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A study of social science achievement of secondary school students in relation to their intelligence

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Abstract

In this dynamic and evolving world, filled with astounding scientific discoveries and inventions on one hand and crumbling ethics, decaying morals and impaired democratic values on the other, teaching and learning of social science is inevitable at secondary level education. It develops the sense of responsibility, positive attitude, moral, social and democratic values in adolescents who are future of mankind in the world. To estimate the successful fulfilment of the objectives of teaching social science, investigating of the trends in the achievement of the students in the subject is much needed. Intelligence plays a key role in shaping the personality of students and their performance in academics. It is one of the proved factors contributing in the academic achievement of students. This study aimed to explore the achievement of male and female students of government schools in social science and its relationship with their intelligence. A sample of 337 students of IX class studying government schools of Gaya district (urban), Bihar was selected through random sampling methods. The data was collected using Culture Fair Intelligence Test (scale 2, form A) prepared by Cattell and Cattell and Social Science Achievement Test prepared and standardised by the researcher. Finding of the study include that there exists a positive and significant relationship between social science achievement and intelligence of government school students irrespective of their gender. A significant difference between male and female students was detected with regard to their intelligence and social science achievement.

Keywords: Secondary education, social science achievement and intelligence

Introduction

Education is a process of enlightening and empowering minds and personalities by facilitating transmission of knowledge, skills and attitudes necessary to cope effectively with the environment. It is an essential human virtue, a necessary entity for the progression of an individual as well as the society and an important tool to bring reforms in a society. The provision of quality education to individuals develops their hidden potentialities to the maximum resulting in their contribution to the progress and development of their society and nation. In the entire education system of India, the primary and secondary levels are considered as most significant and basic building blocks of the entire education system. Primary or Elementary education acts as the foundation for secondary education and secondary education provides the basic knowledge and necessary skills for the future life of an individual.

Secondary education plays a major role in the life of individuals by acting as a bridge from elementary education to higher education. It is not a stage of specialisation but it is a level where all the broad and necessary fields of knowledge and skills are presented to the students. In India, the curriculum for this level is designed with the objectives of developing overall personality and fostering national needs. It aims to enable the students to meet the needs of citizenship of a democratic and socialist state along with inculcating vocational skills and leadership qualities for personality development. Here comes the importance of teaching Social Science as a compulsory subject at secondary level as it is known to be capable of moulding the students into effective and efficient citizens of our country. In this context AC Bining and DH Bining have rightly stated that "The most prominent of the objectives in secondary schools is the training of pupils for effective citizenship.

The materials of the Social Studies / Social Sciences provide the basis for making the world of today intelligible to the pupils, for training them in certain skills and habits and for inculcating attitudes and ideals that will enable boys and girls to take their places as efficient and effective members of the democratic society ^[1].” Thus, along with languages, general science and mathematics, social science is also given an important place in the core subjects of study.

As a subject of study, social science can prove quite helpful in providing education for better citizenship, developing a wholesome personality, enabling to become conscious of the social problems and acquiring capacity for their solution. National Curriculum Framework (2005, P-50) remarks “The social studies encompass diverse concerns of society, and include a wide range of content drawn from the disciplines of history, geography, political science, economics, sociology and anthropology. Social studies perspectives and knowledge are indispensable to building the knowledge base for a just and peaceful society” ^[2].

In the light of the importance of secondary school stage in the lives of students and the advantages of learning social science at this stage, it is imperative for the students to understand and learn the subject to a much better extent and achieve the goals of learning specific to this stage. The extent to which the goals have been accomplished by the students can be measured by assessing their academic achievement on the whole and their achievement in the subject specifically. It is very crucial to find out the trends in social science achievement of students of secondary schools to estimate the successful fulfilment of the objectives of teaching the subject.

