

# RESEARCH SKILLS IN M.ED. STUDENTS

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## ABSTRACT

*The present research is aimed to investigate research skills in M.Ed. students. Random cluster sampling technique was used and 105 M.Ed. students were selected for study in sample. Research skills were studied through descriptive survey method. Research Skill Questionnaire constructed by Emy E. Lacson and Edilberto A. Dejos Jr. (2022) was used in study. The questionnaire consists of five research constructs namely, problem identification and conceptualization skills, information and evidence seeking skills, research methodology skills, statistics/quantitative analysis and evidence evaluation Skills and communication and language skills. It was found that M.Ed. students have perceived that they have research skills as selecting and identifying the problem, data collecting through print or non-print media; accessing appropriate bibliographical resources and other sources of relevant information including web-based resources and primary sources. Some students feel that they lack in writing references in any citation and referencing style and process of constructing standardized tools; also, have shown less confidence in applying tests in quantitative analysis and technical language used in research.*

**KEYWORDS:** Research skills, M.Ed. students

## Introduction

Research is the application of the scientific method in the study of problems. It is a more structured and systematic process of carrying on a scientific method of analysis that is directed towards discovery and development of an organized body of knowledge. Research skills refer to an individual's ability to find and evaluate useful information related to a specific topic. Research skills are the capability a person carries to create new concepts and understand the use of data collection. These skills include techniques, documentation and interpretation of the collected data and improve as experience increases. To conduct efficient research, certain research skills are essential. These skills are important for educational institutions and companies to develop new products and services or make enhancements to existing products. Developing excellent research skills is important for both the individual as well as the institutions. Students can develop their skills solely through the practice of hands-on research, such as performing experiments in a laboratory.

On the other hand, students find research difficult and uninteresting. The reason behind it is that students are not used to doing research from early academic stages. As a result, research outputs are often poor and incomplete. According to the

findings of Gilmore and Feldom (2010) and Meerah, et. al. (2012), the lack of preparation in research knowledge and abilities is one of the main causes of students' difficulties in conducting full research. Across the literature, there is a lack of clarity and consistency surrounding the definition of research skills and which specific skills should be taught, practiced, and assessed at the post-graduate levels. In addition, many research experiences involve the implicit development of research skills or assume that skills are naturally being developed simply by participation in research.

In summary, Research skills are skills that help you target a goal, gather the appropriate information, and relay it to other people. Experienced researchers know that worthwhile investigation involves a variety of skills. Some research skills which are used frequently in research: Goal-setting, Data collection, Analysis of information from different sources, Interviewing, Report writing, Critical thinking Skill, Planning and scheduling skills, Note taking skills, Time management skills, Problem identification and conceptualization skills, Information and evidence seeking skills, Research methodology skills, Statistics/Quantitative Analysis and Evidence seeking skills and Communication and Language Skills.

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Emma Gyuris (2018) evaluated the effectiveness of postgraduate research skills training and its alignment with the research skill development framework and found that there is need to equip students with skills to be competent, self-regulated learners, so they can understand and practice the meta-cognitive skills that allow them at their highest level. Kayla Vieno, Kem A. Rogers and Nicole Campbell (2022) vides an insight into the incorporation of research skill development opportunities in thesis and non-thesis undergraduate and master’s programs. Seven core research skills (critical appraisal, information synthesis, decision-making, problem-solving, data collection, data analysis, and communication) that are developed during, and are important for research experiences were described.

**Objectives Of The Study:**

Researcher conducted study to explore research skills of M.Ed. students studying in college. To achieve this objective, following sub objectives were framed:

1. To study Problem Identification and Conceptualization Skills of M.Ed. students

2. To study Information and evidence seeking skills of M.Ed. students Research Methodology Skills of M.Ed. students Quantitative Analysis and Evidence Seeking Skills of M.Ed. students
3. Communication and Language skills of M.Ed. students

**Research Design**

Descriptive survey method is used to conduct the research. In Ghaziabad district, four colleges were selected through random sampling and then all students studying in M.Ed. were taken as sample. Total 105 students were selected as sample for study.

