

Critique of Qualitative Research Methods and Quantitative Research Methods

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1. Introduction

As John Creswell(2014) illustrated, “*research approaches are plans and the procedures for research that span the steps from broad assumptions to detailed methods of data collection, analysis and interpretation*”. In this article, qualitative (later called QUAL) research approaches and quantitative (later called QUAN) research approaches will be discussed from their respective historical background to their advantages and disadvantages with special reference to my research interest---translation studies. Then mixed methods will be introduced later. By illustrating the merits and downsides, a few case studies of mixed method research plan are exemplified in the end to scaffold how to integrate qualitative and quantitative methods, especially in translation studies.

2. Critique of Qualitative Research and Quantitative Research

In this part, qualitative and quantitative research will be distinguished through their respective theoretical history and features, with reference to their positiveness and drawbacks.

2.1 The overview of historical background of qualitative research

The history of qualitative research could be traced back almost a century ago in social science. “*Qualitative-like methods were first adopted in sociology, anthropology in the beginning of last century*”(Dornyei 2007), then qualitative research was mainly used to explain and support quantitative studies after 1930s and especially post-WWII period. “*It was Glaser and Strauss who first defined qualitative methodology in late 1960s in his book The Discovery of Grounded Theory: Strategies for Qualitative Research*”(Dornyei 2007), which began to set a dominant place of qualitative research and posted as a challenge to the quantitative hegemony. Especially since the mid-1990s, the proliferation of qualitative research emerged and lent it self to growing acceptance in applied linguistics,, as “*qualitative research is ideal for providing insights to social, cultural and contextual conditions and influences*”(Dornyei 2007). Then what is qualitative research? Here’s the quotation from John Creswell:

2.2 The features of qualitative research

“*Qualitative research is an approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem. The process of research involves emerging questions and procedures, data typically collected in the participant’s setting, data analysis inductively building from particulars to general themes, and the researcher making interpretations of the meaning of the data. The final written report has a flexible structure. Those who engage in this form of inquiry support a way of looking at research that honors an inductive style, a focus on individual meaning, and the importance of rendering the complexity of a situation*”(Creswell 2014).

From the above definition, we could infer that qualitative research has the following characteristics:

A. Individuality-concerned:

In term of research subjects, QUAL research aims at addressing a particular social

problem for particular group of human beings or certain kinds of individuals, mainly concerning their feelings, psychology or social behaviors. Thus some scholars commend qualitative research as contextual, humanistic and ethical-friendly.

B. Interpretative/exploratory:

In term of research purpose, qualitative research unearths the detailed meaning of the data, explores how the phenomenon comes into being and explains why it occurs. It mainly relies on the researchers' interpretation and explanation of data collected. Thus it's more descriptive and exploratory.

C. Inductive:

In term of research process, qualitative research inducts theories or assumptions from the data analysis of those participants, rather than setting up a hypothesis at the beginning of the research.

With a deeper look at the above features, qualitative research could be penetrated with the following pros and cons.

a. Flexibility Vs. less validity

For one thing, qualitative research exhibits flexibility in setting as social phenomenon occurs naturally, and researchers are not manipulative in the context under study. Besides researchers are more likely to be responsive to the emergent occurrence of particular variations from participants or changes of their conducted study, especially study involving a fieldwork, and those changes during their study might divert the focus of the research from its original. For another, flexible written structure is also found in their final report as mentioned above. Thus many scholars regard qualitative research as a process of discovering, refining and developing theories.

As qualitative research is more subjective to some social threats, like emergence of participants and other changes, or it may lead the research into an unknown journey and yield no productive predictions; It is also highly susceptible to researchers' personal educational background and biases, thus sometimes its validity might be diluted.

b. Uniqueness Vs. less generalizability

Qualitative research studies the micro understanding of social phenomenon, sometimes specific case studies or small group of samples are selected. It boasts in its speciality, and yet also means it has a smaller audience, thus more difficult to produce general effects.

b. Complexity

Complexity refers qualitative research adept at dipping into more complex situations and shedding light on complex human perceptions, feelings and thoughts on the one hand, and it also takes more time and energy to conduct the research on the other hand.

