

“A Study on Problem Solving Ability of Pre-University Level Students in Relation to their Emotional Intelligence”

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Abstract

The study was conducted on the pre – university college students and focused on the highest level of learning that is problem solving ability and it’s relation with the emotional intelligence, one of the means for the highest level of learning. the major hypotheses of the study are - There is a significant relationship between problem solving ability and emotional intelligence with respect to their gender, locality, discipline of the study and type of management, There is a significant differences between gender, locality, discipline of the study and type of management of pre-university college students with respect to their problem solving ability and emotional intelligence. For the present study the descriptive survey method was employed, for the purpose 1500students from different pre – university college students of bidar district are selected as samples through simple random stratified sampling method. by using the tools namely, Problem solving ability test - By C.N. Dubey and Emotional intelligence inventory - By S.K. Mangal & Shubra Mangal. The researcher collected the data from the respondents. by using descriptive statistics namely, mean and S D. differential analysis including unpaired t-test, one way ANOVA followed by Tukeys multiple posthoc procedures, correlation analysis- Karl-Pearson’s correlation coefficient. The data was analyzed and interpreted. The major findings of the study are - A positive and significant relationship was observed between problem solving ability and emotional intelligence scores of Pre University college students with respect to their gender, locality, discipline of the study and type of management. Significant difference was observed between gender, locality, discipline of the study and type of management of pre-university college students with respect to their problem solving ability and emotional intelligence.

KEYWORDS : Pre – university college students, problem solving, Emotional Intelligence and Relationship.

I. Introduction :

Of all the creation of god human life is the most sacred. it has two aspects – the biological and sociological. While the biological aspects of human life is maintained and transmitted nutrition and reproduction, the social aspect of human life is maintained and transmitted by education. In the primitive society the primary needs of man comprised food, shelter and clothing. With the progress of the society and civilization, however those primary needs have been multiplied into six viz – food, shelter, clothing, education, recreation and health. Man is primarily distinguishable from the lower animals because of his educating ability. He is endowed with intelligence; he wants to remain active, energetic and even original. He desires to go ahead, this list of human achievement is

very big. How has all these been done? Through education. It is the education which promotes his intelligence, creativity, and emotional intelligence. And even it effects on their problem solving ability too. All these things are reflected in one's achievement.

“Educated men are as much superior to uneducated men as the living are to the dead”.

“Education is a controlling grace to the young, consolation to the old, wealth to the poor and ornament to the rich”.

The words by Aristotle and Diogenes respectively, clarifies the concept of education in very sensitive manner. The reflects that the differentiating factor between living and dead is education. To continuing this education comparatively plays its role in different context that it serves controlling grace to the young which leads young mind on the right path. It acts as consoling aspect for old people who almost completed their journey of life. In the same way it may become the wealth to the poor people when utilize it properly, of course it is an ornament to the rich people who are always humble to enjoy secondary needs. Where education uplifts his position in the society.

The grace, the consolation, the wealth and ornaments are useful only for the living people who can utilize and enjoy these things which is the basic opinion of Aristotle related to the education.

Those who wished to make their wills sincere would first extend their knowledge, the extension of knowledge consists in the investigation of things. When things are investigated, knowledge is extended: when knowledge is extended the will becomes sincere, when the will is sincere, the mind is rectified, when mind is rectified, the personal life is cultivated, when the present life is cultivated: the family will be regulated. When the family is regulated the state will be in order and when the state is in order there will be peace ..”

The investigation of things extension of knowledge, sincerity, rectification of mind, cultivation of life, regulation of family and lastly the peace. This should be the motto of education.

II. Significance of the study :

As we know that education should be man making. In the process of man making a human being has to face a lot of difficulties, obstacles, humps etc. These all together called the problem without overcoming these problems no one can't be called it as the education. Education is the only mean to strengthen the individual with his innate competencies for countering the problem which occurs in the process this competency is called the solving the problem in another words the problem solving ability”.

- Secondary stage is the stage of emotional transformation and maturity. Which can be handled/dealed by the highest level of teaching that is problem solving.
- As an individual attains the age of 17 and 18 which should be platform for the upcoming adult life the secondary education should be able to prepare the individual for that through the highest level of teaching along with emotions competencies divergent thinking good habit formation and all these should reflect in the achievement of an individual.
- Though the secondary education serves as a link between elementary and higher education that link should strengthened to hold both ends of education that in

elementary and higher education the secondary education can strengthened by teaching at the highest level is problem solving.

