



ORIGINAL RESEARCH PAPER

Education

SOCIAL INTELLIGENCE AND EMOTIONAL INTELLIGENCE: CORRELATIONAL ANALYSIS AMONG SECONDARY SCHOOL STUDENTS IN DIFFERENT LEVELS OF ACHIEVEMENT

KEY WORDS: Social intelligence, Emotional intelligence, Academic achievement.

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ABSTRACT

The study aims to explore the association between emotional intelligence and social intelligence of secondary school students and how the relationship varies as a function of the level of their academic achievement. Standardized psychometric instruments such as Emotional Intelligence Scale for Secondary School Students and Social Intelligence Test for Secondary School Students were administered on a stratified random sample of 628 secondary school students in the age range 13-16, selected from Thrissur district of Kerala state (India) to collect the data. Analysis exposed the presence of significant differences in both emotional intelligence and social intelligence as a function of the level of academic achievement of the learner. Though emotional intelligence and social intelligence are significantly and positively correlated, the degree of association between the variables decreases with increasing levels of academic achievement of the students.

INTRODUCTION

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; Stewart, 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. Emotional intelligence (EI) is the capacity to perceive emotions, assimilate emotion-related feelings, understand the information of those emotions, and manage them (Ogoemeka, 2011; Mayer et al., 2004). EI has arisen in the last three 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) dates 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 educational 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; Coll & Falsafi, 2010; Grabinger et al., 2007). 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 modest attempt to explore the association between emotional intelligence and social intelligence in secondary school learners with different levels of academic achievement.

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.
3. There is no significant relationship between emotional intelligence and social intelligence of secondary school students.
4. Secondary school students in high-, average-, and low levels of academic achievement will not differ among themselves with regard to the degree of relationship between their 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 were collected from a stratified random sample of 628 secondary school students (boys = 289 & girls = 339) in the age range 13-16, studying in grades VIII to X. Data collection was accomplished by administering the Emotional Intelligence Scale for Secondary School Students (EIS) (Arjunan & Thomas, 2014), and the Social Intelligence Test for Secondary School Students (SIT) (Arjunan & Apsara, 2015), under standardised conditions. 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 has 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

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criterion validity of 0.77, and a test-retest reliability of 0.82, after four weeks interval. The classification of the sample into High-, Average-, and Low levels of Academic Achievement was done on the basis of secondary data (the average score of two statewide term-end examinations) procured from the school records. The data were analyses with the help of SPSS for Windows (version 16.0) by keeping the hypotheses in mind.

ANALYSIS AND INTERPRETATION

Table 1 presents the result of the one way ANOVA performed to compare the emotional intelligence of High-, Average-, and Low Achieving secondary school students.

Table 1. Comparison of the emotional intelligence of high-, average-, and low achievers.

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 is significant ($F = 9.074$; $p < 0.001$), revealing that the secondary school students in different levels of academic achievement differ significantly in their emotional intelligence. Table 2 presents the data and result of the *Tukey's post hoc* test performed to find out whether the observed significant differences exist between all the levels of achievement.

Table 2. Tukey's post hoc tests for multiple comparisons of the emotional intelligence of students in different achievement levels

(I) Achievement Level	(J) Achievement Level	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
LOW	Average	-5.699*	1.621	.001	-9.51	-1.89
	High	-7.985*	1.916	.000	-12.49	-3.48
AVERAGE	Low	5.699*	1.621	.001	1.89	9.51
	High	-2.286	1.419	.242	-5.62	1.05
HIGH	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 result further reveals that the low achievers trail behind the average and high achievers in their emotional intelligence. The hypothesis formulated in this context (secondary school students in different levels of achievement do not differ significantly with regard to their emotional intelligence) is, hence, rejected. 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.

