

A Study of Reasoning Ability of Secondary School Students In Relation To Their Intelligence

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Abstract: *This study investigated the reasoning ability and intelligence of secondary school students. The secondary school students studying in class ix and x of different Government and Private schools of Lucknow city constitute the population of the study. The investigation was conducted on 200 students. Out of the 200 students 100 were male and 100 were female students. It was found that male students have better intelligence as compared to female students. It was also found that there was no significant difference in the reasoning ability of male and female secondary school students. The result showed that there is no significant difference in the intelligence score of Government and Private secondary school students. It had also shown that Private school students had higher reasoning ability as compared to the Government school students.*

I. Introduction

Education plays an important role in shaping an individual's career. The level of education helps people to earn recognition and respect in the society. Undoubtedly education is both socially and personally an indispensable part of human life. However the inequalities in the standards of education are still a major issue that needs to be solved as early as it could be. The importance of education in our life cannot be ignored at any cost. Education is the only way to acquire knowledge. For instance, you can gain huge amount of information by reading books for the subject you are interested in such as current affairs, Mathematics, ex-change rates and so on. Better education can make a person more civilized and useful for the society. One cannot imagine a prosperous life without appropriate education.

Intelligence is the ability to solve problems and to adapt to and learn from life's everyday experiences. The ability to solve problems and the capacity to adapt and learn from experiences includes characteristics such as creativity and interpersonal skills. The mental abilities that enable one to adapt to, shape, or select one's environment, the ability to judge, comprehends, and reasons, the ability to understand and deal with people, objects, and symbols. The ability to act purposefully, thinks rationally, and deals effectively with the environment.

II. Review Literature

Gupta & Kumar (2010) studied the relationship of mental health with emotional and self-efficacy among 200 (100 male and 100 female) college students from Kurukshetra University. The result indicates that emotional intelligence and self-efficacy are positively related with mental health. It also revealed that male students were better than female students in term of mental health, emotional, Intelligence and self -efficacy. Singh & Imam (2013) examined the effects of gender; time spent on internet browsing on Mathematics achievement of class IX students of South-East Bihar. The study consists of 975 male and 969 female students of thirty-six schools of South-East Bihar. The Mathematics achievement test and personal background assessment questionnaire were used for data collection. While t-test, F-test followed by Duncan's Mean test were used for statistical analysis. The result showed that male students had better achievement in Mathematics than female students. Further the result showed that participation in sports activities enhances the performance in Mathematics and English medium students had higher Mathematics achievement in comparison to Hindi medium students.

Objectives of the study

1. To compare the intelligence of secondary school students on gender basis.
2. To compare the reasoning ability of secondary school students on gender basis.
3. To compare the intelligence of Government and Private secondary school students.
4. To compare the level of reasoning ability of Government and Private secondary school students.

Need and Significance of the study

It is a time when the given and internalized norms and ideas are questioned, while at the same time the opinions of the peer-group became very important. It is important to recognize that adolescents need social and emotional support that may require reinforcement of norms of positive behavior, acquisition of skills essential to cope with the risky situations that they encounter in their lives, manage peer-pressure and deal with gender stereotypes. The absence of such support can lead to confusion and misunderstanding about these changes and affect their academic performance and social behavior. Young people hold the promises of our future. They are demographic force. Working with and helping young people have always been a priority across time and cultures. But the changing times have challenged us in exceptional ways to find ways to protect and empower our young people to become happy, healthy adults. Life skills approach is one such approach that promises to contribute to the well-being of our young and empowers them to meet the many challenges of life.

Early adolescents are unique in terms of their intellectual, social, emotional and physical development. Therefore it requires great care while planning programs for them. With the life situation becoming more complex and challenging, there is a great need for the next generation to learn how to cope with change. Reasoning ability enable them to take on the challenges of life with confidence and courage. Acquisition of reasoning ability by students enables them to deal effectively with life's adversities and stressful moments with a sense of serenity. Anyone who wants to lead a meaningful life needs reasoning ability. They are applicable to all ages of children and adolescents, since young people in this age group seem to be the most vulnerable to behavior related health problems. Life skills are thus needed for the promotion of good health and well being, rather than as an intervention aimed only at those already at risk.