In the present study, “Research Skill Questionnaire” constructed by Emy E. Lacson and Edilberto A. Dejos Jr. (2022) was used. The five-point Likert scale considered of 48 items covering five research constructs namely, problem identification and conceptualization skills, information and evidence seeking skills, research methodology skills, statics/quantitative analysis and evidence evaluation Skills and communication and language skills. The respondents were asked to indicate their level of agreement with the following responses: (5) certainly true, (4) generally true, (3) somewhat true, (2) generally false, (1) always false.

**Data Analysis And Results**

**1. Problem Identification and Conceptualization Skills of M.Ed. students:**

Table1: F and % of M.Ed. students on Problem Identification and Conceptualization Skills

Sr. No	Statement	Certainly True	Generally True	Somewhat True	Generally False	Always False
1	If confronted by a question/problem I can see it as an opportunity to do research.	53 50.47%	39 37.14%	12 11.42%	NIL	NIL
2	I can link research to real-world affairs.	52 49.52%	36 34.28%	13 12.38%	1 0.95%	1 0.95%
3	I can identify and ask useful, challenging questions; always curious.	38 36.19%	51 48.57%	16 15.23%	NIL	NIL
4	I can formulate my research topic/problem based on related literature and other sources.	42 40%	46 43.80%	14 13.33%	3 2.85%	NIL
5	I can write a research title.	53 50.47%	43 40.95%	8 7.62%	1 0.95%	NIL

6	I can create a mind or concept mapping of my research topic/problem.	46 43.80%	42 40%	15 14.28%	NIL	NIL
7	I can generate research questions based on the topic/problem.	56 53.33%	31 29.52%	16 15.23%	2 1.90%	NIL
8	I can justify the reasons for conducting the research.	52 49.52%	36 34.28%	14 13.33%	NIL	NIL
9	I can formulate my research hypotheses.	56 53.33%	39 37.14%	15 14.28%	NIL	NIL
10	I can elaborate key variables in my research topic.	54 51.42%	44 41.90%	11 10.47%	1 0.95%	NIL
11	I can indicate the scope and delimitation of my research.	57 54.28%	39 37.14%	9 8.57%	2 1.90%	NIL

Table 1 reveals that mostly students are equipped with problem identification and conceptualization skills. M.Ed. students are skilled in writing research topic, elaborating key variables, link research to real world affairs, write a research title, formulate research hypotheses and indicate the scope and the

delimitation of research. Only 2% students are unable to formulate the research topic/problem based on related literature and other sources and 2% students are not equipped in generating research questions based on the topic/problem and indicating the scope and delimitation of my research.

**2. Information and evidence seeking skills of M.Ed. Students**

Table 2: F and % of M.Ed. students on Information and Evidence seeking skills

Sr. No	Statement	Certainly True	Generally True	Somewhat True	Generally False	Always False
12	I can gather information about my research topic through various means (e.g., electronic media, images, audio and video).	63 60%	35 33.33%	5 4.76%	1 0.95%	NIL
13	I can identify and access appropriate bibliographical resources, archives and other sources of relevant information (including web-based resources, primary sources and repositories)	80 76.19%	43 40.95%	13 12.38%	1 0.95%	NIL
14	I can assess the reliability, reputation, currency, authority and relevance of sources.	46 43.80%	39 37.14%	15 14.28%	2 1.90%	NIL
15	I can evaluate the accurateness of the content by reading other sources mentioned by the writer.	48 45.71%	39 37.14%	18 17.14%	2 1.90%	NIL

16	When searching for information, I can arrange each item systematically.	56 53.33%	34 32.38%	11 10.47%	1 0.95%	NIL
17	I write down the important concepts myself using my own words to support my topic.	56 53.33%	43 40.95%	11 10.47%	1 0.95%	NIL
18	I can use the main ideas obtained from the information researched to support my topic.	46 43.80%	40 38.09%	11 10.47%	2 1.90%	NIL
19	I can combine the main ideas from one source or more to form a new idea.	49 46.66%	39 37.14%	10 9.52%	3 2.85%	NIL
20	I can write my references in any citation and referencing formats or styles.	37 35.23%	42 40%	21 20%	3 2.85%	1 0.95%
21	I follow ethical standards in writing related literature.	52 49.52%	38 36.19%	13 12.38%	2 1.90%	NIL

