
Prevalence of Mis/Conception in Research Methodology: A Survey of Management Research Scholars

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Abstract

The present study aims to address the issue on concepts of Research Methodology held by scholars of management, academic and related institutes. Literature review has been carried out to identify the common mis/conceptions related to research practices and methodology. Data were collected through the questionnaire administered among various Ph.D. students pursuing their research work in different fields. Findings highlighted that varied differences exist among the research scholars in their research practices and perception about qualitative, quantitative and mixed research traditions. Research scholars were found to have distinct perceptions regarding the superiority of one research approach over other- be it qualitative or quantitative research approach that they followed. Usually, quality as well as validity of research findings are greatly influenced by scholars' misconceptions regarding research methodology. Findings of the study have number of implications for academicians, researchers, institutions as well as authorities and contribute toward the improvement of research quality in India.

Key words: *Misconception; Research Methodology; Management Scholar.*

Introduction

Research is the enduring process. From ancient time to modern era research never lost its importance in any field. New tools, techniques, principles and methods are always added by veterans to make this field more enriched and easy. On the other hand, practitioners of research always faced problems in selecting the methodologies for researches. Various misconception and conception about research methodology compel them to prefer one over the other.

There is continuous on-going debate over the accuracy and reliability of quantitative research over the qualitative research methods. Research scholars, academicians from different fields hold various mis/

conception about the research methodology. Selection of research method always is influenced by the perceptions of scholars and these ultimately affect the inferences and findings. So it becomes imperative for professionals and authorities to timely identify and

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overcome these misconceptions for better quality of research findings.

Therefore, this research study aimed to determine the extent of mis/conception related to nature of research, research practices etc. prevalent among the research scholars of various institute and universities.

Literature Review

Research is "an activity conducted to increase knowledge by systematically collecting, analysing and interpreting data to answer carefully formulated question about publicly observable phenomena" (Hadley & Mitchell, 1995, Wester *et al*, 2013).

Literature constantly points towards prevalence of various misconceptions in research methodology among academicians, students and research scholars. Mis/conception exists regarding aspects of research like nature of quantitative methodologies (Meyer *et al*, 2005), different statistical analysis (Huck, 2009), qualitative research methodology (Edy *et al*, 2009, Harper and Kuh, 2007) for addressing and solving those misconception (Smith, 2011).

However, few researches have explored the effectiveness of intervention in addressing and solving these misconceptions. Researches also, mentioned negative consequences of these misconceptions on learning, decision making, (Edy *et al* 2009, Huck 2009).

Basically misconception arises because of prior learning or experience form surrounding (Social, physical environment) of an object. These are reflected in ideas and beliefs of scholars engaged in different research studies (Huck, 2009). If not addressed and rectified properly and timely, these misconceptions are likely to influence selection of the research methodology and both results and findings.

Various research studies also focused on how theses mis/conceptions could be corrected (Brown and Clement, 1989, Mevareck, 1983, Garfield, 1995, Huck, 2009). Many times misconceptions are so strong that holders do not want to change them. Indeed, addressing and replacing wrong perceptions could at times be quite a tedious job .

Misconceptions about research definition, practices and use of different techniques were analysed by many researchers. Since the quality of research is always vindicated by the researcher for its contribution to advancement of theory and knowledge (Wester *et al*, 2013), the clarity of concept, process, tools and techniques in research methodology is essential for quality. As Wester (2013) argued in his study that quality of research lies within all stages of a study including the literature reviewed, questions asked, research design and analyses and their result reported. Many researchers confirm the importance of quality in research (Wampold, 2006; Breger *et al* 2008; Wester *et al*, 2013). Quality in research is ensured by the right research methodology and clarity about each and every step of research is needed. Any wrong and misconceived understanding can produce faulty research findings and low quality research. Fong and Malone (1994) have analysed 100 quantitative manuscripts submitted in one journal and found research design and data analysis error in all. Wester (2013) argued in his paper that most common error related to research design were unclear research questions, sampling errors and instrumental problems. The faulty research design could lead to the wrong and misleading interpretations. Therefore, the present study tries to determine the extent of misconception prevalent among the researchers pursuing research in various discipline.

