

## Qualitative and Quantitative Paradigm Constellation In Educational Research Methodology

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### **Abstrak:**

*Differences qualitative and quantitative research to academicians and researchers mainly concentrated on education studies is only able to browse and identify with the fundamental difference merely as example: research that only uses quantitative data but using the qualitative as a benchmark often not considered as a quantitative research Likewise, qualitative research that uses quantitative data is not considered qualitative research. If traced further, actually qualitative and quantitative research very spacious and is a level. Qualitative and quantitative research in the context of methodology includes a researcher's conception of social reality, the researcher's self-placement in relation to the reality study and various other reviews. Therefore, in this research article, is stated that the correlation between qualitative and quantitative research in educational research methodology is possible if both are based on the same paradigm. Conversely qualitative and quantitative research is difficult to reconcile if they depart from different paradigms, which have different epistemological assumptions, and different goodness criteria.*

**Keywords:** Methodology, Educational Research, Qualitative-Quantitative, Paradigm, Constellation

## I. INTRODUCTION

Research of quantitative and qualitative often only be distinguished from the data that is used [1]. But actually, quantitative and qualitative research is a level from research that only uses quantitative criteria in drawing conclusions [2]. Research simply just using quantitative data but using qualitative benchmark are not often considered as a research quantitatively. On the other hand, it is often found that qualitative research uses quantitative data [3].

Furthermore, the difference between quantitative and qualitative not only regarding the kind of data that is used, but more than that. These differences, among others, include the conception that a researcher has about social reality, the researcher's self-placement in relation to the reality being studied, and so on or what we know as multi-paradigm science [4].

Experts in methodological studies have discussed the differences and similarities between quantitative and qualitative research. Some of them put forward a number of scenarios of research qualitative as early explorative study prior to study quantitatively on a large scale [5],

or even as research that deepens the findings of quantitative research. Despite this, the issue of basic fact is not a distinction between research quantitative with qualitative, but differences in epistemology, ontology, and axiology inter-paradigm that there [6].

Therefore, the qualitative or quantitative research, more specifically more methods of quantitative and methods of qualitative, are the implications of the paradigm that underlie them. This argument is true that in the classical paradigm or the era after positivism. For example, on the basis of the epistemological and ontological assumptions is uses, it is oriented towards a methodology with goodness criteria which is more likely to be achieved through the application of quantitative methods [7]. But it should be noted, studies in the paradigm of classical not all of the research quantitative; many researchers classic that also apply qualitative research [8]. In other words, qualitative research is not the monopoly of constructivist or critical paradigms as in the

view of Alfred Schurtz [9]. So that a qualitative research can also be based on a post-positivist paradigm using the same logical structure as positivistic research in general [10]. Regarding this, Guba and Lincoln in Moch Syahmir Alis stated: "From our perspective, both qualitative and quantitative methods may be used appropriately with any research paradigm. Questions of method are secondary to questions of paradigm, which we define as the basic belief system or world view that guides the investigator, not only in choices of method but in ontologically and epistemologically fundamental ways" [11].

In certain cases, the difference between qualitative and quantitative research may simply be differences in the use of the methods and data used, or the different stages of research (exploratory, descriptive, and explanative stages). In such cases, both may depart from the same paradigm and logical structure. Research on how religious leaders influence the level of religious harmony [12] or perhaps research related to leadership and the success rate of organizational management [13], for example, could be initiated by a qualitative study, using a case study method or perhaps literature, which aims to conduct exploration of the variables that need to be examined in a broader scale quantitative research, using survey methods [14].

Based on what was stated in the introduction of this article, the researcher then wanted to dig deeper into the relationship between qualitative and quantitative research paradigms in educational research studies. So that the formulation of the research problem in this article is how the qualitative and quantitative paradigm in educational research. The aim to be achieved is to get a picture of how qualitative and quantitative research is from the point of view of educational research.

## II. RESEARCH METHODOLOGY

This research is included in the type of library research [15], in which the researcher deals directly with the text or manuscript. The researcher then conducted a search for data from various primary and secondary sources related to qualitative and quantitative correlations in educational research, which were relevant to the research theme. The data that was collected were analyzed and described qualitatively, then concluded.

