

## Social Intelligence and Emotional Intelligence: Correlational Analysis among Secondary School Students in Different Achievement Levels

Dixon P. Thomas<sup>1\*</sup>, Dr. K. V. Jeeva Rathina<sup>2</sup>

### ABSTRACT

The present study aims to explore the relationship between social intelligence and emotional intelligence of secondary school students in different levels of academic achievement. The Social Intelligence Test and the Emotional Intelligence Scale developed by the investigators for the purpose of the study were administered to gather data from a stratified random sample of 628 high school students in the age range 13 to 16. The analysis of the data with SPSS revealed that presence of significant difference among high-, average-, and low achievers in secondary school students with regard to their social intelligence and emotional intelligence. The study exposed the presence of low, but significant positive correlation between social intelligence and emotional intelligence of secondary school students. The high-, average-, and low achievers, however, do not differ significantly with regard to the degree of relationship between their social intelligence and emotional intelligence.

**Keywords:** *Social intelligence, Emotional intelligence, Secondary school students*

Influence of ability factors on academic achievement and school accomplishments have been established beyond doubt. Developments in the field of psychology, in recent years, have brought about unprecedented changes in both the curriculum and the teaching learning process. The classroom experiences are now being provided in such a manner that it addresses the development of multiple ability factors needed for successful adaptation to the ever changing globalized world (Payne & Kyllonen, 2012). Emotional intelligence and social intelligence are two such ability factors of increased concern in modern classrooms where learning results from the co-construction of knowledge in social context.

The concept of emotional intelligence (EI) is relatively young. It involves the capacity to perceive emotions, assimilate emotion-related feelings, understand the information of those emotions, and manage them (Mayer, Salovy & Caruso, 2004). EI has arisen in the last three

<sup>1</sup> Research Scholar, KIHE, Karpagam University, Coimbatore, India

<sup>2</sup> Professor & HOD, Dept. of Education, KIHE, Karpagam University, Coimbatore, India

\*Responding Author

Received: August 15, 2017; Revision Received: September 25, 2017; Accepted: September 30, 2017

## **Social Intelligence and Emotional Intelligence: Correlational Analysis among Secondary School Students in Different Achievement Levels**

decades as one of the decisive factors of personal adjustment, psychological well-being, interpersonal relationships, positive behaviour, and life success in diverse situations of daily life (Berrocal & Ruiz, 2008). Though the concept of social intelligence (SI) date back to Thorndike, who defined it as the ability to understand others and act wisely in human relations (Kihlstrom & Cantor, 2000), it is still waiting to reach its momentum in the field of research. Social intelligence involves the ability to understand the intentions and motivations of other people and to utilize such information to negotiate interpersonal relationship and sail across complex social situations (Honeywill, 2015). The prevailing social constructivism necessitates creation of successful social relationships and culturally significant social contexts in the classroom for effective learning (Arjunan, 2014).

Modern education takes place in socially significant cultural contexts. Learning is no more restricted to mere information processing. It involves construction of knowledge both at individual and societal levels. The learners' past experiences, subjective perceptions, feelings, socio-cultural values etc. are all decisive in the social construction of knowledge (Amineh & Asl, 2015). The emotional and social abilities of the learner is, therefore, as important as his cognitive abilities in learning. The major challenge faced by the teachers in the modern classroom is how to effectively tackle the emotional and social abilities of the learners side by side with their cognitive abilities to optimise academic achievement. Research studies are needed to enrich the classroom practices in this direction. The present investigation is a part of the doctoral research of the first author under the supervision of the second author where a modest attempt is made to find out the how the social intelligence and emotional intelligence of secondary school students are related in the context of achievement discrepancy.

### ***Objectives***

The study has the following objectives in view:

1. To compare the emotional intelligence of secondary school students in different levels of achievement.
2. To compare the social intelligence of secondary school students in different levels of achievement.
3. To find out the relationship between emotional intelligence and social intelligence of secondary school students.
4. To compare secondary school students in different levels of achievement with regard to the relationship between emotional intelligence and social intelligence.

### ***Hypotheses***

The following null hypotheses were tested for the study:

1. Secondary school students in different levels of achievement do not differ significantly with regard to their emotional intelligence.
2. Secondary school students in different levels of achievement do not differ significantly with regard to their social intelligence.

## Social Intelligence and Emotional Intelligence: Correlational Analysis among Secondary School Students in Different Achievement Levels

3. There is no significant relationship between emotional intelligence and social intelligence of secondary school students.
4. The high achieving and average achieving secondary school students do not differ significantly with regard to the relationship between emotional intelligence and social intelligence.
5. The high achieving and low achieving secondary school students do not differ significantly with regard to the relationship between emotional intelligence and social intelligence.
6. The low achieving and average achieving secondary school students do not differ significantly with regard to the relationship between emotional intelligence and social intelligence.