Research Objectives-The present study tries to achieve the following objectives-

- 1) Identify the various mis/conception prevalent about the nature of research among research scholars.
- 2) Analyse the mis/conception about research practices prevalent among the research scholars.
- 3) Observe to what extent research scholars understand every step of research.

Research Methodology-

Variables and research model-The present study used the qualitative approach with descriptive research design for probing issues like awareness about research procedure, different conceptions held

by research scholars etc. Based on the extensive literature review, various mis/conception were identified. Data collected through sampling method have been analysed to test the hypothesis.

Sample-Sample respondents of the study have been selected from research scholars from different area of research (Management). Purposive sampling technique has been used to get the relevant respondents.

Research Instrument- Questionnaire used close ended as well as open ended questions. The main survey contained 5 questions. Question number 2 and 3 contain various mis/conceptions in likert-style statement for which respondent were asked to indicate their extent of agreement on 5 point scale (strongly disagree, disagree, neutral, agree, disagree). Question no 2 contains 13 statements and question no 3 contains 23 statements of conception about the nature and practices of research. Question 2 contains statement identified by Meyer et al, (2005) and question 3 has included the statement identified by Herper and Kuh, (2007), Eby *et al* (2009), Bryman's (2012). Question 4 is all about the understanding of whole research process by research scholars.

Pilot testing and data collection-Data were collected from research scholars of different

disciplines (in management) by using the Google doc, email, direct interaction methods etc. Purposive sampling is used to get reasonable responses. The questionnaire was distributed via an email invitation with a web link (Google doc) to 156 potential respondents. And after screening only 120 were found to be completed and useful for further analysis.

Response rate

After data collection, SPSS. 20 have been used to classify, tabulate and summarise data. And inferences are drawn from results generated on the basis of various statistical tools.

Data Analysis and Findings

Data analysis clearly reveals that researchers prefer to use mix approach combining different approaches as 48.3 per cent respondent used mix research method for their study. Whereas, the quantitative research technique/ tradition is preferred by 20 per cent research scholar from all respondents. Basically, 3 research objectives have been taken in this research study. Kruskal Wallis test has been performed to get the difference among the three research traditions qualitative, quantitative and mixed research methods.

Table-1 Research Method Adopted by research scholar

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Qualitative Research	24	20.0	20.9	20.9
	Quantitative Research	33	27.5	28.7	49.6
	Mix Research	58	48.3	50.4	100.0
	Total	115	95.8	100.0	
Missing	System	5	4.2		
Total	120				

Nature of Research- The first set of questions was on the mis /conception about the nature of research prevalent among the research scholar of different research traditions. Variation of responses of research scholars in this regards has highlighted the difference (Table-2). Further, analysis reveals that significant differences exist among the qualitative, quantitative and mixed research traditions.

Table 2: Nature of Research

S. No.	Statements	Level of Agreement % (N=120)					Md
		Strongly	Disagreed	Neutral	Agree	Strongly Agree	
1	Research is the systematic collection and interpretation of data with a clear purpose of getting results.	6	6	1	46	41	4.00
2	Research is basically a tool about answering the questions.	4	33	6	50	7	4.00
3	Research means finding out more information about something that is already known.	1	2	26	32	39	4.00
4	Research provides a deeper insight and understanding of a particular topic.	1	6	7	27	60	5.00
5	Research is about finding solutions to problem.	-	7	20	47	27	4.00
6	Good research specifically gathers information that will support the researcher's preconceived ideas.	13	7	13	65	2	4.00
7	It is quite acceptable to alter research data if these does not look exactly right.	27	47	7	13	7	2.00
8	Research findings become true after it is published.	13	33	26	26	2	3.00
9	There is one way to interpret research findings.	7	53	27	13		2.00
10	If followed, correctly research procedure will always yield clear results.	-	33	7	40	20	4.00
11	If research is conducted properly then contradictory research will not occur.	-	20	27	40	13	4.00
12	When academics do research, results are always unbiased.	7	60	20	7	7	2.00
13	Research is about collecting data which back up your argument.	3	12	13	60	10	4.00

