 2015), which makes the issue of validity in qualitative research very complex.

This article intends, in the light of validity criteria, to discuss their applicability in qualitative research, especially in the process of data collection, taking into consideration the post-colonial perspective of scientific research and the factors that may affect validity, such as social and cultural factors, among others. Since qualitative research is essentially interpretive in nature, the question of validity should be discussed by looking at the criteria that confer quality on this type of research. Júnior, Leão & Mello (2011) describe six criteria for validity and reliability in qualitative research, namely triangulation, construction of the research corpus, clear, rich and detailed description, surprisingness and feedback from informants. We will only refer to some of these criteria since the aim of this article is not to focus on research validity criteria as a whole.

The triangulation criterion in qualitative research concerns the use of various techniques during the research, since through this method the researcher reaches convergence by combining sources, researchers and theories (Júnior, Leão & Mello 2011). It is therefore a criterion that combines different methods for collecting data, the use of different samples and theoretical perspectives and the use of different moments in time in order to consolidate the conclusions regarding the phenomenon under study (Zappellini & Feuerschütte 2015). The research corpus construction criterion refers to the fact that the

researcher is able to determine which representative sample can maximise the variety of unknown representations. Júnior, Leão & Mello (2011) argue that the sample criterion, however, ceases to be important when evidence of data saturation is reached, as in this sense it is recommended to finalise data collection by saturating the interview responses. The criterion of a clear, rich and detailed description, according to the same authors, concerns the objective analysis of the facts, i.e., clarity in the procedures used with regard to good documentation, transparency and detail in the search for and analysis of the results.

While validity represents the core (not only) of qualitative research, it still poses a challenge for junior researchers, particularly those who are finishing their masters and doctoral degrees in universities, especially in Mozambique. These researchers still have difficulties in describing and applying the process that ensures the validity not only of the instruments used in data collection, but also of the data itself. This is presented in the first part of the chapter.

In the second part, requirements and challenges for validity are discussed, focusing especially on research in post-colonial research contexts. Despite the differentiation between qualitative and quantitative research in terms of methodological approaches, the issue of validity seems to cut across both, since the assurance of research quality is closely linked to these aspects. The assumption of transversality in the two approaches, allows for a holistic look at the essential aspects concerning quality in both approaches. The discussion will raise some considerations about the theoretical aspects related to qualitative research.

Validity of qualitative data and socio-cultural contexts: Problematisation, using the example of doctoral research

In the scientific literature, terms such as Credibility, Neutrality or Confirmability, Consistency or Dependability and Applicability or Transferability (Lincoln & Guba 1985 cited by Golafshani 2003; Noble & Smith 2015) are common when discussing the issue of research validity in the qualitative approach. Despite the fact that these terms are considered to be those that best describe the issue of validity and reliability in qualitative research, it can be noted that there is still a lack of agreement among researchers about what terms could really describe the quality of qualitative research in a clear way.

This difficulty in defining terms is also reflected in the students' investigative work at the university level. The lack of mastery of appropriate terms related to the validation process in qualitative research leads to students omitting the use of these terms and bypassing the process itself. This aspect is very

noticeable in the research work of students in the Faculty of Education at the Pedagogical University in Maputo, Mozambique.

In many dissertations and thesis research projects that we have witnessed over time, we observed difficulties with validity in qualitative research. These difficulties start with the construction of the instrument itself, that is, the selection and content of the instruments to be used in the research. Often, student researchers adopt instruments for their research that have already been used by other authors without worrying about the instrument's validation in the actual context of the qualitative research to be conducted.

The validation process of a research instrument, be it a questionnaire, interview script or observation, regardless of whether it has been adapted or constructed by the researcher, requires careful evaluation by experts in the field in order to propose improvements to both the content and the form.

Most students who engage in qualitative research seem to presume that an instrument that has already been applied in another research study does not require a careful analysis of the validation process. Therefore, during the process of writing dissertations and theses, few students describe how the validation process was conducted and how this process can lead to obtain valid data for the research in question. In many dissertations and theses, a lack of what Noble & Smith (2015) call consistency or neutrality, referring to the clear and transparent description of the research process, is observed.

With regard to methodological choice in dissertations and theses, students mostly address only the technique of data analysis. The technique that is most common in dissertation and thesis research is content analysis. However, the naming of the technique does not explain the process as such, but the general purpose of the research. Therefore, students do not clarify the procedure that precedes data collection such as what steps were used to construct the instrument, a process that leads to its validation. Listing the technique used for data collection and the instrument used to obtain the data does not in itself explain the issue of the validity of the instrument in question and the data collected.

The discussion of aspects related to the validation of instruments in research aims to reduce biases that can be caused by different factors, one of which is the researcher themselves, and to ensure research quality.

The other notable aspect is that several masters and doctoral programs at the University do not emphasise in their syllabus the issue of instrument validation, limiting themselves only to a more general approach to research methodology.