### METHODOLOGY

The descriptive method was used for the study. Secondary school students of Kerala constituted the population of the study. The data collected from a stratified random sample of 628 secondary school students (boys = 289 & girls = 339) in the age range 13-16, studying in grades VII to X were utilized for the study. The data were collected by the Emotional Intelligence Scale for Secondary School Students (EIS), and the Social Intelligence Test (SIT) for Secondary School Students, both developed by the investigators for the purpose of the study. The EIS is a 40 item Likert-type 5-point scale covering five dimensions of emotional intelligence *viz.*, self-awareness, self-regulation, self-motivation, empathy and social skills. The EIS is found to have a criterion validity of 0.71 and a test-retest (four weeks) validity of 0.78. The SIT is a 50 item instrument in three segments, measuring five component abilities of social intelligence *viz.*, social knowledge, pro-social attitude, social skills, social understanding, and social memory. The SIT is found to have a criterion validity of 0.77, and a test-retest reliability of 0.82, after four weeks interval. The classification of the sample based on academic achievement was done on the basis of secondary data (the average score of two statewide term-end examinations) procured from the school records.

#### *Analysis and Interpretation*

The data were analysed with the help of SPSS for Windows (version 16.0) by keeping the hypotheses in mind. The analysis carried out to test each hypothesis formulated are presented below:

***Hypothesis-1:*** *Secondary school students in different levels of achievement do not differ significantly with regard to their emotional intelligence.*

One-way ANOVA was carried out to test whether high-, average-, and low achievers differ significantly with regard to their emotional intelligence. The summary of the ANOVA is given in Table 1.

**Social Intelligence and Emotional Intelligence: Correlational Analysis among Secondary School Students in Different Achievement Levels**

**Table 1: Summary of ANOVA: Emotional Intelligence and Three Levels of Academic Achievement**

EI	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3578.227	2	1789.114	9.074	.000
Within Groups	123234.287	625	197.175		
Total	126812.514	627			

The F-value obtained on comparing the mean EI scores of high-, average-, and low achievers are significant ( $F = 9.074$ ;  $p < 0.001$ ), revealing that the secondary school students differ significantly in their emotional intelligence on the basis of their achievement. Intergroup comparisons of the mean differences were further carried out to find out whether the obtained significant differences exist between all the pairs of groups considered. The *Tukey's post hoc test* of intergroup comparisons made in the context is given in Table 2.

**Table 2: Tukey's Post Hoc Tests for Multiple Comparisons of the Emotional Intelligence of Students in different Achievement Levels**

(I) Academic achievement	(J) Academic achievement	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Low Achievers	Average	-5.699*	1.621	.001	-9.51	-1.89
	High	-7.985*	1.916	.000	-12.49	-3.48
Average Achievers	Low	5.699*	1.621	.001	1.89	9.51
	High	-2.286	1.419	.242	-5.62	1.05
High Achievers	Low	7.985*	1.916	.000	3.48	12.49
	Average	2.286	1.419	.242	-1.05	5.62

\* The mean difference is significant at the 0.05 level.

The result of a *Tukey's post-hoc test* revealed that significant differences exist between only two group pairs, viz., Low- and Average achievers (mean difference = 5.699;  $p < 0.01$ ), and Low- and High Achievers (mean difference = 7.985;  $p < 0.001$ ). The mean difference obtained on comparing the High- and Average achievers is not significant (mean difference = 2.286;  $p > 0.05$ ), indicating that the groups are almost alike in their academic performance. The hypothesis formulated in this context, is hence rejected.

**Hypothesis-2:** Secondary school students in different levels of achievement do not differ significantly with regard to their social intelligence.

The data and result of the one-way ANOVA carried out to find out the significant difference, if any, among secondary school students in different levels of achievement with regard to their social intelligence is given in Table 3.

**Social Intelligence and Emotional Intelligence: Correlational Analysis among Secondary School Students in Different Achievement Levels**

**Table 3: Summary of ANOVA: Social Intelligence and Three Levels of Academic Achievement**

SI	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4106.193	2	2053.097	9.522	.000
Within Groups	134760.258	625	215.616		
Total	138866.451	627			

As evident from Table 3, the F-value obtained on comparing the social intelligence of secondary school students in different levels of achievement is large enough to be high at 0.01 level and beyond ( $F = 9.522$ ;  $p < 0.001$ ). It exposes that the high-, average-, and low achievers differ significantly with regard to their social intelligence. In order to find out whether the observed differences exist among all the paired groups, *Tukey's post hoc test* of multiple comparisons were carried out, the result of the same is given in Table 4.