Bearing the pluses and minuses of qualitative research in mind, many scholars attempted to find remedies, such as quantitative research, which might neutralize some flaws.

2.3 The overview of historical background of quantitative research

The history of quantitative research could be dated back almost several centuries ago in social science. First inspired by the advancement of natural sciences in 19th century, "*social research scholars and philosophers began to adopt the scientific method in their work around 1960s*"(Dornyei 2007). It was not until "*at the turn of the 20th century, Francis Galton who underpinned quantitative data collection and analytical methods in psychology*"(Dornyei 2007). Then followed by tremendous surge in both statistics and scientific methods. The

middle of last century witnessed the dominance of quantitative research in social science, which was later challenged by qualitative research in 1970s. “According to Lazaraton, quantitative research articles soared during 1970-1985”(Dornyei 2007) and were still on the way of increasing sophistication later on in applied linguistics. Here quotes from John Creswell to define the quantitative research.

2.4 The features of quantitative research

“Quantitative research is an approach for testing objective theories by examining the relationship among variables. These variables, in turn, can be measured, typically on instruments, so that numbered data can be analyzed using statistical procedures. The final written report has a set structure consisting of introduction, literature and theory, methods, results, and discussion. Like qualitative researchers, those who engage in this form of inquiry have assumptions about testing theories deductively, building in protections against bias, controlling for alternative explanations, and being able to generalize and replicate the findings”(Creswell 2014).

From the above definition, the features could be summarized as follows:

A: Number-centered:

In terms of research subjects, the quantitative research tends to include a wider scope of participants and build up a large database, then collect the data, analyze the data and use the data to test its original assumption. Thus, some scholars claim numerical feature as the most prominent and indispensable in quantitative research.

B: Confirmatory:

In terms of research purpose, quantitative research usually puts forward a hypothesis at the beginning, then undergoes a series of experiments to test the hypothesis. It confirms whether the hypothesis is true or false from different aspects. It also states how many variables should be chosen and how much the relationship among them.

C: Deductive

In term of research process, quantitative research tries out experiments or pilot studies to test the correlation between variables, and then the result from the large database collected can draw some kind of conclusion.

Retrospecting on the above features, the following strengths and weaknesses could be scrutinized in quantitative research.

a. Replicability Vs. less in depth

As most of the quantitative research is conducted in artificial settings, similar experiments could be replicated by other researchers given the variables controlled. Consequently, the utilization of the research outcome could be generalized to more audience. Meanwhile due to the large number of samples, most of the research just touch the macro features of those samples, and in-depth micro detailed observation is usually ignored.

b. Validity Vs. too much rigidity

As the research process is more data-based, researchers are more liable to be objective, independent from their personal biases. Coupled with a large database, the research results are more of credibility and validity compared with results from only a few case studies and researchers’ involvement. With a distant and cold eye to the database and the process of the study, the written report is all set up in a certain structure and there left not much room for researcher’s autonomy. The rigid structure of quantitative research may lead to the

insensitivity of causes of phenomenon or some contextual changes.

c. Simplicity

Compared with qualitative individual studies, quantitative research may choose large computerized data network or tools to conduct experiments, thus it's easier, quicker, more practical and time-saving. It's also accompanied by its drawbacks. Some scholars argue that it might be too simple, too general and too superficial because it averages out and sacrifices the variety of individual participants and their uniqueness.

2.5 The Qualitative and quantitative research in Chinese translation studies

“Translation studies include pure theoretical and applied studies, and pure theoretical studies are composed of descriptive and theoretical translation studies. For descriptive translation studies, product, process and function orientation are included, while applied translation studies consist of studies on translation teaching, translation tools, translation evaluation, policy, strategies and methods, etc”(Hu&Han 2017). As different translation studies might apply different research methods, the following part will be centered on qualitative and quantitative research in Chinese translation studies with historical discussion and predictive trend.

