

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

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### Abstract

The study was focused on the highest level of learning that is problem solving ability and it's relation with the study habit one of the means for the highest learning. the major hypotheses of the study are - There is a significant relationship between problem solving ability and study habit of pre-university college students 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 study habit. For the present study the descriptive survey method was employed, for the purpose 1500 students 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 Study habit inventory - By Researcher. 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 study habit 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 study habit.

**KEYWORDS** : Pre – university college students, problem solving, Study Habit and Relationship.

#### I. Introduction :

Education is a process which begins at birth and continues thought the life. So we can say it is a never ending process of development, beginning from infancy to maturity, from womb to grave.

According to Dumvile: “Education in its widest sense includes all the influences which acts upon an individual during his passage from the cradle to grave”.

So everything which influences human behavior and personality is education. In another words education helps a lot in transforming man into human, social, moral and spiritual being, hence education is a continuous and dynamic process.

As above mentioned the transformation of man into a human there are lot of obstacles to be face those are called as problems the education should clear those

obstacles and make sure the man should transformed to a human being the present study is a try to emphasize the problem solving ability, study habit and their relation in the field of education.

“Education is the creation of a sound mind in a sound body”. The line by a great philosopher **Aristotle**, speaks about education. That it should develop the body i.e. physical capacities and competencies, strength of the human being. Then we move towards the mind of human being i.e. one’s intellectual, emotional, moral, and spiritual developments through which education should able to help an individual to cater himself to face and complete his real life.

“Education as the natural, harmonious and progressive development of man’s innate powers” a quote by another philosopher **Pestalozzi** is clears that the education should cater the individuals innate capacities to make him a perfect human being with progressive development the innate powers are nothing but the one divergent thinking, ability of the analysis and Finding solution competency etc. Problem solving comes at the highest stage in the hierarchy of learning process it depends on learning of rules. In this regard the present study is focusing on the relation between the problem solving ability and study habits of an individual.

### **III. 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”.

- Problem situation occurs when there is an obstacle to reach the goal the obstacle may be physical, social or emotional which may hinder the progress of the individual towards the goal the secondary education stage is appropriate stage to get aware of these obstacles and get prepare to encounter these.
- It is the foremost responsibility of the secondary stage increasingly important to develop scientific attitude in students so that they may solve their problems independently for better adjustment in filtered complex society this can be achieved with the consideration of balanced emotions bulk of competencies diversity in thinking and habit formation with good achievement.
- As students of secondary education about to be attain the maturity it is appropriate to which teach them at the same level that is the highest level of teaching which should give them enough confidence to move forward.
- Secondary education considered as the preparatory stage for higher education in the preoperational process here is need of individual case so that each and every student may get the chance to prepare himself for higher education on the other hand the problem solving is also a individual process so that this may helpful in preparing the students for higher education individually.
- Study habit plays an important role in acquisition of knowledge.
- Study habit is very important characteristic of all human being who are being educated and are educated.
- Study habit enhance confidence while dealing with others.

- Study habit increases the efficiency and saves the time and energy is well.
- Maintaining good Study habit largely depends upon one's approach towards it.

### **III. Statement of the problem :**

**“A study on problem solving ability of Pre-university level students in relation to their study habit”**

### **IV. Objectives of the study :**

Following are the objectives of the present study:

- I.** To study the relationship between problem solving ability and study habit 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 study habit.

### **V. Hypothesis of the study :**

Following are the hypothesis of the present study :

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

### **VI. Operational terms defined :**

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

#### **Study habit :**

Study habits are the actions (such as reading, taking notes or holding study group) we perform regularly and habitually (for instance, every Monday from moon until upon) in order to accomplish the long term task of learning.

Study habits are effective or ineffective depending upon whether or not they are serve you child. Rather than labeling what your child dues as good or bad focus on whether the habit works for them or not study habit's that some the child create better grades, a better relationship with the teacher a sense of competence and confidence.

**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 10<sup>th</sup> 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 10<sup>th</sup> 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 study habit. 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, D'Zurilla, Thomas J.; Sheedy, Collette F., Noor azlan ahmad zanzali., Songul tumkaya, birsal aybek, habibe aldag., effendi zakaria, normah yousuf., Sunday A. Adeyemo ., Dr. Vanita N kale., prof.susai rajendran, A raji,p.sumati, A rosely and J Wilson sahayaraj.,S.sultarmn,Dr.A vasanthi.,Dr.H K nandini,Dr.H S ganesh bhatt..