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			

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 exists 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) Achievement Level	(J) Achievement Level	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
LOW	Average	-3.734	1.695	.071	-7.72	.25
	High	-8.509*	2.004	.000	-13.22	-3.80
AVERAGE	Low	3.734	1.695	.071	-.25	7.72
	High	-4.775*	1.484	.004	-8.26	-1.29
HIGH	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 shows 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 in their social intelligence. A closer observation of the mean differences estimated for the groups shows that the high achievers excels the average and low achievers in their social intelligence. The hypothesis formulated in this context (secondary school students in different levels of achievement do not differ significantly with regard to their social intelligence) is, therefore, rejected.

The data and results pertained to the computation 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	SEr	rPOP		Sig
				.05 level	.01 level	
Total Sample	628	0.349	.035	0.28 – 0.42	0.26 – 0.44	.01
High Achievers	129	0.126	.087	-0.04 – 0.30	-0.10 – 0.35	NS
Average Achievers	407	0.333	.044	0.25 – 0.42	0.22 – 0.45	.01
Low Achievers	92	0.549	.073	0.41 – 0.69	0.36 – 0.74	.01

The coefficient of correlation (r) between emotional intelligence and social intelligence estimated for the total sample of secondary school students is significant and positive ($r = 0.349$; $p < .01$). While the r -values obtained for average achievers and low achievers are significant, that estimated for high achievers is not significant. The results shows that any increase in the emotional intelligence of the secondary school students is accompanied by a corresponding increase in their social intelligence. The null hypothesis formulated in this context, viz., Hypothesis-3 (there is no significant relationship between emotional intelligence and social intelligence of secondary school students) is, therefore, rejected. Table 6 presents the data and result of the comparison of the coefficients of correlation between emotional intelligence and social intelligence for secondary school students in different levels of academic achievement.

Table 6: Comparison of the correlation between EI and SI in different levels of achievement

No	Groups	Statistical Indices			CR	Sig.
		N	r	z		
1	High Achievers	129	0.126	0.131	2.151	.05
	Average Achievers	407	0.333	0.343		
2	High Achievers	129	0.126	0.131	3.541	.01
	Low Achievers	92	0.549	0.618		
3	Average Achievers	407	0.333	0.343	2.312	.05
	Low Achievers	92	0.549	0.618		

The critical ratio (CR-Value) obtained on comparing the coefficients of correlation between emotional intelligence and social intelligence for High achievers and Average achievers is significant (CR = 2.151; $p < 0.05$). Inspection of the r-values estimated for the groups reveals that the variables are more strongly related in average achievers than in high achievers. The CR-value obtained on comparing the r-values of High achievers and Low achievers are also significant (CR = 3.541; $p < .01$) revealing that the groups are not alike with respect to the degree of association between their emotional intelligence and social intelligence. A close examination of the r-values estimated for the groups show that the relationship between the variables is stronger in Low achievers than in high achievers. The average achievers and low achievers also differ significantly regarding the degree of relationship between their emotional intelligence and social intelligence (CR = 2.312; $p < .01$). Emotional intelligence and social intelligence are more strongly related in Low achievers than in Average achievers. The null hypothesis formulated in this context (secondary school students in high-, average-, and low levels of academic achievement will not differ among themselves with regard to the degree of relationship between their emotional intelligence and social intelligence) is, hence, rejected.

CONCLUSIONS

The high-, average-, and low achieving secondary school students differ significantly in their emotional intelligence. The low achievers trail behind the average and high achievers in their emotional intelligence. There is significant difference in the social intelligence of the high-, average-, and low achieving secondary school students. The high achievers excels the average and low achievers in their social intelligence. There is a significant, positive correlation between emotional intelligence and social intelligence of secondary school students. Any increase in emotional intelligence will be attended by a corresponding increase in the social intelligence of secondary school students, and vice versa. The variables are not significantly correlated in the case of high achievers. The high-, average-, and low achievers differ significantly among themselves with respect to the degree of relationship between their emotional intelligence and social intelligence. The relationship between emotional intelligence and social intelligence is strongest in Low achievers followed by Average achievers, and then by High achievers. Emotional intelligence and social intelligence are important personality factors having decisive role in academic achievement of secondary school students. Though there is significant and positive association between emotional intelligence and social intelligence, the more they become independent better will be academic achievement of the secondary school students.

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