



A STUDY OF INTELLIGENCE AND ACADEMIC ACHIEVEMENT IN MATHEMATICS OF SECONDARY SCHOOL STUDENTS IN ERODE EDUCATIONAL DISTRICT

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Abstract

This study was conducted to know the Intelligence and Academic Achievement in mathematics of Secondary School Students in Erode Educational District, Tamilnadu. The present study the investigator defined to take a sample of 330 school students based on the random sampling were analysed. Intelligence test inventory was designed by Cattell and Cattell was used by the investigator. And Achievement in mathematics marks taken from summative test. It was found that there is a Correlation between Intelligence and Achievement in Mathematics of Secondary School Students.



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Introduction

The root meaning of education is given as bringing up leading out making manifest. Potentialities in a pupil imperative character of education is now accepted as the essential aspect for individual growth and social development. Education is often regarded as experience of any sort intellectual, emotional and sensory motor.

Education whatever goals be its goals and objectives involves learning. What ever be the level of learning or type of learning of the inputs of learning have to reach the pupil through his senses. Our senses are the gateways to acquire knowledge. Their respective functions may have been given of the world education but underlying them all is the conception that is denote an attempt on the part of the adult members of human society to shape the development of the coming generations in accordance with own ideas of life in wide it everything with help to shape the human being.

Statement of the Problem

The problem of the study is entitled as “**A study of Intelligence and Academic Achievement in Mathematics of Secondary School Students in Erode Educational District**”.

Need and Significance of the Study

Intelligence and mathematics are the basic driving forces for higher level achievement in any field of study. Each student has his/her own performance level, in every field. These performance may be affected by low intelligence and high mathematics, as a result of low performance (Achievement) individual student become down hearted and disappointed. It is natural that in classroom situations, some student’s perform well whereas others perform poorly, according to their level of intelligence and mathematics. Academic achievement in the secondary level, doubtlessly affect the future of student’s in the Indian educational scenario with these ideas in mind, the investigator has chosen the topic-“Intelligence and Academic Achievement in Mathematics of Secondary School Students.

Objectives of the Study

1. To find out the Intelligence of Secondary Class Students on the basis of Gender.
2. To find out the Intelligence of Secondary Class Students on the basis of Community.
3. To find out the Intelligence of Secondary Class Students on the basis of Type of Management.
4. To find out the Intelligence of Secondary Class Students on the basis of Medium.
5. To find out the Intelligence of Secondary Class Students on the basis of Location of the School.
6. To find out the Intelligence of Secondary Class Students on the basis of Father’s Education.
7. To find out the Intelligence of Secondary Class Students on the basis of Mother’s Education.
8. To find out the Intelligence of Secondary Class Students on the basis of Father’s Occupation.
9. To find out the Intelligence of Secondary Class Students on the basis of Mother’s Occupation.

10. To find out the Achievement in Mathematics of Secondary Class on the basis of Gender.
11. To find out the Achievement in Mathematics of Secondary Class on the basis of Community.
12. To find out the Achievement in Mathematics of Secondary Class on the basis of Type of Management.
13. To find out the Achievement in Mathematics of Secondary Class on the basis of Medium.
14. To find out the Achievement in Mathematics of Secondary Class on the basis of Location of the School.
15. To find out the Achievement in Mathematics of Secondary Class on the basis of Father's Education.
16. To find out the Achievement in Mathematics of Secondary Class on the basis of Mother's Education.
17. To find out the Achievement in Mathematics of Secondary Class on the basis of Father's Occupation.
18. To find out the Achievement in Mathematics of Secondary Class on the basis of Mother's Occupation.
19. To find out the Relationship between Intelligence and Achievement in Mathematics of Secondary Class Students.

Hypotheses of the Study

1. Students differ significantly in their Intelligence with respect to Gender.
2. Students differ significantly in their Intelligence with respect to Community.
3. Students differ significantly in their Intelligence with respect to Type of Management.
4. Students differ significantly in their Intelligence with respect to Medium.
5. Students differ significantly in their Intelligence with respect to Location of the School.
6. Students differ significantly in their Intelligence with respect to Father's Education.
7. Students differ significantly in their Intelligence with respect to Mother's Education.

8. Students differ significantly in their Intelligence with respect to Father's Occupation.
9. Students differ significantly in their Intelligence with respect to Mother's Occupation.
10. Students differ significantly in their Achievement in Mathematics with respect to Gender.
11. Students differ significantly in their Achievement in Mathematics with respect to Community.
12. Students differ significantly in their Achievement in Mathematics with respect to Type of the Management.
13. Students differ significantly in their Achievement in Mathematics with respect to Medium.
14. Students differ significantly in their Achievement in Mathematics with respect to Location of the School.
15. Students differ significantly in their Achievement in Mathematics with respect to Father's Education.
16. Students differ significantly in their Achievement in Mathematics with respect to Mother's Education.
17. Students differ significantly in their Achievement in Mathematics with respect to Father's Occupation.
18. Students differ significantly in their Achievement in Mathematics with respect to Mother's Occupation.
19. There is a Correlation between Intelligence and Achievement in Mathematics of Secondary School Students.