Table 3: Research Practices

S. No.	Statement	N	Valid	Miss-ion	Level of Agreement (N=120)					Md
					Stron-gly Di-sagr	Disa-gr (2)	Nat-ural (3)	Agr-ee (4)	Stron-gly Agree	
1	Subjectivity compromise trustworthiness	120	0	0	1	6	6	74	13	4.00
2	The perspective of few do not represent many	120	0	0	-	13	20	60	7	4.00
3	There are superior research methods	120	0	0	2	3	38	47	10	4.00
4	Research is not the quest for truth	120	0	0	7	53	13	20	7	2.00
5	Organisational decision maker respond only to numbers	120	0	0	-	27	40	27	7	3.00
6	Objectivity is the gold standard in research	112	8	0	2	13	4	41	33	4.00
7	Subjectivity comprises accuracy	112	8	0	7	7	-	60	20	4.00
8	Qualitative research lacks internal validity	112	8	0	7	27	20	35	5	3.00
9	Qualitative data are easy to collect, anyone can do it.	120	0	0	33	47	6	12	2	2.00
10	Qualitative research lacks construct validity	120	0	0	7	52	6	32	3	2.00
11	Qualitative data are easy to analyse, anyone can do it	120	0	0	30	47	12	7	4	2.00
12	Qualitative research contributes little to the advancement of knowledge	120	0	0	27	47	13	12	1	2.00
13	Qualitative research does not utilise the scientific method	120	0	0	19	50	13	13	4	2.00
14	Qualitative methods are too labour intensive to be practical for student assessed work	120	0	0	7	27	47	20	-	3.00

15	Qualitative research lacks methodological rigor,	120	0	7	33	13	47	-	3.00
16	Only research findings that are generalizable can inform policy and practice	120	0	-	7	20	70	3	4.00
17	Qualitative methods are too cumbersome to be practical for assessed work	112	8	2	47	26	13	7	2.50
18	Qualitative data are useful only when corroborated by numbers	120	0	3	12	46	32	7	3.00
19	Self reliable data are unreliable	120	0	7	35	19	35	4	3.00
20	Quantitative data are useful only when corroborated by qualitative data	120	0	-	47	13	33	7	3.00
21	Secondary data are more substitutes for better primary data	120	0	13	20	33	27	7	3.00
22	Quantitative methods are too labour intensive to be practical for students assessed work	120	0	1	46	26	26	2	3.00
23	Quantitative methods are too cumbersome to be practical for students assessed work	120	0	6	41	47	7	-	3.00

Table 4: Understanding the whole process of Research

S. No.	Statement	N		Level of Understanding (N=120)					Md
		Valid	Missing	Nil	Little	Mede-rate(3)	Enough (4)	Complete (5)	
1	Definition and nature of research	120	0	-	-	40	47	13	4.00
2	Knowledge about different research type	120	0	-	5	40	42	13	4.00
3	Clarity of different research designs, approaches	120	0	-	20	40	20	20	3.00
4	Methods of data collection	112	8	-	7	20	40	27	4.00
5	Understanding of statistical analysis of data	120	0	4	7	50	32	7	3.00
6	Interference and report writing	120	0	4	7	53	27	10	3.00

Quantitative research was found to be more concerned about the objectivity of the research, whereas qualitative research focused more on the easiness of the research study. Table 5(1) - 5 (2) clearly explains the extent of agreement on every mis/conception held by different research traditions except "Research is the systematic collection and interpretation of data with a clear purpose to find things out" (Sig. Value .795 in Table5.1) where difference is insignificant among groups. Mis /conceptions like "Qualitative research contributes little to the advancement of knowledge" (Sig. Value .746) and "Only research findings that are generalisable can inform policy and practice" do not rejecting the null hypothesis that there is no significant difference among the different research disciplines (Sig .Value .848 in Table 6.1). This clearly explains that in spite of many mis /conception, qualitative research still has its validity in terms of findings and advancement of knowledge.