A. The overview of qualitative approach in Chinese translation studies

Looking back history of Chinese translation studies, traditional Chinese translation studies in last century are basically modeled on qualitative method in the last century(Xie&Zhou 2020); The qualitative research is about both theoretical and applied studies, such as translation teaching, textual analysis and transcription. The 21st century has still witnessed substantial qualitative research by *“cognitive and cultural approaches, descriptive investigations and bibliometrics”*(Valdeón 2017). Among all the research funded by The National Social Science Fund of China (NSSF in short later), a top national research sponsor in China, *“qualitative research still dominates translation studies in China, and will still has its role as the cultural turn in translation took place in recent years”*(Zhang 2015), but *the total amount is descending in recent five years*(Wang&Fang 2020).

B. The overview of quantitative approach in Chinese translation studies

To some extent, the declining number of qualitative research is caused by the interaction between methodology and computer technology, cognitive science, neuroscience and translation process. More empirical translation studies were born after 1990s. The booming quantitative methodology in translation studies is realized mainly through *process orientation, such as “corpus analysis, eye tracking, keystroke logging*(Valdeón 2017)”. Glimpsing the latest five-year trend of research sponsored by NSSF, *“the number of quantitative research papers in translation is increasingly rapidly”*(Wang&Fang 2020), though still not equivalent to its counterpart. *Data is sourced textually, experimentally and multi-modeled* (Zou 2020).

Quantitative research in translation as quantitative method shines in the following aspects in translations, for instance, translation studies grounded on a large database might fuel their systematicity and objectivity, or empirical studies through quantitative method might disclose the rule in translators' choice of words, syntactical and textual features and scientifically refine the translation strategy. But some conventional scholars still hold the view that there are substantial data in translation that can't be measured numerically, such as the awareness of poetics, cultivation of sponsors and translators, translating attitude and values(Zou 2020), etc. Moreover, quantitative research would sacrifice the rich humanistic

connotation of translation and just follow the flow of natural science without a second thought. Without variables controlled, quantitative research would deviate even further from its original assumption.

Similar critique of both quantitative and qualitative research had been going for decades. Disputes about the dichotomy of two kinds of research methodologies gave rise to a third choice----mixed methodology.

3. Proposed Mixed methods

In this part, mixed research will be put forward as a more comprehensive alternative, supported with historical literature review at first, then definition, justification and a few case studies in translation specifically.

3.1 The historical background of mixed method research

The earliest practice of multiple data collection in social science could be sourced back to the start of last century. Around 1960s, *“Campbell and Fiske explicitly discussed multitrait-multimethod research as a way of validating research designs by separating trait and method effects”*(Dornyei 2007). In 1970s, Denzin introduced *“triangulation as a way of validating hypotheses by examining them through multiple methods”*, which marked the huge leap of combining two methods. Later around 1990s, mixed methods acquired more attention with the book *Multimethod Research* written by Brewer and Hunter. Abundant research studies were published in education, nursing, psychology, management and psychology and other areas. But *“the real establishment of mixed methods research in social science as a legitimate form of inquiry was not until the publication of Tashakkori and Teddlie”*(Dornyei 2007). Recent years have seen so fast increase in mixed method research *“that John Creswell even predicted that methods paradigm will be the leading paradigm within the next five year*(Leech&Onwuegbuzie 2009)*”*. According to CNKI(China National Knowledge Infrastructure) database, mixed methods are also on the rise for Chinese translation studies in the new century, especially comparative textual translation studies. More and more Chinese experts and scholars on translation studies are adopting mixed methods in their own research and *“calling on followers to apply mixed methods, too”*(Wang&Fang 2020).