**Table 4: Tukey's Post Hoc Tests for Multiple Comparisons of the Social Intelligence of Students in different Achievement Levels**

(I) Academic achievement	(J) Academic achievement	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Low Achievers	Average	-3.734	1.695	.071	-7.72	.25
	High	-8.509*	2.004	.000	-13.22	-3.80
Average Achievers	Low	3.734	1.695	.071	-.25	7.72
	High	-4.775*	1.484	.004	-8.26	-1.29
High Achievers	Low	8.509*	2.004	.000	3.80	13.22
	Average	4.775*	1.484	.004	1.29	8.26

\* The mean difference is significant at the 0.05 level.

The result of the post-hoc test of multiple comparison, given in Table 4, indicate that the observed significant difference is limited to two group pairs compared, viz., between Low- and High Achievers (mean difference = 8.509;  $p < 0.001$ ), and Average- and High Achievers (mean difference = 4.775;  $p < 0.01$ ). The Low- and Average Achievers are almost alike with regard to their social intelligence, as such a significant difference was found to exist between the groups. The Hypothesis-2 is, hence, *rejected*.

**Social Intelligence and Emotional Intelligence: Correlational Analysis among Secondary School Students in Different Achievement Levels**

**Hypothesis-3:** There is no significant relationship between emotional intelligence and social intelligence of secondary school students.

The data and results pertained to the calculation of the coefficients of correlation between emotional intelligence and social intelligence for the total sample and sub-samples based on level of academic achievement are given in Table 5.

**Table 5: Coefficients of correlation between emotional intelligence and social intelligence for the total sample and sub-samples**

Sample	N	r	SE <sub>r</sub>	r <sub>POP</sub>	
				.05 level	.01 level
Total Sample	628	0.272*	0.037	0.20 – 0.34	0.18 – 0.37
High Achievers	130	0.216*	0.084	0.05 – 0.38	0.01 – 0.43
Average Achievers	406	0.284*	0.046	0.12 – 0.45	0.07 – 0.50
Low Achievers	92	0.158*	0.102	-0.04 – 0.36	-0.11 – 0.42

\* Significant at 0.01 level

The value of coefficient of correlation (*r*) between emotional intelligence and social intelligence of secondary school students of Kerala was estimated to be 0.216 with its population values positioned between 0.20 and 0.34 at 0.95 confidence interval and between 0.18 and 0.37 at 0.99 confidence interval. The standard error (SE<sub>r</sub>) of the correlation for the total group was estimated to be 0.037. The estimates of coefficient of correlation show that there exists a significant positive correlation ( $r = 0.272$ ;  $p < 0.01$ ) between emotional intelligence and social intelligence of secondary school students of Kerala. The values of the coefficients of correlation (*r*) obtained for the sub-samples based on the level of academic achievement of the students are also positive and significant. The hypothesis formulated in this context, viz., Hypothesis-3 is hence accepted.

**Hypothesis-4:** The high achieving and average achieving secondary school students do not differ significantly with regard to the relationship between emotional intelligence and social intelligence.

The coefficient of correlation (*r*-values) between the emotional intelligence and social intelligence, obtained for the sub-samples based on the levels of academic achievement were compared to see whether there is a significant difference between the groups with regard to the association between EI and SI. The obtained correlations were first corrected into nearest two decimal figures (*r. correct*) and the corresponding Fisher's *z* functions were found out followed by the estimation of critical ratios. The results obtained on comparing the coefficients of correlation (*r*) between mental health status and Social Intelligence for the sub-samples, are presented in Table 6.

**Social Intelligence and Emotional Intelligence: Correlational Analysis among Secondary School Students in Different Achievement Levels**

**Table 6: Comparison of the coefficients of correlation between EI and SI in High and Average Achievers**

Groups	Statistical Indices				CR
	N	r	r <sub>correct</sub>	z	
High Achievers	130	0.216	0.22	0.224	0.629 *
Average Achievers	406	0.284	0.28	0.288	

\* Not Significant

The CR-value obtained on comparing the coefficients of correlation between emotional intelligence and social intelligence for High achievers and Average achievers is not significant (CR = 0.629;  $p > 0.05$ ). It indicates that the high achieving and average achieving students are almost alike in the relationship between their emotional intelligence and social intelligence. The Hypothesis-4 (*the high achieving and average achieving secondary school students do not differ significantly with regard to the relationship between emotional intelligence and social intelligence*), formulated in this context, is hence accepted.

**Hypothesis-5:** *The high achieving and low achieving secondary school students do not differ significantly with regard to the relationship between emotional intelligence and social intelligence.*

The degree of relationship between emotional intelligence and social intelligence in the High and Low Achieving secondary schools are compared to see whether the groups differ significantly by applying the two-tailed test of significance for the differences between two independent coefficients of correlation. The result of the analysis is given in Table 7.