- With the advancement in socio-economic and technological field the life of an individual is becoming more and more complex which resulting is the problem to overcome this the efforts should be initiated at the secondary level itself so that the probable problems and lead a good life.
- Emotional intelligence as a set of inter related skills such as ability to perceive accurately apprise and express emotions.
 - An emotional competency needs to be learned so as to use it to mange one's own feeling and behavior and deal well with others.
 - Good emotional intelligence really influence one's level of achievement.
 - Emotional intelligence is an ability to perceive, understand, regulate harness emotions adaptively in self and in others
 - Emotional intelligence is both as ability and as a trait.

III. Statement of the problem :

“A study on problem solving ability of Pre-university level students in relation to their emotional intelligence”.

IV. Objectives of the study :

Following are the objectives of the present study:

- I.** To study the relationship between problem solving ability and emotional intelligence of pre-university college students with respect to their gender, locality, discipline of the study and type of management.
- II.** To study the difference between gender, locality, discipline of the study and type of management of pre-university college students with respect to their problem solving ability and emotional intelligence.

V. Hypothesis of the study :

Following are the hypothesis of the present study:

- I.** There is a significant relationship between problem solving ability and emotional intelligence of pre-university college students with respect to their gender, locality, discipline of the study and type of management.
- II.** There is a significant difference between gender, locality, discipline of the study and type of management of pre-university college students with respect to their problem solving ability and emotional intelligence.

VI. Operational terms defined :

Following are the operational terms of the present study and their definitions.

Emotional Intelligence :

One's emotional intelligence as a unitary ability (related to but independent of standard intelligence) helped in knowing feeling and judging. Emotions in close co-operation with one's thinking process to behave as a proper way for the ultimate realize of the happiness and welfare of the self in time with others.

Gender : In the present study gender refers to the sex of a respondent i.e. the PU level students of Bidar dist, i.e. Male (boys) and Female (girls)

Locality : Locality is considered as Rural and Urban areas from where the respondent belongs.

Rural : The geographical area considered as the rural with reference to the Government policy which the area of the level of gram panchayat and below are considered as the rural. In the present study the respondents who were studied their previous level. i.e. up to 10th std. in such areas are considered as the rural respondents.

Urban : The geographical area considered as the rural with reference to the Government policy which the area of the level of gram panchayat and above are considered as the urban. In the present study the respondents who were studied their previous level. i.e. up to 10th std. in such areas are considered as the urban respondents.

Discipline of study : In the present study the discipline of study is considered as the course chosen by the respondent for their PU level, that is the Arts, Science, and Commerce are the course which are considered as the interviewing variables.

Types of management : in the context there are several types of institutions such as Government, Private Aided, and Private Un Aided.

Government : The institutions run by Government itself are called as government institutions.

Private Aided : The institutions run by a private management with the support of grant in aid from the government.

Private un Aided : The institutions run by a private management without the support of the grant in aid from the government.

In the present study the respondents considered as the government, private aided, and private unaided on the basis of in which type of institution they are studying.

VII. Scope of the study :

The present study is focusing on the problem solving ability which is the very necessary aspect of the education without which the education simply become the transforming of the knowledge. The present day's demand is the education should prepare an individual to meet all the environmental needs as well as social needs. So that an individual should have enough dare to handle the situations in another word one should ready to face any situation that is nothing but the problem solving ability.

The present study is mainly focusing on the problem solving ability and its relation with emotional intelligence. The study is conducted on the students of the PU level and it covers the area of Bidar district.

Apart from it the study covers the intervening variables like Gender such as Male and Female, Locality such as Rural and Urban. The discipline of study such as Science, Arts, and Commerce and the type of management where the students are studying like Government, Private Aided, and Private-Un-Aided institutions.

VIII. Review of related literature :

The researcher reviewed the related literature of different researchers, gyongver Molnar., Indira Sharma., Dr. Songul Sonay gucray., M.K Akinsolai., jyotika gupta., Dr. umadevi R., Dr. P usha, rekha., Dr. K subramanya., monika mahajan and Dr,Indu H.

Researches of these scholars focused on the variables namely - problem solving ability, complex problem solving ability, scientific attitude, decision making behavior,

perceived problem solving skills, academic achievement, anxiety, locus of control, emotional intelligence, intelligence, achievement motivation, mental health, spiritual intelligence, and study skills. These studies are conducted on higher secondary school students, secondary school students, in service mathematics teachers, D Ed students, class XI students and high school students. As for as the methodology is concerned – descriptive survey and normative survey methods are adapted. The statistical technique such as mean, S.D, percentage analysis, Pearson's product moment and multiple correlation, B – variate coefficient of correlation, t –test and two way ANOVA were employed.

IX. Design/Methodology of the study :

A descriptive survey research design was employed in the present study in which the researcher collected the data from the respondents by means of some psychological tests and tools to investigate the relationship between problem solving ability and emotional intelligence of Pre University students of Bidar dist.