Table 2 indicates that mostly PG students (80% approximately) have information and evidence seeking skills as gathering information about the research topic through various means (e.g., electronic media, images, audio and video); identifying and accessing appropriate bibliographical resources, archives and other sources of relevant information (including web-based resources, primary sources and repositories) searching for information. Only 2-3% students are not confident in assessing the reliability, reputation, currency, authority and relevance of sources, evaluating the accurateness of the content

by reading other sources mentioned by the writer; writing down the important concepts by using own words to support the topic; combining the main ideas from one source or more to form a new idea; using ethical standards in writing related literature. Percentage on statement 20 shows that 75 % students are confident in writing references in any citation and referencing formats or styles while 20% are uncertain and approx. 4% students are not well versed with reference writing.

### 3. Research Methodology Skills of M.Ed. Students

Table 3 : F and % of M.Ed. students on Research Methodology Skills

Sr. No	Statement	Certainly True	Generally True	Somewhat True	Generally False	Always False
22	I can formulate a conceptual framework of my research.	53 50.47%	40 38.09%	12 11.42%	1 0.95%	1 0.95%
23	I can plan and design the research process of a research topic	49 46.66%	41 39.04%	14 13.33%	2 1.90%	1 0.95%
24	I can determine the appropriate research design or method of my research.	44 41.90%	48 40%	16 15.23%	3 2.85%	1 0.95%
25	I understand relevant research methodologies and techniques and their appropriate application within my own research area.	43 40.95%	42 40%	15 14.28%	1 0.95%	1 0.95%

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26	I can justify the principles and experimental techniques used in own research	43 40.95%	40 38.09%	15 14.28%	4 3.805%	1 0.95%
27	I can select or develop a research instrument to gather necessary data for my research.	43 40.95%	39 37.14%	21 20%	2 1.90%	NIL
28	I can determine my appropriate respondents and number of respondents necessary for my research.	43 40.95%	43 40.95%	19 18.09%	1 0.95%	1 0.95%
29	I understand and apply the relevant codes of conduct and guidelines for the ethical conduct of research; I seek advice from my supervisor..	44 41.90%	45 42.85%	14 13.33%	2 1.90%	NIL
30	I have basic understanding of legal requirements surrounding research, e.g., Data Protection Act, Freedom of Information Act	41 39.04%	40 38.09%	22 20.95%	3 2.85%	1 0.95%

Above table clearly shows that M.Ed. students are equipped in research methodology skills. 80% students responded on all statements that they can formulate a conceptual framework of my research; plan and design the research process of a research topic; determine the appropriate research design or method of my research; understand relevant research methodologies and techniques and their appropriate application within own research area. They are also confident in justifying the principles and experimental techniques used in own research,

selecting or developing a research instrument to gather necessary data for the research and applying ethical conduct of research. Further table also indicates that 11-21% students are uncertain in these skills. 21% are uncertain in developing research instrument and 22% students are not confident in basic understanding of legal requirements surrounding research.

**4. Quantitative Analysis and Evidence Seeking Skills:**

**Table 4: F and % of M.Ed. Students on Quantitative Analysis and Evidence Seeking Skills**

Sr. No	Statement	Certainly True	Generally True	Somewhat True	Generally False	Always False
31	I can observe and collect necessary data.	57 54.28%	41 39.04%	13 12.38%	1 0.95%	NIL
32	I can determine which statistical tool or method analysis to use for my research	43 40.95%	45 42.85%	14 13.33%	3 2.85%	NIL
33	I can perform common statistical tools in any statistical applications like MS Excel, SPSS, Minitab, or others apps.	44 41.90%	37 35.23%	20 19.04%	2 1.90%	2 1.90%
34	I can analyze and interpret the results of my statistical treatment or method analysis.	38 36.19%	48 45.71%	16 15.23%	1 0.95%	2 1.90%

