

Knowledge of Analytical Methods and Research Attitude Among M.Ed. Students in Kerala

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ABSTRACT

Knowledge is very important part of our world every change can be occurs with the help of deep knowledge. Knowledge in analytical method is very importance for the coming teachers and attitude can influence all the teachers in teaching interest towards this paper. The present study is focused to find out the relationship between knowledge of analytical methods and research attitude of M.Ed. students. The study was conducted on 150 M.Ed students. Correlational analysis was used for analysing the data. The study revealed that a significant relationship exists between knowledge of analytical methods and research attitude among M.Ed. students in Kerala.

Introduction

Expertise in Analytical Methods refers to the students' understanding of research, research technique, and statistical expertise in research. Research methodology refers to the precise procedures or strategies used to find, select, process, and analyze information about a topic. Also, statistical approaches play an important role in the research process. It enables the researcher to collect data using right methodologies, conduct appropriate analysis, and effectively convey the results. It is an important process that underpins scientific discoveries, data-driven judgments, and forecasts. Statistics allows you to gain a much deeper understanding of a subject.

Attitude can be defined simply as a predetermined way of thinking, feeling, or acting toward something or someone. The word 'attitude' is derived from French and subsequently from the Latin word "aptitude" (aptus), which signifies fit. Attitude can also be defined as a favourable or negative judgment of one's surroundings or environment. Attitude is an individual's predisposition to react to a specific object, behaviour, person, institution, event, or other distinguishable part of their reality (Ajzen, 1993). Ajzen maintained that while different theorists can define attitude differently, they all agree that attitude has an evaluative dimension (Bem, 1970; Edwards, 1957; Fishbein & Ajzen, 1975). Attitude is a driving component in any work. It is a prime factor in research.

Research attitude plays a pivotal role throughout the entirety of the research process. According to Hogg & Vaughan (2005, p.150), attitude is defined as "a relatively enduring organization of belief, feelings, and behavioural tendencies towards socially significant objects, groups, events, or symbols". While attitudes themselves cannot be directly observed, they are inferred from overt behaviours, encompassing both verbal and nonverbal expressions. Furthermore, attitudes denote relatively permanent predispositions to consistently respond to specific classes of objects or events. Within the context of M.Ed. students, their research attitude is intricately linked with their proficiency in analytical methods. Analytical knowledge pertains to students' comprehension of research methodologies as outlined in the M.Ed. curriculum. This study endeavours to examine the potential relationship between the knowledge of analytical methods and the research attitude among M.Ed. students.

Understanding the research attitude of M.Ed. students necessitates a deeper exploration of their cognitive processes, beliefs, and behavioural tendencies towards scholarly inquiry. A positive research attitude signifies a proactive engagement with research endeavours, characterized by curiosity, perseverance, and methodical approach. Conversely, a negative research attitude may manifest as reluctance, apprehension, or disinterest towards research activities. The correlation between analytical knowledge and research attitude holds profound implications for educational practices and curriculum development within M.Ed. programs. A robust understanding of analytical methodologies equips students with the foundational skills necessary to conduct rigorous research in the field of education. Moreover, fostering a positive research attitude cultivates a conducive learning environment wherein students are motivated to explore, question, and critically evaluate educational phenomena.

The methodology employed in this study entails a systematic investigation to discern any discernible patterns or relationships between students' analytical knowledge and their research attitude.

Through empirical inquiry, the researcher seeks to elucidate the extent to which proficiency in analytical methods influences the disposition of M.Ed. students towards research. The findings of this study are anticipated to provide valuable insights for educators, curriculum designers, and educational policymakers. By elucidating the interplay between analytical knowledge and research attitude, educators can tailor instructional strategies to enhance students' research preparedness and efficacy. Furthermore, curriculum designers can integrate research-centric modules and pedagogical interventions aimed at fostering a positive research attitude among M.Ed. students.

One significant implication of this study is the potential to mitigate research anxiety among M.Ed. students through targeted interventions. By introducing research-related software and practical applications of statistical tools early in the curriculum, educators can alleviate students' apprehensions towards research endeavours. Moreover, emphasizing hands-on experience and experiential learning opportunities enables students to develop confidence and proficiency in utilizing analytical methodologies for scholarly inquiry. It is imperative for educators and academic institutions to recognize the symbiotic relationship between analytical knowledge and research attitude in shaping the scholarly trajectory of M.Ed. students. By nurturing a conducive learning environment that prioritizes critical inquiry, intellectual curiosity, and methodological rigor, educators can empower students to become adept researchers and transformative practitioners in the field of education.

Also, the correlation between analytical knowledge and research attitude underscores the interconnectedness of cognitive processes, beliefs, and behaviours in shaping students' engagement with scholarly inquiry. Through empirical inquiry and targeted interventions, educators can foster a positive research attitude and equip M.Ed. students with the requisite skills to navigate the complex terrain of educational research with confidence and efficacy.

Variables of the Study

- Knowledge of Analytical Methods
- Research Attitude

Objective of the Study

1. To find out whether there exists any significant Relationship between the knowledge in analytical methods and Research Attitude of M.Ed. Students.

