

The Applications of Qualitative and Quantitative Research among Academic Staff in Psychology and Education: A Review of Practice

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Abstract: This study aims to explore the reasons of selecting quantitative or qualitative research methods by researchers in faculty of education in writing their papers. The strategies of conducting this research were by reviewing the content of 102 published articles in GESTEN journal, and by interviewed a number of experts in the field of education, along with a distribution of 73 questionnaires to investigate the reasons behind choosing research methodology in writing papers. The results showed that 92 articles out of a total number of 102 published articles were used quantitative research methods, 6 articles used qualitative research methods and just 2 articles were used mix research methods, and many of them prefer this kind of methodology for a few reasons such as timing, ease of application and less effort of doing quantitative researches. In addition, less of training and less of involving qualitative research methods in postgraduate level in term of teaching and learning hindering the researchers in the faculty of using qualitative research methods. Besides, the view of some participants indicated that social and culture factors do not support doing the qualitative research methods and the lack of psychological laboratories in the faculty play a main reason of hinder qualitative research.

Keywords: Qualitative, Quantitative, Research Methods, Mix Research Methods

Introduction:

Many researches in field of research methods compared the differences between qualitative and quantitative research in various views, some were compared the methods and approaches and some compared other components such as data collection, purposes, results interpretation, questions and hypothesis.

Castellan (2010) in her study compared many components between qualitative and quantitative research such as methods, types, philosophical assumptions, purposes, hypotheses and questions, those being researched, those conducting the research, and data analysis. In order to enhance her research's results in understanding the uses of these different approaches she is mainly focuses on utilized qualitative and quantitative research on education.

The most common research method that using by researchers in education field is quantitative method which involves the use of a structured questionnaire in which the items design possibly with some open-ended questions to obtain respondents' attitude and opinion and the answer options are pre-coded and scaling either in (Yes and No) or in Likert scale, and a large number of respondents can be involved in the study (Pole, 2007). Quantitative research includes a statistical methods and data collection, and the reliable results can be represented and generalized if the research apply directly on the research's population or on comprehensive sample (Castellan, 2010; Bakewell, 2011). For the researchers, the quantitative research is the favorable method because its the faster to conduct research and generalize the results. Qualitative research which needs more time to conduct the research and need more strategies to deeply understand the phenomena is the unfavorable method for researchers because they willing to have their researches done faster and easier by using quantitative researcher.

More recently, the methodological of research has moved to combine the both methods (Qualitative and Quantitative) and being called as mixed methods research. The mix methods research enhances our understanding of reading the phenomena by providing rich information and comprehensive picture than either method can alone (Wisdom and others, 2012). This study aims to study the differences between both methods by applying the mix method research in order to explore the percentage of researches that use every single method or the mix methods as quantitative part and the interviews approach along with the reviewing the published researches in school of education will be used as qualitative part, which mean this study will be structured based on mix methods research.

Qualitative Research Method:

Literature about research method tell us that qualitative research fits many purposes in order to explain and to be ineffective in exploring the realist reasons of understanding the phenomena or the situation, and they have to construct their research method and questions to make better understanding of their work more strongly than quantitative method research (Richards, 2012).

In the qualitative research, the researcher have to provide a framework for the textual data and interpret the data and generate deep cultural understanding. The qualitative researcher aims to discover and explore the real meanings of respondents' opinion and their thinking about the current situation through the interpretation of their perspectives in particular issues. Some people might see university not as a place for studying but more as a place for socialization (Pratt and woods, 2006).

Qualitative research gives more rich information than quantitative research and gives much more meaning answers to research's questions, and may give valuable perceptions that did not appear by any other method that can be a strong case for using it to accompaniment quantitative research method. Besides, qualitative research can be considered as a complement method for the interpretation and for the understanding of finding in quantitative research (Fraenkel and Wallen, 2008).