35	I can evaluate and systematically organize the data I have gathered.	50 47.61%	41 39.04%	12 11.42%	2 1.90%	NIL
36	I can draw conclusions from patterns and themes gathered from the data	41 39.04%	50 47.61%	14 13.33%	NIL	NIL
37	I can organize and interpret data using tables and graphs.	46 43.80%	46 43.80%	11 10.47%	2 1.90%	NIL

Above table reflects that mostly (above 80%) M.Ed. students show confidence in observing and collecting necessary data, organizing the data and organizing and interpreting the data using tables and graphs. But responses on statement 33 that 19% M.Ed. students are not sure in performing statistical tools in MS

Excel, SPSS or other apps and 4% can't perform these tools. Further on statement 34, M.Ed. students have shown that only 36% students are very confident in analyzing and interpreting the results of statistical treatment. 15% are uncertain while about 3% students are not in position to analyze and interpret the results of statistical treatment.

5. Communication and Language Skills of M.Ed. Students:

Table 5: F and % of M.Ed. students on Communication and Language skills

Sr. No	Statement	Certainly True	Generally True	Somewhat True	Generally False	Always False
38	I have excellent knowledge of language(s) appropriate for research, including technical language.	29 27.61%	55 52.38%	16 15.23%	4 3.80%	1 0.95%
39	I can understand, interpret, create, and communicate appropriately within an academic context.	41 39.04%	51 48.57%	10 9.52%	3 2.85%	NIL
40	I can prepare grammatically and syntactically correct content for presentations.	45 42.85%	36 34.28%	16 15.23%	3 2.85%	NIL
41	I can communicate research results clearly.	39 37.14%	50 47.61%	15 14.28%	1 0.95%	NIL
42	I can construct my thesis statement clearly	41 39.04%	48 45.71%	15 14.28%	1 0.95%	NIL
43	I can organize my thoughts and ideas clearly and prepare a manuscript of my research	41 39.04%	49 46.66%	14 13.33%	1 0.95%	NIL
44	I can construct my own conclusion based on the information gathered.	52 49.52%	36 34.28%	17 16.19%	NIL	NIL
45	I can communicate orally the results of my research process.	53 50.47%	35 33.33%	15 14.28%	2 1.90%	NIL

46	I can	44 41.90%	49 46.66%	12 11.42%	1 0.95%	NIL
47	I can formulate recommendations based on conclusion	49 46.66%	41 39.04%	14 13.33%	1 0.95%	NIL
48	I can list all my references using a specific referencing style.	55 52.38%	35 33.33%	13 12.38%	1 0.95%	NIL

Table 5 reveals about communication and language skills of M.Ed. students in research. It can be interpreted that 80-85% M.Ed. students are confident that they have communication and language skills to communicate research results clearly; construct their thesis statement and constructively defend research outcomes. Responses on statement 38 shows that

**Conclusion**

It can be concluded that mostly students are confident that they have research skills in all five areas and well versed with the selection and identification of problem. All students are confident in process of data collection through print or non-print media; identifying and accessing appropriate bibliographical resources, archives and other sources of relevant information including web-based resources and primary sources. Few students reported on the other hand that they are not equipped in generating research questions based on the topic/problem and indicating the scope and delimitation of research. Also they lack confidence in assessing the reliability and relevance of sources, evaluating the accurateness of the content by reading

80% students are confident in having excellent knowledge of language(s) appropriate for research, including technical language, but 16% are uncertain about it and 5% students consider that they are not well versed with knowledge of language(s) appropriate for research, including technical language.

other sources mentioned by the writer and using ethical standards in writing related literature. Few students feel that they are not upto mark in writing references in any citation and referencing styles. Some students are not confident in applying tests in quantitative analysis and technical language used in research.

Therefore, institutions must organize training programs in research proposal writing, tool construction and quantitative analysis. These training programs should be criterion-based tests to make students expertise in research skills. Research skills help researchers to give reliable and valid solutions or findings for the wellbeing and develop generic skills in students.

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