3.2 Features of mixed methods research

Here quotes from John Creswell: *“Mixed methods research is an approach to inquiry involving collecting both quantitative and qualitative data, integrating the two forms of data, and using distinct designs that may involve philosophical assumptions and theoretical frameworks. The core assumption of this form of inquiry is that the combination of qualitative and quantitative approaches provides a more complete understanding of a research problem than either approach alone”*(Creswell 2014).

From the above definition, a few characteristics of mixed methods research could be listed as follows:

A. Integration

As the definition indicates, data from both quantitative and qualitative experiments are collected, analyzed and combined to interpret. The process of data integration is reputed to be the most obvious feature.

B. Complementarity

In terms of research problems, the mixed methods are supposed to target at more complex issues which couldn't be fully addressed by either qualitative or quantitative method.

The employment of mixed methods could further clarify the result from only one method.

C. Development

In terms of research designs, mixed methods research takes both philosophical and theoretical research design into consideration. Instead of a set-up assumption by quantitative research design or no-structured philosophical exploration, mixed methods research designs entail both theory-testing and phenomenon discovery. The research designs go beyond the boundary of either one and thus advance and enhance the depth and breadth of the research.

As a new approach, mixed methods research do enjoys some praises (see below) and at the same time is also watered with criticism as follows.

a. More credibility Vs. diversity

The credibility is strengthened through data collection, data analysis and interpretation. The research follows not only the observation of minor changes in individual cases but also major trend of general samples. Thus the data collected is more representative and enlightening than either one method, and data analysis and interpretation is done both by experience of the researchers and some scientific statistic tools, like SPSS. Hence, the overall credibility and reliability is intensified.

If the qualitative research within alters the research focus due to the changes from individual participants, then mixed method research might generate different views and diversified assumption slightly contradictory to its quantitative research results. Thus sometimes its overall research result might turn out to be unexpected.

b. Larger audience Vs. less guidance

Taking both particular case studies and general tendency into account, mixed methods research could reach much more audience than either one method, and thus benefit more people from its research outcomes. However, there's not yet standard guidance on how the two methods could be combined and how the mixed methods research generates the utmost effect, rather than just randomly put them together.

c. Complexity

Because mixed methods research allows researchers to gather data from both individuals and broader computerized samples, it is more skilled in broader interpretation or more appropriate to probe into complex issues and offer a deeper and more sophisticated understanding to the problem discussed. Meanwhile, the research requires more complex scientific research knowledge and it takes more time and more complex process to design and finish, thus more demanding for researchers.

As it is demonstrated above, mixed methods research is not flawless at all. Yet many researchers are keen on promoting this methodology. Are they rational? Then let's dive into the rationale of mixed methods research.

3.3 The justification of mixed methodology

Firstly, from the perspective of research outcome, with proper guidance, mixed methods research could merge the edges of two methods, offset their respective limitations and make the utmost use of their advantages. As some researchers indicate, *"it is not enough to fulfill the purposes of a study with just fact and meaning, QUAN and QUAL, or numbers and language or even those combined, as quantitative research is a search for numeric fact, whereas qualitative is a search for language-based meaning"*(McLafferty at. 2010). Research problems are better answered in terms of length and width. It may provide better insight to

“multi-layers of meaning” and *“different dimensions of facts”*(Litosseliti 2010).

Second, in the aspect of research methodology disagreement, mixed methods research eases the tension between two hostile methodological battlefields to some extent, reduces the conflicts and buffers them against the attacks and slanders from each other. By narrowing down the gap and divisions between two methods, it harmonizes the academic atmosphere and stands a better chance of setting up an amiable interdisciplinary or cross-disciplinary research trend. According to *“Bryman’s study on 232 social science articles, it reveals that multi-strategy research is more commonly practised”*(Bryman 2005).

Thirdly, from researchers’ side, mixed methods research renders researchers’ lifelong training and learning opportunities and slows down their obstinacy and presumption. Whether Self-access or systematically methodological training to skill improvement, mixed methods research will endow researchers with latest updates in academics, confer them with more competence, and finally researchers may gain an upper hand in their research performance, especially for those young PHD students. In all probability, they are less opinionated to hold their own thoughts all the time and refuse to accept questions from opponents.