Fraenkel & Wallen, (2008) and Patton(2001) described the guidelines of doing proposal of qualitative research in their books to reach goals and purposes of conducting qualitative research methods. The description of their guidelines contains the following elements: Introduction: The introduction in qualitative research which is different than the introduction in quantitative research in its content and the way of focusing should answer the following questions: Why should the research be done? Who will benefit and how many will benefit? How will the field or subject benefit from the research?. In addition, the introduction should pose initial research question and sub questions, theoretical sensitivity, researcher's personal experience, knowledge and analytic rigor. For literature of review: The literature section in qualitative research not much different than the way of writing literature in quantitative research, literature in qualitative research not only have to be reviewed of literature in the current research field but should be relevant to the research's topic and a statement about how each article informs the study. As for the research design in qualitative research, the methodology should describe the strategies that will be used in the study, site and sample selection method in order to answer the following questions: where will you conduct your study and why that site? Who you will study and how will studying this person/these people help you to answer your question? In what sequence will you carry out your study and why? How will you ensure that the context is fairly and accurately represented?. For the theoretical framework, the theoretical itself should influences your research design and appropriateness of the methodology for answering your research question includes adequate description of your particular theoretical approach such as Ethnography, Phenomenology, Ethno methodology, System theory and Symbolic interaction. For the data collection and analysis, the data procedures should answer the following questions: how will collect data and how will be used to answer your research questions? When you will observe? And how will deal with context, duration of the study, unit of the study and approach descriptive? What ways will you record each type of data and how do you plan to store the data once collected?. Besides, the researcher must sate specifically how will proceed to analyze each type of data such as (observation, interview and documents).

In his study, Myers (2012), he described three philosophical perspectives on qualitative research; the first one is Positivist, second is Interpretive and the third is Critical. The meaning of positivist in qualitative research is the philosophy of social science that depends basically on the view of natural situation and science, and the information obtained from sensory experience, scientific treatments, logical beliefs, and reports of data. (Cohen, Manion and Morrison, 2007). While, the meaning of Interpretive and Critical he assumed that some of qualitative researches interpret based on researcher's philosophical assumptions. Some researchers may use for example the case study method in his research that based on philosophical position (positivist) adopted, some may chose action research method in their research which based on interpretive or critical theory. Therefore, Myers described the three philosophical perspectives in the following Figure:

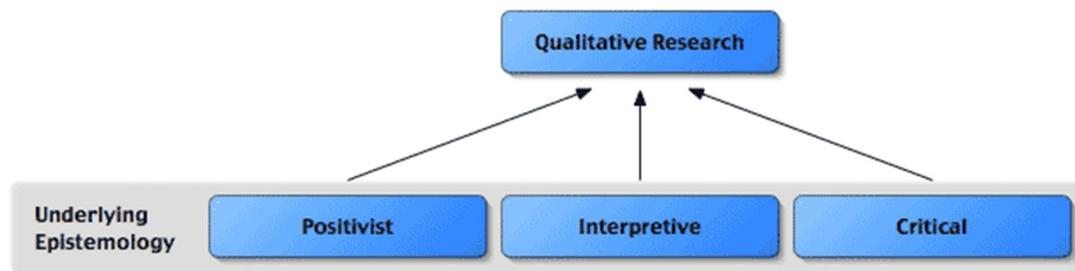


Figure 1 Qualitative Research Methods, Adapted from Myers (2012)

Quantitative Research Method:

The most useful methods in research area are quantitative research methods due to a few reasons such as time saving, less effort, easy conducting and many other reasons which are behind in doing this kind of methods. This study will try to investigate these reasons through interviewing the experts in this field. By looking on the idea of conducting quantitative research we can find up that the phenomena social science can be studied by different statistically ways and can be analyzed by different computer programs because this method basically based on numerical and quantified terms (Rose and Sullivan 2006).