**Table 7: Comparison of the coefficients of correlation between EI and SI in High and Low Achievers**

Groups	Statistical Indices				CR
	N	r	r <sub>correct</sub>	z	
High Achievers	130	0.216	0.22	0.224	0.463 *
Low Achievers	92	0.158	0.16	0.161	

\* Not Significant

The critical ration obtained on comparing the coefficients of correlation between the variables for the High- and Low achievers is not significant (CR = 40463;  $p > 0.05$ ). It shows that high and low achievers do not differ significantly with regard to the degree of relationship between their emotional intelligence and social intelligence. The hypothesis formulated in this context, viz., Hypothesis-5, is hence accepted.

**Social Intelligence and Emotional Intelligence: Correlational Analysis among Secondary School Students in Different Achievement Levels**

**Hypothesis-6:** *The low achieving and average achieving secondary school students do not differ significantly with regard to the relationship between emotional intelligence and social intelligence.*

The Low- and Average achieving secondary school students were compared with regard to the degree of relationship between their emotional intelligence and social intelligence to find out whether the groups differ significantly. The data and result of the analysis carried out in this context is given in Table 8.

**Table 8: Comparison of the coefficients of correlation between EI and SI in Low and Average Achievers**

Groups	Statistical Indices				CR
	N	r	r <sub>correct</sub>	z	
Low Achievers	92	0.158	0.16	0.161	1.084*
Average Achievers	406	0.284	0.28	0.288	

\* Not Significant

As evident from Table 8, the critical ration obtained is not large enough to be significant at least at 0.05 (CR = 1.084;  $p > 0.05$ ). It reveals that the Low- and Average Achievers are alike in the relationship between their emotional intelligence and social intelligence. The hypothesis formulated in this context is, therefore, accepted.

## CONCLUSIONS

1. The high-, average-, and low achieving secondary school students of Kerala differ significantly in their emotional intelligence ( $F = 9.074$ ;  $P < 0.001$ ).
2. While significant differences were found to exist between the Low achievers and Average achievers and between Low achievers and High achievers, the High achievers and Average achievers are almost alike in their emotional intelligence.
3. There is significant difference among the social intelligence of the high-, average-, and low achieving secondary school students of Kerala ( $F = 9.522$ ;  $P < 0.001$ ).
4. Whereas significant difference exists between Low achievers and High achievers, and between Average achievers and High achievers, the Low achievers and Average achievers are found to be almost alike in their social intelligence.
5. There exists a significant, positive correlation between emotional intelligence and social intelligence of secondary school students of Kerala ( $r = 0.272$ ;  $p < 0.01$ ).
6. The high achieving and average achieving secondary school students do no differ significantly regarding the relationship between their emotional intelligence and social intelligence.
7. The high achievers and low achievers in secondary schools are alike in the degree of relationship between their emotional intelligence and social intelligence.

## Social Intelligence and Emotional Intelligence: Correlational Analysis among Secondary School Students in Different Achievement Levels

8. The low achievers and average achievers in secondary schools do not differ significantly in the relationship of their emotional intelligence to social intelligence.

### *Acknowledgments*

The author appreciates all those who participated in the study and helped to facilitate the research process.

**Conflict of Interest:** The author declared no conflict of interest.

### REFERENCES

- Amineh, R. J., & Asl, H. D. (2015). Review of Constructivism and Social Constructivism. *Journal of Social Sciences, Literature and Languages*, 1(1), 9-16.
- Arjunan, N. K. (2014). Psychological basis of education. Palakkad: Yuga Publications.
- Berrocal, P. F., & Ruiz, D. (2008). Emotional intelligence in education. *Electronic Journal of Research in Educational Psychology*, 6(2), 421-436.
- Boyatzis, R. E. (2008). Competencies in the 21st century. *Journal of Management Development*, 27(1), 5-12.
- Honeywill, R. (2015). *The Man Problem: destructive masculinity in Western culture*, Palgrave Macmillan, New York.
- Kihlstrom, J. F., & Cantor, N. (2000). *Social Intelligence*. [Online] Available: [http://ist-socrates.berkeley.edu/~kihlstrm/social\\_intelligence.htm](http://ist-socrates.berkeley.edu/~kihlstrm/social_intelligence.htm).
- Mayer, J. D., Salovey, P., & Caruso, D. R. (2004). Emotional intelligence: Theory, findings, and implications. *Psychological Inquiry*, 60, 197– 215
- Payne, D., & Kyllonen, P. (2012). *The role of noncognitive skills in academic success. Presented at 21st Century knowledge and skills: the new curriculum and the future of assessment*. Los Angeles, California, January 11-13, 2012.

**How to cite this article:** Thomas D P, & Rathina K. V (2017). Social Intelligence and Emotional Intelligence: Correlational Analysis among Secondary School Students in Different Achievement Levels. *International Journal of Indian Psychology*, Vol. 4, (4), DIP:18.01.156/20170404, DOI:10.25215/0404.156