**Table-5: Nature of research (Kruskal Wallis test)-
Table- 5.1: Test Statistics a, b**

	Research is the systematic collection and interpretation of data with a clear purpose to find things out	Research is the basically a tool about answering the questions	Research means finding out more information about something that is already known	Research provides a deeper insight and understanding of a particular topic	Research is about finding solutions to problem	Good research specifically gathers that will support the researcher's preconceived ideas.
Chi-Square	.458	13.846	29.453	.956	18.525	2.571
Df	2	2	2	2	2	2
Asymp. Sig.	.795	.001	.000	.620	.000	.277

- a. Kruskal Wallis Test
b. Grouping Variable: Research Method Adopted by research scholar

Table-5.2: Test Statistics a, b (continue)

	It is quite acceptable to alter research data if it does not look exactly right.	Research becomes true after it is published	There is one way to interpret research findings	If followed correctly research procedure will always yield clear results	If research is conducted properly then contradictory research will not occur	When academics do research the results are always unbiased	Research is about collecting data which back up your arguments
Chi-Square	1.549	23.462	20.004	17.048	2.030	1.394	28.068
Df	2	2	2	2	2	2	2
Asymp. Sig.	.461	.000	.000	.000	.362	.498	.000

- a. Kruskal Wallis Test
b. Grouping Variable: Research Method Adopted by research scholar

Table-6.1: Test Statistics a, b

	Subjectively compromise trustworthiness	The perspective of few do not represent many, there are superior research methods	There are superior research methods	Research is not the quest for trust	Organisational decision maker respond only to numbers	Objectivity is the gold standard in research
Chi-Square	10.422	28.536	20.135	23.291	4.346	16.480
Df	2	2	2	2	2	2
Asymp. Sig.	.005	.000	.000	.000	.114	.000

- a. Kruskal Wallis Test
 b. Grouping Variable: Research Method Adopted by research scholar

Table-6.2: Test Statistics a, b

	Qualitative methods are too labour intensive to be practical for student assessed work	Qualitative research lacks methodological rigor	Qualitative methods are too cumbersome to be practical for assessed work	Only research findings that are generalisable can inform policy and practice	Qualitative data are useful only when corroborated by numbers	Self reliable data are unreliable
Chi-Square	27.916	14.729	13.729	.284	23.588	24.338
Df	2	2	2	2	2	2
Asymp. Sig.	.000	.001	.001	.868	.000	.000

- a. Kruskal Wallis Test
 b. Grouping Variable: Research Method Adopted by research scholar

Table 7.1 : Test Statistics a & b

	Quantitative data are useful only when corroborated by qualitative data	Secondary data more substitutes for better primary data	Qualitative methods are too labour intensive to be practical for student assessed work	Quantitative methods are too cumbersome to be practical for student assessed work
Chi-Square	23.891	9.282	5.821	24.230
Df	2	2	2	2
Asymp. Sig.	.000	.010	.054	.000

- a. Kruskal Wallis Test
- b. Grouping Variable: Research Method Adopted by research scholar

Table 7.2 : Test Statistics a & b

	Definition and nature of research	Knowledge about different research type	Clarity of different research designs, approaches	Methods of data collection	Understanding of statistical analysis of data	Interference and report writing
Chi-Square	38.137	38.137	10.692	1.832	4.916	.363
Df	2	2	2	2	2	2
Asymp. Sig.	.000	.000	.005	.400	.086	.834

- a. Kruskal Wallis Test
- b. Grouping Variable: Research Method adopted by research scholar

Understanding of Research Process :

Understanding of whole research process is very important for carrying good quality research. It has been found that the differences existed among all three groups in terms of these understanding about the whole research process.

Highest understanding has been found among the research scholar of mixed tradition. In "Inferences and report writing" difference were found insignificant and researchers have full understanding of the inference and report writing irrespective of their research traditions (Sig. Value .834 in Table 7).

Conclusion

Research is an enduring process of finding the truth and reality. When the process/ method used for it is faulty or suffered from any prejudice or misconception , it eventually affects its quality. Therefore, clear understanding about the nature of research, research practices are of prime importance for quality research. The present study focused on the various conflicts as well as mis-conceptions held by research scholars of different traditions directly involved in the research process and that affect their findings as well inferences. On the other hand, every research tradition has many mis / conceptions about the other traditions that need to be resolved properly. So it become imperative for academicians (both teachers and supervisors) first to address these issues and try to overcome these problems by discussion and with strong evidences. A strong and innovative intervention by authorities and professionals is suggested.

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