For example, in both the doctoral course in education and the master's course in educational assessment it is not clear to what extent the issue of validity is addressed or even if it even gets addressed at all.

Tab. 1: Syllabus of the “Educational Research” module in the doctoral course in education.

Module	Syllabus
Educational Research	Experimental research (notion, phases and stages, data collection and analysis). Qualitative research (Phenomenological, Dialectical and Hermeneutic approaches; research plan, fieldwork, data collection and analysis). Research strategies (ethnography, active research (action research, intervention research, and participant research); life history, content analysis, narrative analysis, opinion survey, poll, case study). Research planning (design, sources of information, literature review, selection and procedures for data collection and analysis)

Tab. 2: Syllabus of the “Research Methodology in Education” module in the Master's course in Educational Assessment.

Module	Syllabus
Research Methodology in Education	1. Methods, techniques and research instruments 2. Quantitative and qualitative research 3. Ethics in research 4. Analysis of research projects 5. The research report

Validity criteria of qualitative data collection: Socio-cultural contextualisation and post-colonial relations

First of all, it is necessary to understand what the guiding principles of validity are, and which factors may affect it. That is, one must know the paradigmatic assumptions of qualitative research in order to use them for research quality (Moreira 2018). This mitigates potential bias and subjectivity in interpretations of data by the researcher (Brink 1993).

From Noble & Smith's (2015) perspective, validity in qualitative research would be what they call truth value, that is, whether the researcher recognises the existence of multiple realities, outlines personal experiences and view-

points that may have resulted in methodological bias, or whether he or she clearly and accurately presents the participants' views.

The discussion about validity and reliability in qualitative research, is not only exhausted in the description of the methodological steps (population, sample, instruments, etc.) of the actual research or the use of terms validity or reliability without however describing the exact process as such. It relates to the point of how the researcher describes the process of obtaining the data, whether the description of the data corresponds with the explanation, and whether or not the explanation is plausible (Moreira 2018), as perceived by other researchers. This requires that students, first of all, understand what the principles that guide validity and reliability are, and what factors can affect it. That is, one must know the paradigmatic assumptions of qualitative research in order to use them for research quality (Moreira 2018).

On the other hand, validity in qualitative research must also be accounted for in terms of the social context in which it takes place. Therefore, many dissertations and theses written by college students are limited to subjects living in urban areas or their suburbs, and most of these subjects are best able to express themselves in Portuguese, which allows the interviewer and interviewee to converse in their common language, thus enabling a straightforward gathering of information.

The tendency to conduct research on Portuguese-speaking subjects may be due to the characteristics and nature of educational research since its main subjects are teachers, students or other educational agents who express themselves in the language of instruction. However, it should be noted that in a broader context, many educational research subjects, especially in rural areas, do not express themselves in the Portuguese language and it is therefore in these contexts that the use of mother tongues is important.

Brink (1993) claims that one of the major problems that affects the validity or credibility of qualitative data is related to the social and cultural context where the data is collected. The same author argues that the validity and reliability of the data can be affected by factors such as group or individual participation in the interviews. For example, in the individuals' stories and experiences, (loaded) aspects that relate to the individuals' memories, reminiscence, gender, ethnicity and realities as well as proper sociocultural aspects, may be embedded. This means that in studying the individual we must consider his or her subjectivity and the socio-historical and sociocultural background of that subjectivity. This view is embedded in symbolic social interactionism in which the individual interacts with others through symbols and these symbols carry values, meanings of his own for him (Carter & Fuller 2015; Segalman 1978).

In narrative studies which require interaction with the individual, the study of sociocultural aspects is important (Adama, Sandin & Bayes 2016) since

the individual story is embedded in a certain social and cultural context. The validity and reliability of the study can be affected by a lack of understanding of the sociocultural aspects when trying to interpret the data (Phillimore & Goodson 2004). The interpretation of phenomena, as Phillimore and Goodson state, can also come from the researcher – that is, whether the researcher belongs to a certain ethnicity, gender, sex, or race. This, in general, will affect the opinions of the respondents. For example, in contexts of a patrilineal culture, a female researcher might find it difficult to collect information if the survey or interview is directed at males, since certain types of information would not be available to females and vice versa. Topics such as affectivity, sexuality, cross-sexual relationships, or body functioning, create ambivalent responses when presented to male or female individuals because they are considered taboo in some cultures.

Power relations in some societies can also affect the validity and reliability of data since certain information can only be given by certain family members, for example, elders or ancestors whose power is already established within the clan. This means that the researcher will have to find the appropriate subjects to collect the relevant information for his or her research. In traditional societies such as African societies, this relationship exerts a strong influence on the behaviour of individuals and manifests itself through discipline, a fact that is different in Western societies where individualism is cultivated. The guarantee of data quality lies fundamentally in the observance of these conditions, that is, the researcher must address these aspects in his methodology.