## III. DISCUSSION

### Qualitative and Quantitative Paradigms in Educational Research

The constellation between qualitative and quantitative research in educational research methodology is possible if both are based on the same paradigm. In contrast, qualitative research and quantitative difficult reunited when both departing from different paradigms, which have different epistemological assumptions, as well as *goodness criteria* different [16].

If qualitative and quantitative research has arrived at differences, then in fact the two types of research depart from different paradigms, each of which has different epistemological, ontological and methodological assumptions [17]. Not just the differences in the methods and data analysis used [18]. Differences concerning the relationship between the researcher and the object under study, walking else is a difference epistemology.

Researchers quantitative in educational research studies, should try to put themselves as an *outsider* [19], keep a distance as far as possible with the object of the study. This could mean that in the survey, for example, the relationship between the researcher with the object that is observed (group of respondents) only bridged by the questionnaire structure, the researchers also do not have situational involvement with the object that is studied, and not also use the assessment, perceptions, values as well as the attitude of the object that is observed in the conduct of analysis and data collection. On the other hand, qualitative researchers are portrayed as researchers who actually position themselves as the insider [20], who try as far as possible to empathize (or project themselves in the roles and perceptions of the object under study), in order to reflect the subjective appreciation of the object under study as best as possible.

While the differences in conceptions about the reality of the social, the difference in terms of *ontology* as an example in the condition of the attitude of a group to another group of a tradition as the first researcher to study it [21]. A quantitative researcher tends to see social reality as a static form, which

has become, and can be observed at a certain point in time. Instead qualitative researchers tend to assume that social reality is always changing, and is the result of a social construction that takes place between the participants and social institutions. The difference regarding the research strategy, or the scope of the research, is the difference in methodology.

Researchers quantitative tend to implement a strategy that structured, both in the phrasing of the research process as well as the instruments of data collection were used (for example, the process of research is always starts from the formulation of conceptual problems, operational concept, the collection of data, and then analyzes the data) can be seen in the example of the results of educational research in the context of decentralization [22], in this study it would seem that the instrument collection of data is usually also a list of questions that have been structured; Quantitative researchers also tend to focus on finding the "truth", or *the truth*, which is generally accepted for the phenomenon under study (*nomothetic*) [23].

On the other hand, researchers qualitative tend not structured, the concepts used may be a concept that has not obtained the definition and elaborated tight (often using *sensitizing concepts*, which serves only as an overview of common conceptual and early); formulation of the problem which will be investigated many also just "found" after collecting data in the field; instruments of research is usually also not structured (just a general guideline for the *depth interview*, which can be developed in accordance with the conditions in which the interviews conducted); stage of data collection and analysis are not always separated by strict [24]. In addition to that, the research qualitative interested to find "a truth" or *a truth* about the phenomenon in the context where research is done (*ideographic*) [25].

With this, the difference between research qualitative and quantitative in certain cases could constitute paradigmatic differences, a fundamental matter because of the difference in the elements of epistemology, ontology, and methodology of each paradigm. Hence, in such cases, it is difficult to conduct quantitative and qualitative research as a combination. For example, researchers quantitatively the conduct survey and analysis of the data statistics, probably will assess the results of a qualitative study conducted colleagues as a result of the "bias", or "not objective", among others for qualitative research is pursued using observations involved are such that so the researchers looked at the reality of the social were investigated by the perspective of individuals who are involved in it.

Instead, colleagues who do research qualitative it will be argued that it empathy (the ability to projecting themselves into position or perspective of the subject of research) is a criterion important to assess the quality of a study of social [26]. Studies quantitative, especially more survey which uses the data collection instruments sort of questionnaire structured and carried out by post, rated only will produce picture or findings are trivial, superficial, or false.

### **Research Quality Assessment Paradigm and Criteria**

Such paradigm implications methodological. One of the implications of the methodology that was the criteria that are used by each paradigm for assessing the quality of research, those each other is difficult to reconcile [27]. In the classical paradigm perspective, the research quality of a study (in terms of methodology) is determined by internal validity and external validity in the study [28]. Internal validity includes 2 aspects, namely (a) reliability and validity of measurements, and (b) validity of design and analysis. Meanwhile, external validity includes (a) empirical or descriptive generalizations, and (b) context or setting generalizations.