Hypothesis of the Study

1. There exists significant relationship between knowledge in analytical methods and Research Attitude of M.Ed. Students for the total sample and sub sample based on
 - (a) Gender
 - (b) Subject
 - (c) Type of Management

Methodology

The present study is an attempt to investigate relationship between knowledge of analytical methods and research attitude of M.Ed. students.

Sample

In this study will be confined to the teacher education college offering M.Ed. Programme under Calicut University. Simple random sampling technique is used for to collect data. Sample of 150 M.Ed. students are selected for this study.

Tools Used for the study

The investigator used the following tools for measuring the variable under the study.

- Test on Knowledge Assessment
- Scale of Research Attitude

Analysis

The present study was to find out whether there exists any correlation between Knowledge in Analytical methods and research attitude of M.Ed. students. After the collection of data, the analysis was done in the SPSS Software based on the objective set. The results are as follows:

Relationship between Knowledge in analytical Methods and Research Attitude of M.Ed. Students for the total sample and relevant subsamples based on Gender, Stream and Type of Management

An attempt was made to examine the nature and extent of the relationship between Knowledge in analytical Methods and Research Attitude of M.Ed. Students. The Correlation was found out using Karl Pearson's product moment coefficient of correlation.

The value obtained for relationship between Knowledge in analytical Methods and Research Attitude of M.Ed. Students with respect to total sample are given in table 1

Table 1

Data and result of the Relationship between Knowledge in analytical Methods and Research Attitude of M.Ed. Students for the Total sample

Variables	N	R	Type of Relation
Knowledge in analytical Methods and Research Attitude of M.Ed. Students	150	0.935	Positive

Discussion of the result

From the table 9, it is clear that correlation coefficient between Knowledge in analytical Methods and Research Attitude of M.Ed. Students is 0.935. The relation can be interpreted as Very High positive correlation between these variables. This positive value of 'r' indicates that any increase or decrease in Knowledge in analytical Methods will result in corresponding increase or decrease in Research Attitude of M.Ed. Students.

Thus, there exists a significant positive correlation between Knowledge in analytical Methods and Research Attitude of M.Ed. Students with respect to the total sample.

Relationship Knowledge in analytical Methods and Research Attitude of M.Ed. Students for the subsamples

Relationship between Knowledge in analytical Methods and Research Attitude of M.Ed. Students for the subsamples based on gender, Type of management and stream of the students were found out using Pearson's product moment Coefficient of Correlation.

Relationship between Knowledge in analytical Methods and Research Attitude of M.Ed. Students for the sub samples based on gender

The value obtained for relationship between Knowledge in analytical Methods and Research Attitude of M.Ed. Students with respect to male and female students is given in table 2 and 3

Table 2

Data and result of the Relationship between Knowledge in analytical Methods and Research Attitude of M.Ed. Students for the Sub Sample Based on Female students

Variables	N	R	Type of Relation
Knowledge in analytical Methods and Research Attitude of M.Ed. Student	129	0.934	Positive

Discussion of the result

From the table 2, it is clear that correlation coefficient between Knowledge in analytical Methods and Research Attitude of M.Ed. Students is 0.934. The relation can be interpreted as Very High positive correlation between these variables. This positive value of 'r' indicates that any increase or decrease in Knowledge in analytical Methods will result in corresponding increase or decrease in Research Attitude of M.Ed. Students.

Thus, there exists a significant positive correlation between Knowledge in analytical Methods and Research Attitude of M.Ed. Students with respect to the female students.

Table 3

Data and result of the Relationship between Knowledge in analytical Methods and Research Attitude of M.Ed. Students for the Sub Sample Based on Male students

Variables	N	R	Type of Relation
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Knowledge in analytical Methods and Research Attitude of M.Ed. Student	129	0.957	Positive
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Discussion of the result

From the table 3, it is clear that correlation coefficient between Knowledge in analytical Methods and Research Attitude of M.Ed. Students is 0.957. The relation can be interpreted as Very High positive correlation between these variables. This positive value of ‘r’ indicates that any increase or decrease in Knowledge in analytical Methods will result in corresponding increase or decrease in Research Attitude of M.Ed. Students.

Thus, there exists a significant positive correlation between Knowledge in analytical Methods and Research Attitude of M.Ed. Students with respect to the male students.

Relationship between Knowledge in Analytical Methods and Research Attitude of M.Ed. Students for the Sub Samples Based on Stream

The value obtained for relationship between Knowledge in analytical Methods and Research Attitude of M.Ed. Students with respect to Arts, Science and Commerce students is given in table 4,5 and 6

Table 4

Data and result of the Relationship between Knowledge in analytical Methods and Research Attitude of M.Ed. Students for the Sub Sample Based on Arts Stream

Variables	N	R	Type of Relation
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Knowledge in analytical Methods and Research Attitude of M.Ed. Student	129	0.939	Positive
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Discussion of the result

From the table 4, it is clear that correlation coefficient between Knowledge in analytical Methods and Research Attitude of M.Ed. Students is 0.939. The relation can be interpreted as Very High positive correlation between these variables. This positive value of ‘r’ indicates that any increase or decrease in Knowledge in analytical Methods will result in corresponding increase or decrease in Research Attitude of M.Ed. Students.

