

# RESEARCH AND REFLECTIONS ON EDUCATION

ISSN 0974-648X

a peer reviewed and refereed quarterly journal

UGC- CARE Approved

Volume : 20 No : 04

Rs. 50

Oct - Dec 2022

Educational Equity &  
Equality of (LBGT)

Augmented Reality and  
Lateral Thinking

Modern Social Reformers  
and Employment of Women

Problem Solving Ability of  
Higher Secondary Students

Value Integrated Constructivist  
Approach in Pedagogy

Attitude towards Human Rights  
and Academic Achievement

Dropout among Scheduled  
Caste Children

Proactive Attitude Scale

Multimedia and  
Tamil Grammar Learning

Learning Styles and  
Achievement Motivation

Interest for Theoretical and  
Practical Education

Gender Disparity in  
Leadership Roles

Mathematics APP  
for Deaf Children



**St. Xavier's College of Education**  
(Autonomous)

[Re-accredited ( 3<sup>rd</sup> cycle) at 'A' Grade by NAAC with CGPA : 3.67]

PALAYAMKOTTAI - 627 002, TAMIL NADU.

Email: rresxce@gmail.com

Web: www.sxcejournal.com

Respected Readers!



As per UN's World Population Prospects, released in July 2022, India is projected to surpass China as the world's most populous country in 2023. (<https://journalsofindia.com/united-nations-wpp>). Today's adolescents and youth (aged 10-24) account for 1.8 billion people, 24% of the global population (<https://www.unfpa.org/data/world-population-dashboard>). Currently, there are 253 million adolescents in the age group 10-19 years in India (<https://journalsofindia.com/youth-in-india-2022-report>). It is extremely felt among the adolescents that their rights are being neglected and they remain unattended. The neglect is visible in terms of the rampant gender-based violence, unemployment, addiction to drugs, increasing quantum of self-immolation and other anti-social incidents; this group of adolescents also indulge in antisocial engagement due to serious mental and physical health deficits. The issues of adolescents, if not looked into, will result in 'human suffering, lost social and economic opportunities and threats to global peace and security' (Bhabha., ed.2014).

The 21st century adolescents have the unique characteristics including desiring to be independent, searching for an identity, building self-esteem, being sensitive to personal criticism, looking for new experiences and being influenced by peers. The above traits of youth emerge from today's socio-political-economic-cultural-techno environment which constantly influence the thought pattern and behavioural changes. The typical behaviour of the adolescents struggles for identity; it swings between search for identity and dreams for future. In the process, as they are impacted by peers and various individuals, they seem to be choosing their heroes or models whom they begin to venerate and trail behind. Meanwhile, their usual personal problems, feelings and experiences occupy a prime slot in their belief system, as if every event that occurs, is unique to them; A lot of inward look happens and slowly they become introverts and selfish. This track distances them from the social reality and begin to follow 'touch me not policy', which means, there is no social outlook, rather the concern for the neighbour and humanity dwindles. Consequently, the human rights violence, connected with gender, labour, justice, politics, social norms etc., rarely pinch them and the adolescents almost become numbed.

Therefore, a section of the elders is of the opinion that today's adolescents have turned a blind eye towards the appalling social realities, though another group appreciates them for being techno-savvy. What do we have to do? A conscious effort is needed to create awareness among the adolescents to the growing stark realities in the name of caste, gender, language, colour and creed and a sense of belonging to the larger society is to be developed through curricular and co-curricular programmes. Needless to say, the teachers are to be trained as critical thinkers of the human rights issues so that they in turn will invigorate and stimulate the enthusiasm among the students for a greater enlightenment of the social evils.

As usual, we have presented a bunch of thirteen papers for your deeper reading and do reflect with them; you are welcome to write your feedback on the quality of our journal.

Thanking you  
Editorial Board.



RESEARCH AND REFLECTIONS  
ON EDUCATION  
(A Quarterly Journal)

Reg.No : TNENG / 2003 / 10220

ISSN : 0974-648X (P)