On the other hand, research in the tradition of critical theories assesses the quality of a study in terms of the extent to which it is a study that has clarity in what is called *historical situatedness*: it does not ignore the historical, political-economic and socio-cultural contexts that underlie the phenomenon being researched. With said other research in the tradition of theories critical not always aims to obtain external validity (generalizability) as well as studies that are nomothetic, but is aiming to gain an understanding of reality in the context of specific, such as studies that are ideographic.

The theoretical perspective of critical theory also emphasizes the holistic nature of a study [29]. Because it is, in general, the studies were carried out is a *multi-level Analysis*, is not limited only on the level

of specific analysis alone [30]. From the perspective of critical theories, especially those that use structuralism analysis, a study that focuses only on analysis at the individual level will certainly be considered insufficient. For example, if in doing an analysis of the factors causing poverty we only use the variables on the level of the individual (such as low *nach* or the need for achievement, fatalism, etc.), regardless factor-factor structural (such as the gaps access to education, access to the sources of the economy, and so on), then it will be judged as a study of the less holistic. Likewise, if we do text analysis of media content without paying attention to the structural context in which the processes of producing and consuming text take place.

Constructivist approach, in terms of *quality criteria* are used, is actually split into two (2) variants. On the one hand is a group of qualitative researchers who are trying to adopt the *quality criteria* of classical researchers in conducting quantitative research. This can be seen with the use of criteria such as credibility (as a criterion intended to be parallel to internal validity in classical research); then the transferability criteria (parallel to external validity), and confirmability (parallel to objectivity) [31]. On the other side is a group that refused at once criteria for the study of classical or attempts to adopt the criteria of the classical research in constructivist research that uses qualitative methods. This group looks more at the quality of a study than the ability for things such as empowering the actions of the subject under study (*tactical authenticity*) and so on. Perspective theory in under the perspective of constructivism itself is a lot which is not a monolithic perspective. We know the flow of the Chicago and the flow of Iowa in the perspective of *symbolic interactionism* -which latter is more inclined to adopt the classical criteria.

For example, a study meets all the criteria for internal validity or external validity. However, in practice, this has been difficult to fulfill in a single study. There will always be a trade-off between internal and external validity. The need to obtain a research result that has internal validity (which can be improved by applying experimental methods) will reduce the external validity of the research result (which can generally be improved through survey methods). This issue will be discussed in the comparative analysis section between various research methods (survey, experiment and case study). Need also underlined that a study from a methodological aspect was perfect, not necessarily as a whole could be rated as a quality research is high. Apart from the methodological qualities discussed above, there are a number of other things that will determine the quality of the research

*First*, the quality of the theoretical framework used. The quality of a theoretical framework, among other things, concerns the strength of the theoretical framework used or compiled by the researcher (for example: whether the existing theorems or *theoretic hypotheses* are built on clear propositions, whether *fallacies* or *reasoning errors* occur, namely errors in reasoning, and so on), as well as whether the propositions are solely the result of speculation the researcher or a postulate that has been proven by empirical; and also the extent to which the framework of the theory are concerned following the recent development (*state of the art*) in the field of science who studied etc.

*Second*, the quality of a study is also inseparable from the significance of the research itself, both academic, practical and methodological significance. A study may have a quality higher than in terms of methodology, it means having the validity of internal and external yang high; in addition to that, the study may also be based on a framework of theory that is built from a number of strong proposition. However, the study may it not have academic significance that high (for example because it has been widely researched), does not have the significance practical, and do not also have a methodological significance because it does not use a better method than that has been used researcher others. The criteria we discussed earlier, as stated in the previous section, only apply to studies in the classical paradigm, and do not fully apply to studies that depart from other paradigms. On the other hand, the criteria shared by other paradigms also cannot be applied to assess the quality of a classical study. Therefore, these issues are often displayed in a debate in among researchers regarding the possibility of development or manufacture of a criterion that applies to all research from the paradigm is different. Is it possible? Most researchers assessed the criteria that apply to all paradigm as it is a thing that is not possible, even necessary.