The quality of achievement is meant for making a difference locally, regionally, nationally and globally. Achievement in school is a function of a set variables. “There is a range of factors that effect on the quality of performance of students.” (Waters and Marzano, 2006) ^[3]. There are number of cognitive and non-cognitive factors that positively effect and predict the academic achievement of the students. “There are many cognitive and non-cognitive factors such as intelligence, personality, creativity, socio economic status, adjustment, study habits, social acceptance, level of aspiration, motivation, achievement motivation, opportunities, education and learning and gender which influence the learning of a student.” (Conger and Peterson, 1984) ^[4].

Every child is unique and different in his mental ability. Intelligence can be understood as the child’s ability to learn and carry out abstract thinking and to respond appropriately to the different situations of life. Intelligence is a concept which effects all the spheres of an individuals’ life. In this context it is relevant to state that one of the most important contributing factors towards academic achievement is intelligence. Since long numerous researches have been conducted to the study the significance of the contribution of intelligence on overall academic achievement and achievement of the students in individual subjects like Science and Mathematics. The result of many such studies have shown that intelligence is an important predictor for academic performance of students.

Hence, keeping in view the above discussion and owing to the significance of teaching and learning Social Science at secondary level, the researcher has taken intelligence as an important variable which may affect the achievement in Social Science. This study might prove to be beneficial in

not only bringing about improvement in the process of teaching and learning Social Science but also in enhancing the interest and achievement of adolescents in the subject, ultimately producing socially well-informed and well-behaved citizens contributing their best in the development of their nations as well as the world.

Review of related literature

Nitulgogoi *et al.* (2016) ^[5] performed a comparative study on academic achievement and intelligence of class X students of Jawahar Navodaya Vidyalaya and Kendriya Vidyalaya in Lakhimpur district, Assam. It was revealed that there is no significant difference in academic achievement of the male JNV and KV students and female JNV and female KV students. Moreover, intelligence of JNV students was found to score higher than the intelligence of KV students. No significant difference was found between intelligence of female JNV and female KV students. Sreeraj (2015) ^[6] explored the relationship between multiple intelligence and achievement in mathematics of students at secondary level. The findings of the study revealed that there is a significant difference in academic achievement of boys and girls. A positive and significant correlation at 1% level was found between the selected components of multiple intelligence and achievement in mathematics of students. Parveen (2014) ^[7] conducted a correlational study of intelligence, study habits and academic achievement at tenth grade students. Through the analysis, no significant relationship was found between intelligence and academic achievement of male students whereas a significant relationship was found between intelligence and academic achievement of female students. It was also revealed that there was a significant difference in the academic achievement of males and females.

Objectives

The objectives of the present study are

1. To find out the relationship of social science achievement of government school students with their intelligence.
2. To compare the male and female students with regard to their social science achievement.
3. To compare the male and female students of government schools with regard to their intelligence.

Hypotheses

In compliance with the objectives of the study the following null hypotheses were framed

1. There would be no significant relationship between social science achievement and intelligence of government school students.
2. There would be no significant difference in the social science achievements of male and female students.
3. There would be no significant difference in the intelligence of male and female students.

Research Method

Taking into account the adaptability of the proposed design according to the type of study variables under consideration, size of the sample and phenomenon under study the ex post facto research design has been selected as an appropriate design for the present study. The target population for this study comprised all the IX class students studying in government schools of Gaya district located in urban area

and affiliated to Bihar Board. For the sample 12 government schools were randomly selected and from these selected schools a total of 337 IX class students (Male = 149 & Female = 188) were selected using cluster sampling technique.

Research tools

The following standardized tools were employed for collecting data.