Researches of these scholars focused on the variables namely - problem solving ability, social problem solving ability, psychological stress, critical thinking disposition and perceived problem solving skills, attitude, students ability level, study habit, academic achievement, socio economic status, learning environment, adjustment and intelligence. These studies are conducted on university students, college students, secondary school students, matriculation college students, Xth standard students, secondary and higher secondary school students, XIth standard students. As for as the

methodology is concerned – prospective design, descriptive survey, and simple survey methods are adapted. The statistical technique such as mean, percentage analysis, co relational technique hierarchical difference analysis, 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 study habit 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.
- ❖ Study habit inventory - By Researcher.

#### **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.
- ☞ Study habit - 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., correlation analysis- Karl-Pearson's correlation coefficient, differential analysis including unpaired t-test, one way ANOVA followed by Tukeys multiple posthoc procedures, 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, correlation analysis differential analysis including unpaired T-test, one way ANOVA followed by Tukeys multiple posthoc procedures, by using SPSS 21.0 statistical software and the results obtained thereby have been interpreted.

**Table:** Mean and SD of problem solving ability and study habit 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
Study habit	Mean	75.86	79.14	77.50	74.80	80.19	77.50
	SD	13.75	13.35	13.64	13.71	13.04	13.64

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

variables	Summary	Arts	Commerce	Science	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
Study habit	Mean	74.46	79.23	78.80	77.50	74.67	77.70	80.19	77.50
	SD	13.35	13.83	13.26	13.64	13.76	13.97	12.60	13.64

**Hypothesis:** There is a significant relationship between problem solving ability and study habit 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 study habits 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 study habits 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 study habit			
	r-value	t-value	p-value	signi
male	0.9098	59.9378	0.00001*	S
Female	0.7971	36.0972	0.00001*	S
Rural	0.9123	60.9088	0.00001*	S
Urban	0.7916	35.4355	0.00001*	S
Arts	0.9345	58.5656	0.00001*	S
Commerce	0.8431	34.9878	0.00001*	S
Science	0.8029	30.0596	0.00001*	S
Govt.	0.8708	39.6763	0.00001*	S
Aided	0.8199	32.0929	0.00001*	S
unaided	0.8641	37.9999	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 study habit.

**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 study habit.

**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 study habit scores

Variable	Problem Solving Ability					Study Habit				
	n	Mean	SD	t-value	Signi.	n	Mean	SD	t-value	Signi.
Male	750	8.99	3.13	-2.2380	S <0.05	750	75.86	13.75	-4.6937	S <0.05
Female	750	9.35	3.07			750	79.14	13.35		
Rural	750	8.63	2.94	-6.7536	S <0.05	750	74.80	13.71	-7.8025	S <0.05
Urban	750	9.70	3.18			750	80.19	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 freedom	Mean sum of squares	F-value	p-value	Signi.
Between colleges	532.5	2	266.26	28.5867	0.00001	S
Within colleges	13943.2	1497	9.31		<0.05	

Total	14475.7	1499				
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**Table:** Results of ANOVA test between students of Arts, Commerce and Science Pre-University colleges with respect to study habit scores

Sources of variation	Sum of squares	Degrees of freedom	Mean sum of squares	F-value	p-value	Signi.
Between colleges	6957.0	2	3478.51	19.1388	0.00001	S
Within colleges	272082.0	1497	181.75		<0.05	
Total	279039.0	1499				

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

Discipline Of the study	Problem Solving Ability			Study Habit		
	Arts	Commerce	Science	Arts	Commerce	Science
n	500	500	500	500	500	500
Mean	8.38	9.30		74.46	79.23	78.80
SD	2.85	2.90		13.35	13.83	13.26
Arts	-			-		
Commerce	P=0.00001*	-	-	p=0.00001*	-	
Science	P=0.00001*	P=0.0177*		p=0.00001*	p=0.8670	-

\*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		<0.05	
Total	14475.7	1499				

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

Sources of variation	Sum of squares	Degrees of freedom	Mean sum of squares	F-value	p-value	Signi.
Between managements	7628.9	2	3814.46	21.0392	0.00001	

Within managements	271410.1	1497	181.30		<0.05	S
Total	279039.0	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			Study Habit		
	Govt.	Aided	Unaided	Govt.	Aided	Unaided
n	500	500	500	500	500	500
Mean	8.57	9.27	9.67	74.67	77.70	80.19
SD	3.19	3.07	2.97	13.76	13.97	12.60
Government	-			-		
Aided	p=0.0009*	-		p=0.0010*	-	
Unaided	p=0.00001*	p=0.0968	-	p=0.00001*	p=0.0098*	-

\*P<0.05

#### **XVI. Major findings of the study.**

- I. A positive and significant relationship was observed between problem solving ability and study habit 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 study habit.

#### **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 conducted with different variables namely – intelligence, creativity, emotional intelligence, socio economic status, academic achievement etc.

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