X. Selection of Sample :

For the present study all the Pre University students who are studying throughout the Bidar dist. Were the population for the study. By using the stratified simple random sampling method the researcher was selected the sample of 1500 students.

Keeping in the mind that these 1500 student samples represents the gender i.e. Male and Female, Locality, i.e. Rural and Urban, various stream of the education i.e. Science, Arts and Commerce and the students studying in various institutions namely Government, Private Aided, and Private Un-Aided.

XI. Tools used :

For the present study the researcher used the following tools:

- ❖ Problem solving ability test - By C.N. Dubey.
- ❖ Emotional intelligence inventory - By S.K. Mangal & Shubra Mangal.

XII. Procedure for data collection :

By administrating the various test. The researcher was collected the data from the selected sample, while administrating the tests the systematic gap is provided to the respondents to respond fairly, through which the perfect data was extracted.

XIII. Variables of the study :

The researcher identified the following variables for the present study.

- ☞ Problem solving ability – dependent variable.
- ☞ Emotional intelligence- Independent variable.
- ☞ Gender – Intervening variable.
- ☞ Locality - Intervening variable.
- ☞ Stream of subjects - Intervening variable.
- ☞ Type of institution - Intervening variable.

XIV. Statistical techniques used :

For the present study the researcher used descriptive statistics,-namely mean and S D. differential analysis including unpaired t-test, one way ANOVA followed by Tukeys

multiple posthoc procedures, correlation analysis- Karl-Pearson’s correlation coefficient, by using SPSS 21.0 statistical software and the results obtained, thereby have been interpreted.

XV. Data analysis interpretation :

After collected the data from the respondents by using the various tools. Researcher went for the data analysis, it was processed and tabulated using Microsoft Excel - 2007 Software. The data collected on problem solving ability, study habits, of Pre University college students. Then the data were analyzed with reference to the objectives and hypotheses by using descriptive statistics, differential analysis including unpaired t-test, one way ANOVA followed by Tukeys multiple posthoc procedures, correlation analysis by using SPSS 21.0 statistical software and the results obtained thereby have been interpreted.

Table: Mean and SD of problem solving ability and emotional intelligence of Pre-University college students with respect to their gender and locality.

Variables	Summary	Male	Female	Total	rural	urban	total
	n	750	750	1500	750	750	1500
Problem solving ability	Mean	8.99	9.35	9.17	8.63	9.70	9.17
	SD	3.13	3.07	3.11	2.94	3.18	3.11
Emotional intelligence	Mean	60.72	61.94	61.33	59.89	62.77	61.33
	SD	10.16	10.44	10.31	9.24	11.11	10.31

Table: Mean and SD of problem solving ability and emotional intelligence of Pre-University college students with respect to their discipline of the study and type of the managements.

variables	Summary	Arts	Comm.	Sci.	Total	Govt	Aided	Un aided	Total
Problem Solving ability	n	500	500	500	1500	504	504	492	1500
	Mean	8.38	9.30	9.82	9.17	8.57	9.27	9.67	9.17
	SD	2.85	2.90	3.38	3.11	3.19	3.07	2.97	3.11
Emotional intelligence	Mean	59.14	61.71	63.14	61.33	59.26	61.88	62.88	61.33
	SD	8.72	10.94	10.75	10.31	10.32	10.20	10.09	10.31

Hypothesis: There is a significant relationship between problem solving ability and emotional intelligence of pre-university college students with respect to their gender, locality, discipline of the study and type of management.

Null Hypothesis: There is no significant relationship between problem solving ability and emotional intelligence of Pre University college students with respected to their gender, locality, discipline of the study and type of the managements.

Table: Results of correlation coefficient between problem solving ability and emotional intelligence of Pre University college students with respected to their gender, locality, discipline of the study and type of the managements.

Variables	Correlation coefficient between problem solving ability of Pre University college students with emotional intelligence			
	r-value	t-value	p-value	signi
male	0.8981	55.8572	0.00001*	S
Female	0.8847	51.9070	0.00001*	S
Rural	0.8743	49.2682	0.00001*	S
Urban	0.9030	57.4729	0.00001*	S
Arts	0.8642	38.3317	0.00001*	S
Commerce	0.8828	41.9331	0.00001*	S
Science	0.9194	52.1632	0.00001*	S
Govt.	0.8732	40.1378	0.00001*	S
Aided	0.9081	48.5755	0.00001*	S
unaided	0.8877	42.6814	0.00001*	S

*p<0.05

Hypothesis: There is a significant differences between gender, locality, discipline of the study and type of management of pre-university college students with respect to their problem solving ability and emotional intelligence.

Null Hypothesis: There is no significant differences between gender, locality, discipline of the study and type of management of pre-university college students with respect to their problem solving ability and emotional intelligence.