1. Intelligence test: Culture Fair (Scale 2, form A) by Cattell and Cattell. Each scale includes four subtests, consisting types of perceptual tasks in order to measures the composite intelligence and avoid false reliance on a single skill. The researcher has used test of ‘G’ culture fair, scale 2, Form A as a tool for data collection in his research. The reliability of the test is established by three different methods. All the three reliability coefficients 0.76, 0.67 and 0.73 are quite high and have calculated across large and widely diverse samples. The concept validity of the scale was found to be 0.81 and the concrete validity was found to be 0.70.
2. Social science achievement test for class IX prepared and standardized by the researcher. The reliability of the 50 items of the social science achievement test was determined by three different formulae. The test reliability was found to be 0.899 through Cronbach’s Alpha formula, 0.839 through Spearman Brown coefficient and 0.837 through Guttman split half coefficient. The items of the social science achievement test covered the half yearly syllabus of the IX class social science text book. The face validity and content validity of the items was determined by the central university Professors, Assistant Professors, Educationists, subject expert PGTs, TGTs of NVS, KVS and MANUU Model School. Out of 182 items 100 items were selected as per the suggestions of the experts.

Result and discussion

Table 1: Significance of relationship between social science achievement and intelligence

Students	N	r value
All students	337	0.573***
Male students	149	0.577***
Female students	188	0.562***

*** $p < 0.001$

Result of the study revealed that the coefficient of correlation between social science achievement and intelligence of the government school students is positive and significant with ‘r’ value 0.57 beyond 0.001 level. The coefficients of correlation between social science achievement and intelligence of male and female students were also found to be positive and significant beyond 0.001 level with ‘r’ values 0.58 and 0.56 respectively. Hence the first null hypothesis is rejected and it is concluded that there is significant and positive relationship between social science achievement and intelligence of government school students.

To test if there were any difference in the social science achievement of male and female students an independents samples t-test was run with level of significance at 5% ($\alpha = 0.05$). Result of independent samples t-test revealed that

male and female students differed significantly in their social science achievement.

Table 2: Significance of difference in social science achievement of male and female students

Gender	N	M	SD	T	p
Male	149	23.57	7.99	-2.048	0.037*
Female	188	25.59	9.75		

* $p < 0.05$

As shown in Table. 3. Male students ($M=23.57$, $SD = 7.99$) reported having lower scores in social science achievement than their female counterparts ($M=25.59$, $SD = 9.75$), with $t(337) = -2.04$, $p = 0.037$. Hence the second null hypothesis is also rejected and it is concluded that there is significant difference in the social science achievement of male and female students of the government schools.

Table 3: Significance of difference in intelligence of male and female students

Gender	N	M	SD	T	p
Male	149	25.30	7.56	-2.419	0.014*
Female	188	27.55	9.13		

* $p < 0.05$

The table reveals that the t and p values obtained after conducting t-test with level of significance at 5% ($\alpha = .05$) to examine any difference in the intelligence of the male and female students of the government schools. It was found that the means of intelligence of the male and female students differed significantly with male students ($M = 25.30$, $SD = 7.56$) showing lesser intelligence than the female students ($M = 27.55$, $SD = 9.13$) with $t(337) = -2.41$, $p = 0.01$. Thus, the third null hypothesis is also rejected and the inference is drawn that there is significant difference between male and female students of government schools with regard to their intelligence.

Discussion

The result of the study revealed that there exists positive and significant relation between social science achievement and intelligence of the government secondary school students on the whole and those of male and female students. This means that students, irrespective of their gender, having high intelligence have scored higher in the social science achievement test. This result is in agreement with some other similar studies on intelligence and its relation with academic achievement (Pallabi, 2017; Sreeraj, 2015; Parveen, 2014; Lamare, 2012) ^[8, 9].

The results of the study also ascertained that there is significant difference between the male and female students with regard to their social science achievement and intelligence. Few other studies have also revealed similar results for academic achievement (Parveen, 2014) and intelligence of male and female students (Parveen, 2014; Dhull, 2012) ^[10]. The female students of government schools were found to be higher in intelligence and also in their social science achievement than their male counterparts.

Thus, it can rightly be stated that the females acquire a significantly higher position in intelligence as well as in social science achievement when compared with the students of opposite gender.