In this background the investigator would like to assess the development of reasoning ability among students of secondary schools in order to evaluate the effectiveness of life skills education. The investigator believes that this study will find whether reasoning ability develops thinking, social and emotional skills, thus empowering young adolescents to respond to real life situations in positive and responsible ways. It is also hoped that this study will enable educators to identify and develop skills needed for empowering learners to make informed decisions, understanding the importance of life skills development in a continuous and comprehensive education. The investigator wishes to recommend that schools foster thinking, emotional and social skills by providing students with opportunities to improve their reasoning ability.

III. Methodology

The method adopted for this study was descriptive and statistical in nature. The investigator used survey method for data collection. The secondary school students of class ix and x of different Government and Private as well as Hindi and English medium secondary school students of Lucknow city (capital of the state of Uttar Pradesh, India) constitute the population of the study. A stratified random sampling design was applied to target population. The investigation was conducted on 200 male and female students from different schools of Lucknow. The total sample was equally distributed to include Government and Private school students in this study.

Samples Used for Study

S. N.	Name of School	Gender		School Type	
		Male	Female	Govt.	Private
1.	Montfort Inter College, Mahanagar	50	00	00	50
2.	Mount Carmel Inter College, Mahanagar	00	50	00	50
3.	Govt. Inter College, Nishathganj	50	00	50	00
4.	Govt. Girls Inter College, Mahanagar	00	50	50	00
	Total	100	100	100	100

Tools Used

In the present study the researcher selected two tools from National Psychological Corporation

- a) Reasoning Ability Test (RAT) by L.N.Dubey, College of Educational psychology and Guidance. Jabalpur (M.P.)
- b) A Group Test of Intelligence for children, by Dr. R.K.Tandon, Reader & Head, Department of Psychology, K.G.K. College, Moradabad (U.P.).

IV. Results and Analysis

The statistical analysis was done by using SPSS (Statistically package for social science) statistical analysis software. The mean, standard deviation, standard error of the mean (SE_m), Student't' test and ANOVA were the required statistics to determine and to test the hypotheses. The results are shown in the form of tables.

Table-1 Comparison of Mean Intelligence Scores of Male and Female students

Gender	N	Mean	SD	SE _m	t-value df=198	Significance
Male	100	67.80	10.324	1.032	2.176	Significant at .05 level
Female	100	64.38	11.852	1.185		

Table-1 shows that mean intelligence score of male students is 67.80 and female students is 64.38. The Standard Deviation of the intelligence score of male students is 10.324 and that of female students is 11.852. The t-value is 2.176 which is significant at 0.05 level of significance. This shows that the male and female students of secondary school significantly differ in their intelligence.

Table-2 Comparison of Reasoning Ability of Male and Female students

Gender	N	Mean	SD	SE _m	t-value df=198	Significance
Male	100	41.73	19.306	1.931	1.325	Not Significant at .05 level
Female	100	38.54	14.390	1.439		

Table-2 shows that mean score of reasoning ability of male students is 41.73 and female students is 38.54. The Standard Deviation of the reasoning ability of male students is 19.306 and that of female students is 14.390. The t-value is 1.325 which is not significant at 0.05 level of significance. This shows that the male and female students of secondary school is not significantly differ in their reasoning ability.

Table-3 Comparison of Mean Intelligence Scores of Government and Private secondary school students

School	N	Mean	SD	SE _m	t-value df=198	Significance
Govt.	100	64.78	12.133	1.213	1.659	Not Significant at .05 level
Private	100	67.40	10.114	1.011		

Table-3 shows that mean intelligence scores of Government school students is 64.78 and private school students is 67.40. The standard deviation of intelligence scores of Government school students is 12.133 and private school students is 10.114. The t-value is 1.659 which is not significant at 0.05 level of significance. This shows that Government and private secondary school students did not differ in their intelligence.

Table-4 Comparison of Reasoning Ability of Government and Private secondary school students

School	N	Mean	SD	SE _m	t-value df=198	Significance
Govt.	100	35.50	13.997	1.400	3.983	Significant at .05 level
Private	100	44.77	18.591	1.859		

Table-4 shows that mean scores of reasoning ability of Government school students is 35.50 and private school students is 44.77. The standard deviation of reasoning ability of government school students is 13.997 and that of private school students is 18.591. The t-value is 3.983 which is significant at 0.05 level of significance. This shows that Government and private secondary school students differ significantly in their reasoning ability.

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