Several criteria for assessing good bad a research qualitative that can be agreed upon by researchers from the camp paradigm of anything else-even though each paradigm may be given a weight that is different to the dimensions of certain criteria. The assesment criteria that apply to assessing the quality of qualitative studies (the goodness of qualitative studies) from all these paradigms, according to Marshal, are as follows:

1. The method used is sufficiently described so that anyone can judge whether the method used is adequate. For example, the reasons for using the method are stated, in addition to the methods or producedures for entry and exit in data collection, all methods of data collection and analysis are described in detail; notes the produres that are used in data collection or field data, included (attached) and so on.
2. The assumptions used are stated explicitly; do a sort of self-analysis of the possibility of the occurrence of *personal bias* .
3. Researchers took measures to prevent the entry of ratings subjective (*value judgments* ) in the collection and analysis of data.
4. Having sufficient evidence in the form of raw data to show a relationship between the findings presented and the empirical reality under study; and data is presented in an easy to understand form.
5. Questions Research stated in a clear and explicit, then the study findings also clearly answer these questions.
6. The linkage with the study earlier stated it explicitly. The definition of the phenomenon under study is early stated, and explicitly refers to the phenomena that have been previously identified (in previous studies ) - but the studies are carried out using a different *framework* , which is an alternative to those that have been used.
7. All the evidence that is presented, including evidence that does not support, and no attempt to seek an explanation of alternative, or using a variety of methods to check the findings (*triangulation*).
8. Raw data is available to other researchers who wish to re- analyze.
9. Applying methods to perform a quality check of data (for example, a technique to assess the *informant's knowledge ability* , honesty informant, and so on )
10. People who are involved in the research get certain benefits, they will not be harmed.
11. Studies conducted are associated with *the big picture* . Researchers see the phenomenon under study is holistic.

The criteria were rated Marshall and Soemantri [32] applies to research qualitative paradigm of anything, in fact the majority is related to the code of conduct of research, which is not as directly affect the quality of the research itself (such as the criteria that the object of the study should gain benefit from the research that is done) .

In addition to that, maybe not the whole dimension of the criteria which stated Marshall mentioned in the above may be accepted by the adherents of each paradigm. For example, researchers from the critical research camp may not see the relevance of preventing the inclusion of *value judgments* in data analysis [33] . Therefore, the researchers in the stronghold of theories critical of this, values, ethics, and the choice is morally section was separated from the study. The researchers of this camp also position themselves as *transformative intellectuals*, advocates, and activists