Conclusion

Statistical analysis and interpretation of the data revealed that intelligence is significantly and positively related to the social science achievement of the government school students irrespective of their gender. It was also found that male and female students differ significantly in respect of their intelligence and social science achievement. Moreover, the female students of the government schools were found to achieve higher scores in intelligence scale as well as social science achievement than their male counterparts.

Educational Implications

The study reveals that intelligence of the students is a significant factor effecting the social science achievement. It plays a key role in the achievement of government school students in the subject of social science at secondary level. This means that higher the intelligence better the achievement in social science. Keeping this in view, the schools should design activities such as puzzles, scrabbles, cryptograms, story or book reading activities, stage performance and role plays, which optimise the intelligence level of the students, along with regular routine educational tasks and playground activities. Parents should also try to provide nutrient rich food to their growing kids as well as involve their young minds in intellectual and problem-solving activities so that their brains and thinking abilities are polished. The students should get enough sleep, practise yoga, play their favourite musical instrument and read variety of good books which help them in using their intelligence up to optimum levels. All these endeavours would prove to be beneficial for shaping the personalities of the future citizens in the desired manner.

References

1. Mangal SK, Mangal Uma. Pedagogy of social science: 2nd Ed. Delhi: PHI learning private limited, 2018, 23.
2. National curriculum framework: 4th Ed. New Delhi; NCERT, [Internet], 2005, 50. Available from <https://ncert.nic.in/pdf/nc-framework/nf2005-english.pdf>
3. Waters JT, Marzano RJ. School district leadership that works: The effect of superintendent leadership on student achievement: Midcontinent research for education and learning. [Internet], 2006. Available from [https://www.scirp.org/\(S\(351jmbntvnsjt1aadkozje\)\)/reference/referencespapers.aspx?referenceid=1228379](https://www.scirp.org/(S(351jmbntvnsjt1aadkozje))/reference/referencespapers.aspx?referenceid=1228379)
4. Conger JJ, Petersen AC. Adolescence and youth: psychological development in a changing world. 3rd ed. London; Harper and Row. [Internet], 2016. Available from [https://onlinelibrary.wiley.com/doi/abs/10.1016/S0140-1971\(85\)80077-4](https://onlinelibrary.wiley.com/doi/abs/10.1016/S0140-1971(85)80077-4)
5. Nitulgogoi, Dutta J. A comparative study on academic achievement and intelligence of class X students of Jawahar Navodaya Vidyalaya and Kendriya Vidyalaya in Lakhimpur district Assam, International Journal of Development Research [Internet]. 2016;6(3):7191-7198. Available from <https://www.journalijdr.com/comparative-study-academic-achievement-and-intelligence-class-x-students-jawahar-navodaya-vidyalaya>
6. Sreeraj KG. Relationship between multiple intelligence and achievement in mathematics of students at

- secondary level: Shodh Ganga, [Internet], 2015. Available from <http://shodhganga.inflibnet.ac.in:8080/jspui/handle/10603/184540>
7. Parveen D. A correlational study of intelligence, study habits and academic achievement at tenth grade students: Paripex Indian journal of research. [Internet], 2014;3:4. Available from <https://www.worldwidejournals.com/paripex/article/a-correlational-study-of-intelligence-study-habits-and-academic-achievement-at-tenth-grade-students/MjIOMg==/?is=1>
8. Pallabi S. influence of home environment and intelligence on academic achievement of secondary school students. A study of in Lakhimpur district of Assam: Shodh Ganga, [Internet], 2017. Available from <https://shodhganga.inflibnet.ac.in/handle/10603/165977>
9. Lamare R. A study of academic achievement in relation to some psycho-social variables of secondary school students in East Khasi hill district, Meghalaya: Shodh Ganga; [Internet], 2012. Available from <https://shodhganga.inflibnet.ac.in/handle/10603/5323>
10. Dhull J. A comparative study of the achievement in science in relation to intelligence, academic anxiety and reading interest of the X class students in government and private schools of Haryana: Shodh Ganga [Internet], 2012. Available from <https://shodhganga.inflibnet.ac.in/handle/10603/112303>