Generally, by looking for the categorization of all types of researches methods in social science there are a few models and methods that based on philosophical assumptions. The categories of social researches are appeared clearly as in Guba& Lincoln (1994) and Morgan (2006). They suggested a few types of research methods and models as in the following Table:

Table: 1.1

Basic Beliefs of Models and Methods of Researches (Adapted from Denzin and Guba (1994).

Item	Positivism	Post-positivism	Critical Theory	Constructivism
Ontology	naive realism- "real" reality but Apprehendable	critical realism- "real" reality only imperfectly and probabilistically apprehendable	historical realism/virtual reality shaped by political, cultural, economic, ethnic, and gender values; crystallized over time	relativism- logical and specific constructed realities

Epistemology	dualist/objectivist; findings true	modified dualist/objectivist; critical tradition/community; findings probably true	Transactional subjectivist; valuemediated findings	transactional subjectivist; created findings
Methodology	Experimental manipulative; verification of hypotheses; chiefly quantitative methods	modified experimental/manipulative; critical multiplism; falsification of hypotheses; may include qualitative methods	dialogic/dialectical	Hermeneutical/dialectical

Quantitative Research Methods use techniques that includes of hypotheses, examine relationships between independents and dependent variables and measure the percentages and frequencies of observations (Fowkes and Fulton,1991, Greenhalgh 1997, Bowling 2002). Besides, Quantitative research methods have been considered as more rough than qualitative research methods, with randomized sample and controlled of research trials and process (Hoe and Hoare, 2012). However, qualitative and quantitative research methods are both considered valid and harmonizing methods when applied them correctly, and may also be combined and called mix methods research (Bowling 2002).

In the field of research, there are two methods and approaches in conducting research; the quantitative and qualitative research methods that use techniques to explore new issues of human experience by understanding and interpreting the currently phenomena (Bowling 2002).

This study aims to investigate and explore the type of research methods commonly used in faculty of education, and try to find out the reasons behind choosing research methods and techniques. The research design of this study includes two types of methods; qualitative and quantitative research methods (mix methods) in order to have more deep meaning and information in understanding the real situation.

Research Questions

This study aims to answer the following questions:

First: what are the types of research methods commonly used by lectures in faculty of education?

Second: what are the types of research methods that slightly used by lectures in faculty of education?

Third: what are the reasons of choosing the type of research methods among the lecturers in faculty of education?

Research Methodology and Materials

This study consisted of two types of research methods; qualitative and qualitative in order to explore the reality of research activity in faculty of education and to find out factors that influence researchers in selecting their research techniques and methods.

Qualitative Method:

The qualitative method used in this study consists of two types of data collection and techniques; the first type which is collected by interviewing a number of experts in faculty of education at King Saud University and the second type which is collected by reviewing the articles in the faculty's journal "GESTEN" by reviewing and analyze the last two issues in this journal; 2011 issue and 2012 issue.

The reasons of using qualitative method in this study are to find the real reasons that encouraged researchers in the faculty of selecting qualitative or quantitative methods in doing their research, and the study try to find out the challenges of prevent researchers in selecting quantitative or qualitative method in doing their research.

The researcher in this study he is one of the lecturer at faculty of education in king Saud University and he consider as a good instrument in conducting this research according to his experience in the field of research as he heading the department of research in the faculty and he also a member of academic staff at this faculty. Besides, the researcher has a good experience in conducting research and he published a few articles in international journals.

Sample of Qualitative Method

This study used a sample from a published articles in GESTEN journal in faculty of education by reviewing all articles in issue of 2011 and issue of 2012. In addition, a sample of 23 lectures were interviewed by researcher. The reviewed articles in this study not just reviewed by viewing their titles but rather they were reviewed to be relevant to this research topic and statement about how much each article informs this study.

Reviewing of Articles

In reviewing articles in study sample, the researcher choose all published articles in issue 2011 and issue 2012 in GESTEN journal at faculty of education. The processes of reviewing includes checking of title, content, and used techniques (qualitative or quantitative). The time of doing this kind of data collection it was about two weeks to finish reviewing the both issues of this journal. Thus, the collected data have been categorized in tow columns (qualitative or quantitative) in order to find out the percentages of conducted researches that used one of the methods or the both methods.