Validity and trustworthiness in qualitative research can also be affected by how the researcher presents him or herself in the cultural environment. Therefore, it is important for the researcher to know the cultural specificities in order to obtain valid, meaningful, diverse, and in-depth data (Pelzang & Hutchinson 2018).

The importance of taking sociocultural factors into account has been reported in the scientific literature, because scientific rigor in qualitative studies cannot be achieved without knowledge of the sociocultural dimensions without the risk of the researcher imposing his or her beliefs, values, and behavioural patterns. This may limit the subjects' willingness to participate and even make the information gathered less credible. A research methodology must be employed that is sensitive to the cultural specificities of the context in which the research will take place.

However, today, both quantitative and qualitative research uses Western scientific models. The major theoretical developments have been based on research with individuals from these societies. The great advances in the sciences, especially in philosophy, arts, and the scientific methods that we know now, came from Europe and the United States of America, at least in

the format that we are currently familiar with. With the advent of colonisation these methods expanded ubiquitously, and the theories, developed mainly in the human sciences, were considered universal, since man has the same characteristics, but failed to take the socio-cultural specificities of each region and people into account. Scientific research, having been born in these contexts, has encountered few obstacles in the process of asserting itself and developing an implicit philosophy that is specifically connected to the context in which it is being developed.

In countries with a great linguistic and cultural diversity, especially in under-developed countries where research is not even a tradition yet (see Mulhanga in this volume), the credibility or validity of the information depends very much on the mastery of the socio-cultural and linguistic framework as well as the habits, values, beliefs, attitudes and opinions of each social group. The language issue, for example, is one of the barriers to building research validity, as the researcher may not master the language spoken by the research subject. In multilingual contexts, translations from one language to another for example, can distort the meaning of the information that is intended, moreover, some words and terms are not translatable (Pelzang & Hutchinson 2018), or a translation is not literal and perceptible. The study could not in this sense show what actually exists in the phenomenon outside of influences from other extraneous factors (internal validity), or whether or not these results could be generalised or applicable to other groups (external validity).

Although African countries have adopted most of the colonisers' languages for instruction and communication, the majority of the population does not master these languages, which can be a great challenge when conducting research and validating the information obtained if the researcher does not master the language of the research subjects. In the case of Mozambique, most of the people who speak Portuguese as their first language are based in large cities and have virtually no command of other languages spoken in the country. A researcher who speaks only Portuguese would find it difficult to communicate with non-Portuguese speakers, which would make it somewhat difficult to verify the information.

In this sense it would be desirable for the researcher to have proficiency of the language that is spoken by the respondents so that credible information about the investigated phenomenon can be obtained. The issue of language proficiency is just one of multiple factors that can affect validity and reliability in qualitative research.

Conclusion

Addressing the issue of data validity in qualitative research in contexts of cultural multiplicity seems to us a challenging task as the interpretation of phenomena by individuals needs to take into account the cultural and social context in which these phenomena occur. In the case of Mozambique, where the scientific tradition is still in its infancy, in-depth knowledge about the interpretation of phenomena is still not very deep-rooted. However, this does not mean that the issue of validity cannot be discussed. Quite the contrary. Because it is a crucial and most interesting issue for the researcher, it must receive the best attention in order to enhance the quality of the research itself. Nevertheless, it should be noted that the current models used to discuss the issue of validity in qualitative research need to be rethought, especially when they only try to transpose concepts from a quantitative model, with its already developed methodology, to a new model still in development. This way of looking at things can mislead us, especially when we want to make sure that the information gathered throughout our research corresponds to what the researcher is investigating in order to ensure the validity or quality of the research.

Qualitative research can nevertheless make use of the advances made in quantitative research to consolidate and enhance itself, as happens in many areas of knowledge, but the blind transposition of models and concepts can give the erroneous perception that all things work in the same way and thus jeopardise the validity of the data. On the other hand, it is of utmost importance to look at the context in which the research is conducted and understand the reality of that very environment.

Observing sociological as well as cultural factors of everyday life would be a very important step towards the development of adequate and contextualised theories that allow us to increase the quality of understanding the phenomenon in a holistic way. The paradigm shift in research cannot depend only on research oriented towards more developed societies. Rather, it must encompass all aspects of human life because at its core, it is man in his fullest and most differentiated context that research tries to understand. Culture and the social environment play an important factor in the construction of experiences and behaviours and must be considered as driving factors in these behaviours. The researcher, in order to ensure the validity and reliability of his results, must consider the subjective factors of culture and society in order to have an objective and unbiased view. This means that the issue is not only in the process but mainly in the need to use appropriate strategies/criteria that allow for the effective search for the truth about the events, by looking at the symbolic and cultural perspective of those involved in the research.

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