#### IV. CONCLUSION

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## REFERENCE

- [1] Fitrah, Muh. *Metodologi penelitian: penelitian kualitatif, tindakan kelas & studi kasus*. CV Jejak (Jejak Publisher), 2018.
- [2] Hermawan, Iwan. *Metodologi Penelitian Pendidikan (Kualitatif, Kuantitatif dan Mixed Method)*. Hidayatul Quran, 2019.
- [3] Manzilati, Asfi. *Metodologi Penelitian Kualitatif: Paradigma, Metode, dan Aplikasi*. Universitas Brawijaya Press, 2017.
- [4] Hidayat, Dedy. "Metodologi Penelitian dalam Sebuah " Multi-Paradigm Science"." *Mediator: Jurnal Komunikasi* 3, no. 2 (2002): 197-220.
- [5] Muhajirin, Muhajirin, and Panorama Maya. "Pendekatan praktis: metode penelitian kualitatif dan kuantitatif." (2017).
- [6] Hidayat, Dedy N. "DIKOTOMI KUALITATIF & "Kuantitatif dan varian paradigmatis dalam penelitian kualitatif." *Scriptura* 2, no. 2 (2008): 81-94.
- [7] Mulyadi, Mohammad. "Penelitian kuantitatif dan kualitatif serta pemikiran dasar menggabungkannya." *Jurnal studi komunikasi dan media* 15, no. 1 (2011): 128-137.
- [8] Arifin, Zaenal. "Metodologi penelitian pendidikan." *Jurnal Al-Hikmah* 1, no. 1 (2020).
- [9] Rasid, Ruslan, Hilman Djafar, and Budi Santoso. "Alfred Schutz's Perspective in Phenomenology Approach: Concepts, Characteristics, Methods and Examples." *International Journal of Educational Research & Social Sciences* 2, no. 1 (2021): 190-201.
- [10] Suryadi, H. Edi. "Metodologi Penelitian Kuantitatif dan Kualitatif dalam Perdebatan (Bagian1)." *manajerial* 406 (2006).
- [11] Alias, Mohd Syahmir. "Objektivitas Dalam Penyelidikan Sains Sosial: Perbandingan Perspektif Positivisme dengan Perspektif Islam." *Jurnal Islam Dan Masyarakat Kontemporer* 16, no. 1 (2018): 1-10.
- [12] Rasid, Ruslan. *BIOGRAFI ANDERSON MEAGE: Merajut Kerukunan di Bumi Cendrawasih*. Tangan Emas, 2020.
- [13] Rasyid, Ruslan. "KEPEMIMPINAN TRANSFORMATIF KH AHMAD DAHLAN DI MUHAMMADIYAH." *Humanika, Kajian Ilmiah Mata Kuliah Umum* 18, no. 1 (2018): 50-58.
- [14] Zakariah, M. Askari, Vivi Afriani, and KH M. Zakariah. *METODOLOGI PENELITIAN KUALITATIF, KUANTITATIF, ACTION RESEARCH, RESEARCH AND DEVELOPMENT (R n D)*. Yayasan Pondok Pesantren Al Mawaddah Warrahmah Kolaka, 2020.
- [15] Darmalaksana, Wahyudin. "Metode Penelitian Kualitatif Studi Pustaka dan Studi Lapangan." *Pre-Print Digital Library UIN Sunan Gunung Djati Bandung* (2020).
- [16] PARJAMAN, TATANG, and DEDE AKHMAD. "PENDEKATAN PENELITIAN KOMBINASI: SEBAGAI "JALAN TENGAH" ATAS DIKOTOMI KUANTITATIF-KUALITATIF." *Moderat: Jurnal Ilmiah Ilmu Pemerintahan* 5, no. 4 (2019): 530-548.
- [17] Priatna, Tedi. "Filsafat Ilmu Penelitian Kualitatif." *Artikel Ilmiah* (2015): 1-21.
- [18] Kartowagiran, Badrun. "Pendekatan Kualitatif dan Pendekatan Kuantitatif Dalam Penelitian Tindakan di Bidang Psikologi." (2015).
- [19] Amir, Mohammad Faizal, and Septi Budi Sartika. "Metodologi penelitian dasar bidang pendidikan." (2017).
- [20] Anshori, Muslich, and Sri Iswati. *Metodologi penelitian kuantitatif: edisi 1*. Airlangga University Press, 2019.
- [21] Rasid, Ruslan. "TELAAH PEMIKIRAN HASSAN HANAFI DALAM MUQADDIMAH FĪ 'ILMI AL-ISTIGHRĀB (PENGANTAR OXIDENTALISME: SIKAP KITA TERHADAP TRADISI BARAT)."
- [22] Djafar, Hilman, Ruslan Rasid, and Evi P. Hulukati. "Perencanaan Strategi Pendidikan Terhadap Pembangunan Peradaban Bangsa Dalam Konteks Desentralisasi." *Journal Mistar* 1, no. 1 (2020).
- [23] Ghony, M. Djunaidi. "Metodologi penelitian pendidikan: Pendekatan kuantitatif." (2016).
- [24] Suwendra, I. Wayan. *Metodologi penelitian kualitatif dalam ilmu sosial, pendidikan, kebudayaan dan keagamaan*. Nilacakra, 2018.
- [25] Hadi, Sumasno. "Pemeriksaan Keabsahan Data Penelitian Kualitatif Pada Skripsi." *Jurnal Ilmu Pendidikan* 22, no. 1 (2017).
- [26] Rukin, S. Pd. *Metodologi Penelitian Kualitatif*. Yayasan Ahmar Cendekia Indonesia, 2019.
- [27] Arikunto, Suharsimi. "Prosedur penelitian suatu pendekatan praktik." (2019).

- [28] Arikunto, Suharsimi. "Dasar-dasar evaluasi pendidikan." (2016).
- [29] Suliyanto, S. E., and Suliyanto MM. "Metode Penelitian Kuantitatif." (2017).
- [30] Sugiyono, Prof Dr. "Statistika untuk penelitian." *Bandung: CV. Alfabeta* (2006).
- [31] Supardan, H. Dadang. "Teori dan praktik pendekatan konstruktivisme dalam pembelajaran." *Edunomic Jurnal Pendidikan Ekonomi* 4, no. 1 (2016).
- [32] Somantri, Gumilar Rusliwa. "Memahami metode kualitatif." *Hubs-Asia* 10, no. 1 (2010).
- [33] Zamili, Moh. "Sketsa Penelitian Kualitatif dalam Pendidikan." *LISAN AL-HAL: Jurnal Pengembangan Pemikiran dan Kebudayaan* 7, no. 1 (2013): 197-236.