Interviewees for Participants

The researcher in this study interviewed a number of lecturer at faculty of education in deferent department. The interview used in this study consisted of two questions; the first question was 'based on your own knowledge, what kind of commonly research method that used in your faculty? And what the real reasons behind that?', the second question was ' what kind of uncommon research method in your faculty? And what the real reasons behind not doing this kind of research?'

The respondents were interviewed by the researcher and the researcher asked them to add any comment that they think it can improve the results in this study. The researcher collected all the information from the respondents and organized them in one table in order to compute the frequencies and percentage of opinions agreement among the lecturers.

Quantitative Method

The researcher in this study chooses a sample of 73lecturers in faculty of education to form the sample size of this study for the quantitative part in this study. The sample was chosen from the population of this study which involved all the lecturers in the faculty. Quantitative method can give support findings of the research beside the qualitative method that can provide a rich and real information for the study. The questionnaire was prepared by the researcher in this study and consists of 30 items on the usage of qualitative and quantitative methods in conducting researches in faculty of education. The respondent has to answer all the questions in the questionnaire using triple scaling (Agree, Not Agree and Natural).

Data collection was by distributed the questionnaires on randomly sample from the whole number of lecturers in the faculty of education. Then, the researcher later on collected the answered questionnaires, and the number of returned questionnaires in this study was 73 which represent a 0.92% from the total number of targeted sample. After the data collection, the researcher then key in all the data into SPSS program in order to make the probable analysis.

Findings of the Study

Findings of Qualitative Part

The findings of the qualitative part in this study are presented by the analytic of articles and the interviews of participants as the following:

Findings of Articles Analysis

The content analysis of 102 published articles in GESTEN journal in issues for the year of 2001 till issues in year 2012was used systematically by categorizing the types of research methods in these articles and showed that 92 articles out of total number of 102 published articles were used quantitative research methods, 6 articles used qualitative research methods and just 2 articles were

used mix research methods. The following table shows the number of qualitative, quantitative and mix methods articles with a percentage number of each category:

Table 1.2 : The analysis of articles types in GESTEN Issues from the year of 2001 to 2011

GESTEN Issues	Qualitative	Quantitative	Mix methods
Issues in 2011	1	7	0
Issues in 2010	2	9	2
Issues in 2009	0	7	0
Issues in 2008	0	7	0
Issues in 2007	0	10	0
Issues in 2006	1	9	0
Issues in 2005	0	10	0
Issues in 2004	1	7	0
Issues in 2003	0	8	0
Issues in 2002	1	9	0
Issues in 2001	0	11	0
Total	6	94	2
Percentage	6%	92%	2%

Table 1.2 shows the content analysis of all the articles in GESTEN issues for the years between 2001 to 2011. The analysis used a techniques of methods analytic by reading the abstract for each article and reading the methods that used in each study. Then, the researcher categorized all the articles to three columns; first is the qualitative, second is the quantitative and third is the mix methods column.

Findings of Interviews

The interview strategy was used in this study by using a sample of 23 lecturers from faculty of education in different fields with 8 females lectures and 15 male lectures. The distribution of the sample is clarify in the following table:

Table 1.3: The distribution of interview sample

Interview Sampling	Psychology Department	Special Education Department	Art Department	Physical Education Department	Islamic Studies Department	Administration Department
Male	5	4	1	1	2	2
Female	3	2	1	0	1	1
Total	8	6	2	1	3	3

The interviews were conducted on 23 lectures from faculty of education with 15 male lectures and 8 female lectures. The participants were asked to answer the two main questions listed in the interview and they were asked to add any comments or opinions that can enhance the research results. The main points which being provided and mentioned by lecturers through the interviews are listed as the following:

- The specialization of lectures play a great role in deciding the research methodology.
- The types of research methods can push the researcher to choose the type of his research.
- The reasons of conducting quantitative research more than qualitative research are due to the ease of application, the less effort and the familiarity of doing quantitative research.
- The low experience among the lecturers in the faculty play the important role in hinder the application of qualitative research.
- Most of the participants mentioned that the quantitative research methods is the most useful in conducting the researches in the faculty and the less they use is the qualitative research methods.
- One of the reasons behind conducting the quantitative research is the ease and the faster of doing this kind of research and the fast of publication.
- The less of training and the less of involved the qualitative research methods in postgraduate level teaching contributed in hindering the use of qualitative research methods.
- The view of some participants indicated that social and culture factors do not support doing the qualitative research methods.
- the lack of psychological laboratories in the faculty play a main reason of hinder qualitative research.

Findings of Quantitative Study

The findings of the quantitative part of this study are presented in the following table:

Table 1.4: The Descriptive Statistics for the responds on questionnaire's items

Item	N	Mean	Std. Deviation
item4	73	1.1918	.46120
item14	73	1.3562	.69462
item20	73	1.4110	.68385
item11	73	1.4247	.66495
item12	73	1.4521	.76451
item16	73	1.4658	.80073
item28	73	1.4658	.74689
item27	73	1.5205	.68940
item30	73	1.5342	.81789
item17	73	1.5753	.83196

item9	73	1.5753	.78027
item10	73	1.5890	.77881
item8	73	1.6027	.75901
item13	73	1.6164	.82715
item25	73	1.6301	.67714
item29	73	1.6575	.83698
item23	73	1.6712	.80026
item15	73	1.6712	.80026
item19	73	1.7397	.78222
item5	73	1.7808	.83743
item3	73	1.7945	.78101
item26	73	1.7945	.66581
item2	73	1.7945	.74459
item1	73	1.8493	.82784
item22	73	1.8493	.87672
item24	73	1.8904	.79165
item6	73	1.9863	.84151
item18	73	2.0274	.74485
item21	73	2.0548	.83150
item7	73	2.0822	.87803
Valid N (listwise)	73		

Table 1.4: shows the means for the participants' responds on the 30 items in the designed questionnaire for this study. The results showed that the highest means values were for items 7 with mean value of 2.08, item 21 with mean value of 2.05 and item 18 with mean value of 2.03. Whereas, item 7 was "I prefer a quantitative research methods because its faster to conduct", item 21 was "the qualitative research methods are very complicated", and item 18 in the scale was "the commonly used research in the faculty is quantitative research methods".

On another side, the results showed that the lowest means values were for items 4 with mean value of 1.2, item 14 with mean value of 1.36, and item 20 with mean value of 1.4. Whereas, item 4 in the scale was "My conducted researches some were based on quantitative methods and the others based on qualitative research methods", item 14 was "I don't have any problem in conducting qualitative research methods", item 20 was "the qualitative research needs long time to be conducted".

Discussion and conclusion:

From the earlier results in this research, the findings indicated that most of the researchers in the faculty of education they wrote their researches using quantitative research methods, and many of them prefer this kind of methodology for a few reasons such as timing, ease of application and less effort of doing quantitative researches. In addition, less of training and less of involving qualitative research methods in postgraduate level in term of teaching and learning hindering the researchers in

the faculty of using qualitative research methods. Besides, the view of some participants indicated that social and culture factors do not support doing the qualitative research methods and the lack of psychological laboratories in the faculty play a main reason of hinder qualitative research.

From the results and the conclusion of this study, the researcher recommends the faculty administration to provide lecturers and researchers with workshops on researcher design using qualitative research methods and to push researcher to conduct more researches using qualitative research methods.

Acknowledgement

The authors extend their appreciation to the College of Education Research Center, Deanship of Scientific Research, King Saud University for funding this research work.

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