**CONTENTS**

- Educational Equity and Equality of (LGBT) Transgender in India : Special Reference to National Educational Policy (NEP-2020)  
**Biswajyoti Sarmah, Dr.R.S.S.Nehru, Dr.P.William Benarji** 2
- Effectiveness of Augmented Reality to Enhance Lateral Thinking of High School Students  
**S. Rukmani, Dr. M. Vasimalai Raja** 7
- Role of Modern Social Reformers towards the Employment of Women in India  
**Dr. V. Kalyani, Dr. M. Suryakumar, C. Kaleecharan, Dr. L. Anitha** 10
- A Study on Problem-Solving Ability among Higher Secondary Students  
**V. Lincy Pushpa, Dr. K.A. Sheeba** 14
- Teacher's Willingness for Implementation of Value Integrated Constructivist Approach in Pedagogy-An Empirical Study  
**B. Sai Soujanya Kumari, Dr. P. Lavanya** 17
- A Study of Adolescents' Attitude towards Human Rights in relation to their Academic Achievement  
**Dr. Rajesh Kumar Srivastava** 21
- Why We Need to Study School Processes to Understand Dropout among Scheduled Caste Children?  
**Subhadarsheenayak** 24
- Construction and Validation of Proactive Attitude Scale for Adolescents  
**S. Rajamanickavasagan, Dr. A. Punitha Mary** 28
- Multimedia and Achievement in Tamil Grammar Learning  
**D.Jayasree, Dr.K.Nachimuthu** 32
- A Study on the Learning Styles and Achievement Motivation of B.Ed. Students in Vellore District  
**Dr. S. Santhi, S. Yuvarani** 36
- A Study on Undergraduate Students' Interest in Theoretical and Practical Education with Special Reference to the Rabindranath Tagore University, Hojai. (Assam)  
**Jebun Ara Begum** 39
- Indian Higher Education : Gender Disparity in Leadership Roles  
**Dr. Nidhinalwaya** 43
- Developing an Mathematics App for Deaf Children for Achieving their Learning Outcomes  
**Dr. E. Ramganes, Kalpana.K, Dr. S.Amutha** 46

# A STUDY ON PROBLEM-SOLVING ABILITY AMONG HIGHER SECONDARY STUDENTS

UGC CARE  
APPROVED

## ABSTRACT

*Problem Solving is the process to understand what is happening in the environment, identifying things that ought to be changed, and then figuring out the things that need to be done to create the desired outcome. The main purpose of the study is to find the difference in problem-solving ability among higher secondary students owing to the difference in a few selected variables. A stratified random sampling method was used and the Sample size is 498. The findings are there is no significant difference in the problem-solving ability of students owing to the differences in the medium of instruction. Government school students have low problem-solving ability compared to government-aided and private school students.*

**Keywords:** *Problem-solving ability, higher secondary students.*

## Introduction

Problem solving is the process or act of achieving our desires and goals despite all odds of failure. Everyone should have some skills like good analytical skills to execute, critical thinking, and emotional well-being. Analytical skill is the ability to identify, collect the data and get insights on the knowledge the data provides to find the root cause of the problem and critical thinking is the ability to question, analyze, interpret and make a judgment. Emotional well-being is a state where we have control of all our thoughts irrespective of the odds things that happen around us and the skill to execute is the act of putting in place an action as planned. The first and foremost step is to identify the problem. The next step is to identify the root cause. There should be some actions or series of events that made the problem occur. The root cause identification leads us to the next step of the solution. The goal in this stage is to find all the possible solutions and list them. The pros and cons of all the identified solutions are studied. And the next step is to choose a primary and secondary solution. Once evaluated all the options, choose the best one and can create an action plan to implement the solution that is identified as needed to create an action plan and shall implement the solution, monitor regularly, and finally document the solution. Both the successful, failed solutions and the related observations should be documented for future reference.

## Background of the Study

Problem-solving is a vital human quality. It is the

process to understand what is happening in the environment, identifying things that ought to be changed, and then figuring out the things that need to be done to create the desired outcome. Problem-solving is not only an important skill but also a mandatory requirement of each individual to face the problems of society and by effectively finding solutions for each problem each individual can attain absolute freedom to achieve the Goal in life.

## Significance of the Study

It is evident that now-a-day no one has the patience to wait for the right time nor accept or adapt to the flow of society. Now, students are concentrating only on winning but no one is taught how to handle complications. Hence one could see lots of suicide among students when it comes to either results or when students face problems in society, at home, or in classrooms. Teenage Suicides, social media addiction, and teenage crimes are the finest example that defines how the present generation of students handle the problem.

Students expect a struggle-free existence and weren't taught how to effectively handle hitches or failures in life.

**V. LINCY PUSHPA**

*Ph.D. Research Scholar, Stella Matutina College of Education, Chennai, Tamil Nadu, India*

**Dr. K.A. SHEEBA**

*Research Supervisor, Stella Matutina College of Education, Chennai, TamilNadu, India*

The education system in such a way defines success as purely academic and not in any other way. But practically academic success is only a small part of their life and is not a whole life. Hence the present study is the need of the hour.

### Objectives of the study

The objective of the study is to find the difference in problem-solving ability among students studying in different Mediums and among students studying in government, government-aided, and private schools.

### Hypotheses of the study

1. There is no significant difference in the problem-solving ability of students owing to differences in medium of instruction.
2. There is no significant difference in the problem-solving ability of students owing to differences in the type of school.

### Methodology

In order to get information from the higher secondary school students for this study, the researcher used the survey method (descriptive research). A survey is a highly organized questionnaire that is used to gather data from a large number of respondents that are representative of certain demography. The tool used to study the problem-solving ability of students is Problem Solving Inventory (PSI) which was constructed and standardized by P. Paul Heppner (1988).