Fourthly, from the part of academic influence and dissemination, compared with either one method, it goes without doubt that mixed method research could exert more impact on readers or followers, spread ideas far wider to people who might translate the research results into practice.

In the end, pondering on the reality, for one thing, it’s better that research papers or books get accepted, peer-reviewed and published by more publishers within shorter period of time. Comparatively speaking, mixed methods research opens more doors of publishing, with both two different kinds of journals into its publishing basket. For another, research is better done with financial support especially funds from institutions or government, therefore researchers won’t be bothered with financial concerns on the way of conducting their studies and financial support could slim the odds of financial insufficiency at the expense of research efficiency. Mixed methods research allows researchers more chances of financial endorsement from different kinds of organizations, as it states in Julia Brannen’s paper----*“opportunities for mixed methods research are increasing with the rise in crossnational research in the context of the growth in European Union funding. Many EU projects typically comprise context mapping exercises, involving secondary analysis of macro-level data and the collection of national statistical data”*(Brannen 2005). The same case is also true of Chinese translation studies. It is said that *“mixed methods research is in greater demand by NSSF”*(Wang&Fang 2020).

Reviewing on papers from CNKI(China National Knowledge Infrastructure), the largest and most renowned peer-reviewed academic database in China, empirical translation studies with quantitative approach are still at a disadvantage. There are indeed some case studies, but some of them are just attached to certain theories and serve to describe theories and tend to be subjective and deficient in scientific proofs, or some are just isolated by moderate samples, insufficient in explanation and generalizability. Since *“translation has always been seen as a complex human activity and caused by a set of incentives”*(Xie&Zhou 2020), a product of cause-effect chain, many scholars suggest mixed methods might be a new attempt to innovate Chinese translation studies.

3.4 Proposed research designs of mixed methods and its implications

To maximize the mixed methods' beauty and minimize its defect, three basic models on how to mix quantitative and qualitative methods are depicted by John Creswell.

A. *"Convergent parallel mixed methods"*

In order to analyze research issue comprehensively, the researcher collects and converges qualitative and quantitative data almost at the same time and then gives an overall interpretation of the whole results.

To name one specific application in translation, Zhu (2013), in his essay analyzed six different Chinese versions of "The Adventures of Huckleberry Finn" from lexical, syntactic and discursive angle. He presented the quantitative results with qualitative discovery side by side. It confirmed statistics with inductive conclusion.

B. *"Explanatory sequential mixed methods"*

This kind of research starts with quantitative method, based on which the qualitative research is developed later to explain the previous results in details.

This model is found in Liao(2019)'s doctoral dissertation. Starting with a corpus-based quantitative research on Dialogues in Hong Lou Meng(The Red Mansions), she discovered the differences in words and syntax between Chinese and English versions, then a detailed qualitative study on four types of samples with remarkable difference is followed to unfold the possible causes. Thus the research problem is well explained by with corpus data and causes further deepen the understanding of the problem.

C. *"Exploratory sequential mixed methods"*

Just the opposite to the second research, it initiates with qualitative method and discusses participants' viewpoints and then analyze the data and select some appropriate information, such as some variables for later quantitative samples to do follow-up research.

This research framework is exemplified by Brazil(2016)'s dissertation, In order to get sound data on problems and its possible solution of C-E translation, interviews with renowned translators and translation professors in seven different universities were conducted first. Based on their views, researcher designed some relevant questions in a follow-up survey for over 300 graduate students from different universities. The study is both representative and illuminating.

4. Conclusion

Though with their uniqueness and deficiency, qualitative, quantitative and mixed method all contribute a lot to the prosperity of research in certain fields. The choice of research methodology largely depends on the specific research problem, researchers' personal preference and experiences as well their audiences. Whatever method is chosen, what matters most is that how it is utilized to serve its specific research purpose.

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