Table: Results of t- test between male and female as well as rural and urban students of Pre-University colleges with respect to their problem solving ability and emotional intelligence scores

Variable	Problem Solving Ability					Emotional intelligence				
	n	Mean	SD	t-value	Signi.	n	Mean	SD	t-value	Signi.
Male	750	8.99	3.13	-2.2380	S <0.05	750	60.72	13.75	-2.3017	S <0.05
Female	750	9.35	3.07			750	61.94	13.35		
Rural	750	8.63	2.94	-6.7536	S <0.05	750	59.89	13.71	-5.4649	S <0.05
Urban	750	9.70	3.18			750	62.77	13.04		

Table: Results of ANOVA test between students of Arts, Commerce and Science Pre-University colleges with respect to their problem solving ability scores

Sources of variation	Sum of squares	Degrees of	Mean sum of	F-value	p-value	Signi.
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		freedom	squares			
Between colleges	532.5	2	266.26	28.5867	0.00001	S
Within colleges	13943.2	1497	9.31			
Total	14475.7	1499				

Table: Results of ANOVA test between students of Arts, Commerce and Science Pre-University colleges with respect to emotional intelligence scores

Sources of variation	Sum of squares	Degrees of freedom	Mean sum of squares	F-value	p-value	Signi.
Between colleges	4116.3	2	2058.15	19.8388	0.00001	S
Within colleges	155304.3	1497	103.74			
Total	159420.6	1499				

Table: Pair wise comparison of students of Arts, Commerce and Science Pre-University colleges with respect to problem solving ability and emotional intelligence scores by Tukeys multiple posthoc procedures

Discipline Of the study	Problem Solving Ability			emotional intelligence		
	Arts	Commerce	Science	Arts	Commerce	Science
n	500	500	500	500	500	500
Mean	8.38	9.30		59.14	61.71	63.14
SD	2.85	2.90		8.72	10.94	10.75
Arts	-			-		
Commerce	P=0.00001*	-	-	p=0.0002*	-	
Science	P=0.00001*	P=0.0177*		p=0.00001*	p=0.0674	-

*P<0.05

Table: Results of ANOVA test between students of Government, Aided and Unaided Pre-University colleges with respect to their problem solving ability scores

Sources of variation	Sum of squares	Degrees of freedom	Mean sum of squares	F-value	p-value	Signi.
Between managements	312.3	2	156.17	16.5066	0.00001	S
Within managements	14163.3	1497	9.46			
Total	14475.7	1499				

Table: Results of ANOVA test between students of Government, Aided and Unaided Pre-University colleges with respect to emotional intelligence scores

Sources of variation	Sum of squares	Degrees of freedom	Mean sum of squares	F-value	p-value	Signi.
Between managements	3504.1	2	1752.07	16.8222	0.00001	S
Within managements	155916.5	1497	104.15		<0.05	
Total	159420.6	1499				

Table: Pair wise comparison of students of Government, Aided and Unaided Pre-University colleges with respect to their problem solving ability and study habit scores by Tukeys multiple posthoc procedures

Manage-ments	Problem Solving Ability			emotional intelligence		
	Govt.	Aided	Unaided	Govt.	Aided	Unaided
n	500	500	500	500	500	500
Mean	8.57	9.27	9.67	59.26	61.88	62.88
SD	3.19	3.07	2.97	10.32	10.20	10.09
Government	-			-		
Aided	p=0.0009*	-		p=0.0002*	-	
Unaided	p=0.00001*	p=0.0968	-	p=0.00001*	p=0.2658	-

*P<0.05

XVI. Major findings of the study.

- I. A positive and significant relationship was observed between problem solving ability and emotional intelligence scores of Pre University college students with respect to their gender, locality, discipline of the study and type of management.
- II. Significant difference was observed between gender, locality, discipline of the study and type of management of pre-university college students with respect to their problem solving ability and emotional intelligence.

XVII. Conclusion :

Secondary education serves as a link between the elementary and higher education, and plays a very important role in this respect. A child's future can depend a lot on the type of education she/he receives at the secondary level. Apart from grounding the roots of education of a child, secondary education can be instrumental in shaping and directing the child to a bright future. This stage of education serves to move on higher secondary stage as well as to provide generic competencies that cut across various domains of knowledge as well as skills. Providing secondary education to all with a focus on quality education assumes greater meaning today, when we consider the emerging

challenges in our society. For instance, raising levels of socioeconomic aspirations and also the democratic consciousness. The present study is an attempt to focusing the problem solving ability and its relation with few other selected variables.

XVIII. Suggestions for further study:

- The study can conduct on the different levels of education.
- The study can conduct on the different areas – divisional, state even national.
- The study can be conduct with different variables namely – intelligence, creativity, study habit, socio economic status, academic achievement etc.

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