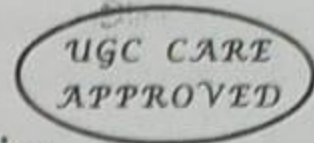
### Analysis of data

Data was collected from 498 students drawn from standard XI of different school types. The variable studied in the present investigation is Problem Solving Ability with reference to some selected variables like Medium of Instruction and Type of School. After the data was collected it was classified according to various categories and sub-categories of the above-mentioned variables and a test and ANOVA were carried out to find the significant difference between the different sub-variables.

### Interpretation of data

**Hypothesis 1 :** There is no significant difference in the problem-solving ability of XI standard students owing to the differences in the medium of instruction.

**Table 1**  
**Difference in problem-solving ability owing to medium of instruction**



Variable	Medium of Instruction	N	Mean	SD	Calculated 't' Value	p-value	Remarks
Problem-Solving Ability	Tamil	249	114.1	15.416	3.767	0.000	S
	English	249	119.20	14.844			

From the table 1, since the p-value is less than 0.05 at 95% of confidence level, the null hypothesis is rejected. Hence it is concluded that there is significant difference in the problem-solving ability of XI standard students owing to the difference in the medium of instruction.

**Hypothesis 2 :** There is no significant difference in the problem-solving ability of XI standard Students owing to the differences in the Type of School.

**Table 2**  
**Mean and SD of problem-solving ability owing to type of school**

Variable	Type of School	N	Mean	SD
Problem Solving Ability	Government	166	109.46	13.28
	Government Aided	166	119.97	15.55
	Private	166	120.51	14.56

Table 2 shows the One-Way ANOVA Showing the difference in the problem-solving ability of XI standard students with respect to the difference in types of school

**Table 3**  
**One-Way ANOVA Showing the difference in problem-solving ability with respect to the difference in types of school**

Variable	Source of Variation	Sum of Squares	df	Mean Square	Calculated 'F' value	p-value
Problem-Solving Ability	Between	12870.173	2	6435.09	30.64	0.000
	Within	103957.63	495	210.015		

Since the p-value is less than 0.01 at 99% confidence level, the null hypothesis is not accepted. Hence it is concluded that there is a significant difference in the problem-solving ability of XI standard students owing to differences in the type of school. Since F is significant for types of school Post Hoc test was used to analyze between the subgroups and the results are presented in table 4.

**Table 4**

**Post Hoc Test showing the difference in the problem-solving ability of XI standard students with respect to the difference in Types of School**

Group	Sub Groups	Mean Difference	Standard Error	p-value
Types of School	Government Vs. Government Aided	10.506	1.587	0.000
	Government Vs. Private	11.042	1.529	0.000
	Government Aided Vs. Private	0.536	1.653	0.944

From the above table 4, it was found that there is a significant difference in the problem-solving ability between Government school students vs. Government Aided school students and Government school students vs. private school students. The computed mean difference indicated that the problem-solving ability of Private school students is high and among them, the problem-solving ability of Government school students is very less.

**Findings of Study**

1. There is significant difference in the problem-solving ability of XI standard students owing to the differences in the medium of instruction.
2. Government school students have the low problem-solving ability when compared with private school and Government Aided School Students.

**Educational Implication**

Problem-solving skill has more implications in many of the actions one performs. And particularly education plays a significant role. Students are facing challenges in weighing

their abilities, and self-doubt and simply assume they cannot do it. The problem-solving skill being properly employed will help the students overcome their fear and pursue higher education and beyond. It is a proven fact that problem-solving ability is lower in Government school students compared to private school students as well as Government aided school students. The poor infrastructure and facilities in the Government school lead to poor problem-solving ability. Hence in government school infrastructure facilities, teaching methods, learning techniques, puzzles solving, and brain activities should be upgraded to increase the problem-solving ability among Government school students.

The government of India has set a target of a 50 percent Gross Enrollment Ratio (GER) in higher education by 2035. GER stood at 27.1 percent during the year 2019-2020. Surprisingly Tamil Nadu has a gross enrollment ratio (GER) of 51.4% in Higher education. Hence by imparting education to students their ability to solve the problem will automatically raise and the awareness about the possibilities of the problem will also increase among students.

**References**

1. Aruna Mohan, G.(2012). *Educational Psychology*. Neelkamal Publications pvt.ltd. Educational publishers.
2. Chaube, S.P. Akhilesh Chaube.(2011). *Handbook of Education and Psychology Volume I*. Neelkamal publications Pvt. ltd. Educational publishers.
3. David Yonggi Cho.(1998). *Solving life's problems*. Ben publishing.
4. Leela Gnanalekshmi S.(2012). *General Psychology*. Saratha pathipagam.
5. Nagarajan, K. Deva Seetharaman. (2015). *Psychology of learners and learning*. Sriram Publishers.
6. *National Education Policy*. (2020). The new policy aims to bring transformational reforms in school and higher education. Retrieved from <https://pib.gov.in/PressReleasePage.aspx?PRID=1642061>
7. *What is problem-solving?* Retrieved from <https://asq.org/quality-resources/problem-solving>