Method of the Study

The investigator selected the Random method for the study

Population of the study

The population includes secondary students of Erode District of Tamilnadu

Sample of the Study

The investigator used the random sampling technique and randomly selected 330 students from Erode Districts. From the selection of sample, various bases of randomly are followed such as gender of students, community type of Management, Location of the school,

Educational qualification of parents, Level of Occupation of parents, etc., have been taken in to consideration.

Tools of the Study

The following Research tools has been used by the investigator

- Intelligence Test
- Achievement in Mathematics (AIM)

Intelligence Test

The present study, the investigator assessed students Intelligence using by 'g' Culture fair test. The test was prepared and validated by Cattell and Cattell.

Achievement in Mathematics

The investigator collected achievement scores from students of summative test marks in mathematics.

Findings

1. Findings Based on Intelligence

1. Girl students have showed higher mean value (15.01) for Intelligence than the boys (13.57) of secondary school level.
2. BC students have showed better Intelligence (14.48) than the students belonging to other Communities viz, SC/ST(13.95), MBC (13.90).
3. Students studying Municipal/Welfare schools have showed better Intelligence (14.17) than the students studying in other Management schools viz, Government (14.09), Private Aided (14.00).
4. English Medium students have showed higher mean value(15.37) for Intelligence than Tamil Medium students (13.96).
5. Students studying in Urban areas have showed better Intelligence (14.63) than the students studying in other Location of the Schools viz, Rural (13.55), Semi Urban (13.27).
6. Students whose Fathers were Above Matric have showed better Intelligence (14.70) than the students whose Father's Education were Upto Matric (14.49), Illiterate(13.25).
7. Students whose Mothers where 8thstd have better Intelligence (14.85) than the students whose Father's Education were Upto 8 thstd (14.13), Illiterate (13.25).

8. Students whose fathers were Private Employee have showed better Intelligence (15.23) than the students whose Father's Occupation were Business (15.07), Government Employee(14.37), Cooli (13.69).
9. Students whose Mother's Occupation was Housewife have scored better Intelligence(14.23)than the Students whose Mothers were Employee(13.86) of secondary class level.

2. Findings Based on Achievement in Mathematics

1. Girl students have showed higher mean value (60.48) for Achievement in Mathematics than the boys (51.95) of secondary school level.
2. BC students have showed better Achievement in Mathematics (56.11) than the Students belonging to other Communities viz, SC/ST (54.62). MBC (54.51).
3. Students studying in Municipal/Welfare schools have showed better Achievement in Mathematics(55.68) than the students studying in other Management schools viz, Private Aided (55.47), Government(54.37).
4. Tamil Medium students have showed higher mean value (55.27) for Achievement in Mathematics than English Medium students (52.27).
5. Students studying in Urban area have showed better Achievement in Mathematics (56.41) than the students studying in other Location of the Schools viz, Semi Urban (55.68), Rural (51.68).
6. Students whose Fathers were Above Matric have showed better Achievement in Mathematics (57.90) than the students whose Father's Education were Upto Matric (57.59), Illiterate (50.25).
7. Students whose Mothers were Upto 8thstd have showed better Achievement in Mathematics (57.20) than the students whose Mother's Education were Above 8thstd (56.50), Illiterate(51.10).
8. Students whose Fathers were Business have showed better Achievement in Mathematics (58.24) than the students whose Fathers were Employee (55.94), Government Employee (55.52), Cooli (54.39).
9. Students whose Mother's Occupation was Housewife have scored better Achievement in Mathematics (56.77) than the students whose Mothers were Employee(52.31) of secondary class level.

Conclusions

The present study made on the secondary class students Intelligence and Academic Achievement in Mathematics. Many studies have been conducted keeping the students “Academic Achievement in Mathematics” as the dependent variable. This study is also of that kind. The effect of the independent variables “Intelligence of Secondary Class Students” has been studied in this paper.

It remains insufficient even after having done this research for the topic itself implies that there are so many other factors affecting the mathematical achievement of IX standard students.

Thus students Intelligence and Achievement in Mathematics involves different factors like students varied mental abilities, their aptitude, attitudes towards the mathematics diversified interest and other motivational characteristics as well as teacher – related factors and the nature of teaching methods. Attempts could be made to assess the relative influence of various students – related factors affecting their Intelligence and Academic Achievement in Mathematics.

It is concluded that there is significant relationship between Intelligence and Academic Achievement in Mathematics.

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