Thus, there exists a significant positive correlation between Knowledge in analytical Methods and Research Attitude of M.Ed. Students with respect to the Arts Stream.

Table 5

Data and result of the Relationship between Knowledge in analytical Methods and Research Attitude of M.Ed. Students for the Sub Sample Based on Science Stream.

Variables	N	R	Type of Relation
Knowledge in analytical Methods and Research Attitude of M.Ed. Student	129	0.929	Positive

Discussion of the result

From the table 5, it is clear that correlation coefficient between Knowledge in analytical Methods and Research Attitude of M.Ed. Students is 0.939. The relation can be interpreted as Very High positive correlation between these variables. This positive value of ‘r’ indicates that any increase or decrease in Knowledge in analytical Methods will result in corresponding increase or decrease in Research Attitude of M.Ed. Students.

Thus, there exists a significant positive correlation between Knowledge in analytical Methods and Research Attitude of M.Ed. Students with respect to Science Stream.

Table 6

Data and result of the Relationship between Knowledge in analytical Methods and Research Attitude of M.Ed. Students for the Sub Sample Based on Commerce Stream

Variables	N	R	Type of Relation
Knowledge in analytical Methods and Research Attitude of M.Ed. Student	129	0.903	Positive

Discussion of the result

From the table 6, It is clear that correlation coefficient between Knowledge in analytical Methods and Research Attitude of M.Ed. Students is 0.903. The relation can be interpreted as Very High positive correlation between these variables. This positive value of ‘r’ indicates that any increase or decrease in Knowledge in analytical Methods will result in corresponding increase or decrease in Research Attitude of M.Ed. Students.

Thus, there exists a significant positive correlation between Knowledge in analytical Methods and Research Attitude of M.Ed. Students with respect to the Commerce Subject.

Relationship between Knowledge in analytical Methods and Research Attitude of M.Ed. Students for the subsamples based on Type of Management

The value obtained for relationship between Knowledge in analytical Methods and Research Attitude of M.Ed. Students with respect to Government and Aided colleges are given in table 7 and 8

Table 7

Data and result of the Relationship between Knowledge in analytical Methods and Research Attitude of M.Ed. Students for the Sub Sample Based on Government Colleges

Variables	N	R	Type of Relation
Knowledge in analytical Methods and Research Attitude of M.Ed. Student	129	0.956	Positive

Discussion of the result

From the table 7, it is clear that correlation coefficient between Knowledge in analytical Methods and Research Attitude of M.Ed. Students is 0.957. the relation can be interpreted as Very High positive correlation between these variables. This positive value of ‘r’ indicates that any increase or decrease in Knowledge in analytical Methods will result in corresponding increase or decrease in Research Attitude of M.Ed. Students.

Thus, there exists a significant positive correlation between Knowledge in analytical Methods and Research Attitude of M.Ed. Students with respect to the Government colleges

Table 8

Data and result of the Relationship between Knowledge in analytical Methods and Research Attitude of M.Ed. Students for the Sub Sample Based on Aided Colleges

Variables	N	R	Type of Relation
Knowledge in analytical Methods and Research Attitude of M.Ed. Student	129	0.935	Positive

Discussion of the result

From the table 8, It is clear that correlation coefficient between Knowledge in analytical Methods and Research Attitude of M.Ed. Students is 0.935. the relation can be interpreted as Very High positive correlation between these variables. This positive value of ‘r’ indicates that any increase or decrease in Knowledge in analytical Methods will result in corresponding increase or decrease in Research Attitude of M.Ed. Students.

Thus, there exists a significant positive correlation between Knowledge in analytical Methods and Research Attitude of M.Ed. Students with respect to the Aided colleges.

Conclusion

The study's findings show a strong positive relationship between analytical methodology proficiency and research disposition in M.Ed. students. This empirical evidence highlights the need of developing a strong understanding of analytical methodologies in order to promote a positive research attitude within this academic group. The study's findings are useful for educators and curriculum designers. They emphasize the potential advantages of introducing research-oriented software into the curriculum from the beginning of the M.Ed. degree. By using such tools early on, teachers can effectively reduce students' research-related anxiety, resulting in a smoother transition into academic inquiry.

Furthermore, the data demonstrate the effectiveness of using a practical approach to teaching statistical procedures rather than a strictly theoretical framework. Educators can reduce students' apprehension about research by stressing hands-on application over abstract notions. This teaching

technique not only improves comprehension, but also builds confidence in the use of statistical tools for empirical research.

In a nutshell the study emphasizes the importance of integrating teaching practices with empirical data to improve M.Ed. students' research preparedness. Educators can enable students to traverse scholarly inquiry confidently and proficiently by prioritizing the acquisition of analytical skills and incorporating research-centric software into the curriculum. Furthermore, the use of practical teaching approaches guarantees that students have the necessary tools and expertise to flourish in their research endeavours, so contributing to the growth of educational scholarship.

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