

**Vol. 9**

**No. 2**

**October 2023**

**ISSN: 2454-4531**

**AKCE QUEST**  
**A Journal on Educational Research**  
**Peer – Reviewed Quarterly Journal**

**ARULMIGU KALASALINGAM COLLEGE OF EDUCATION**

**(Accredited by NAAC at B Grade with a CGPA of 2.87 on a four point scale&Affiliated to  
Tamil Nadu Teachers Education University, Chennai)**

**Anand Nagar, Krishnankoil-626126**

**Srivilliputtur Taluk, Virudhunagar District**

**Phone: (04563) 289 312 Fax: (04563) 289 322**

**E-mail: akceducation@rediffmail.com**

**Website: www.akceducation.org**

## **EDITORIAL BOARD**

*Research will help to understand any subject and its principals in much better and easier way which will encounter new questions and search for answers of those questions. Research is not always a concept that practitioners, managers and policy makers respect. It is an academic activity conducted by others to the profession, not with the profession. Research education professionals are always learning finding out things, analyzing information adapting their behavior according to information received, looking to improve and adapting to modern demands. Teachers can adapt it to fit the individual needs of their own pupils. As teachers are accountable, the public must have faith in the profession and attitudes to education vary across may social groups so the performance of teachers can be demonstrated through the publication of research findings. Teachers project their own personality upon learning experiences. Sometimes this is intuitive and these decisions can either be successful or fail. Research methodologies give teachers the tools to analyze and make informed decisions about their practice. Research helps teachers to share with colleagues. Research leads to an expansion of knowledge.*

*AKCE QUEST is a journal concerned with the teacher education. AKCE QUEST aims to enhance theory, research, practice in teacher education through the publication of primary research and review papers.*

*This issue of the journal contains 5 research papers. We thank all the contributors and also invite researchers to send their articles to our journal.*

## **GUIDELINES FOR CONTRIBUTORS**

We invite the authors to contribute their original articles on contemporary issues in Higher education / Teacher Education in General and Educational Research for Publication in the AKCE QUEST. Contributors are requested to provide their complete mailing address along with contact numbers, email id. The manuscripts must be typed in MS-Word, Times New Roman Font size 12 with 1.5 line spacing not exceeding 5 pages and abstract must be submitted about 250 words. Both hard and soft copy (by mail only) along with the declaration certificate can be sent to the following address.

*The Editor &*

*Principal AKCE*

*QUEST,*

*Arulmigu Kalasalingam College of*

*Education, Anand Nagar,*

*Krishnankoil-626126.*

*E-mail: akceeditorveni@gmail.com*

# ARULMIGU KALASALINGAM COLLEGE OF EDUCATION

(Accredited by NAAC at B Grade with a CGPA of 2.87 on a four point scale &

Affiliated to Tamil Nadu Teachers Education University, Chennai)

Anand Nagar, Krishnankoil-626 126

Srivilliputtur Taluk, Virudhunagar District

Date: -----

## Declaration Certificate

I declare that the article/manuscript entitled -----

-

----- has not been

published in any of the journal. This is my original contribution.

Signature of the Researcher

## Subscription Form

Name : .....

Designation : .....

Address : .....

.....

.....

Phone No : .....

E-mail : .....

Magazine

to be sent to : .....

.....

D.D. No. : .....

Dated: .....

Amount : .....

Annual subscription is Rs. 1000/-. Subscribers may kindly make the payment through DEMAND DRAFT only. DDs should be drawn in favour of

**The Principal, Arulmigu Kalasalingam College of Education payable at Krishnankoil.**

## CONTENTS

<b>S. No.</b>	<b>Articles</b>	<b>Author</b>	<b>Page No.</b>
1	RELATIONSHIP BETWEEN SOCIAL MATURITY AND ACHIEVEMENT IN BIOSCIENCE OF XI STANDARD STUDENTS	<i>Dr. A. R. Anandha Krishnaveni M. Amalorpavam</i>	1
2	MENTAL HEALTH AND ADJUSTMENT PROBLEMS OF HIGHER SECONDARY STUDENTS IN VIRUDHUNAGAR DISTRICT	<i>Dr. M. Sugumari R.Nagalakshmi</i>	6
3	ATTITUDE TOWARDS GAME-BASED LEARNING AMONG PERSPECTIVE TEACHER	<i>Dr. M. Nithya Kalyani S. Mehala</i>	11
4	PROBLEMS FACED BY SCIENCE TEACHER IN TEACHING LEARNING PROCESS IN VIRUTHUNAGAR DISTRICT	<i>Mrs. R. Madaselvi S. Saravanan</i>	16
5	ATTITUDE OF B.ED. STUDENTS TOWARDS INFORMATION AND COMMUNICATION TECHNOLOGY IN VIRUDHUNAGAR DISTRICT	<i>Dr. A. R. Anandha Krishnaveni A. Annie Thomas Mary</i>	21



**RELATIONSHIP BETWEEN SOCIAL MATURITY AND ACHIEVEMENT IN BIOSCIENCE  
OF XI STANDARD STUDENTS**

<sup>1</sup>Dr. A.R. Anandha Krishnaveni

<sup>2</sup>M. Amalorpavam

**Abstract**

*The focus of present study was to ascertain the influence of relationship between social maturity and achievement in bioscience of XI standard students. Descriptive survey method was used to conduct the study. The sample comprises of 250 XI standard students acquired from ten higher secondary schools in Srivilliputhur Taluk through simple random sampling technique. The collected data is analyzed statistically in SPSS software. The level of social maturity and achievement in bioscience of XI standard students are moderate in Virudhunagar district. The findings reveal that there is a significant difference between male and female XI standard students in their Social Maturity.*

**Keywords:** Social Maturity, Achievement in Bioscience, Descriptive, Survey Method and SPSS.

**Introduction**

According to Hurlock (1989), "Social maturity is nothing but scholastic achievement or educational attainment, which refers to the gains, got by the pupils as a result of education in educational institutions."

Bio Science is being offered as an elective subject at the XI standard stage of school education. At this stage, the students take up Bio Science, as a discipline, with a purpose of pursuing their future careers in basic Science s or professional courses like medicine, engineering, technology and studying courses in applied areas of Science and technology at tertiary level. There is a need to provide the learners with sufficient conceptual background of Bio Science which would eventually make them competent to meet the challenges of academic and professional courses after the XI standard stage.

Academic Achievement is a complex behavior. It is not yet definitely particular known that determines the level of achievement of school students in a particular subject. But there is enough evidence to the effect that academic achievement is not an unidimensional phenomena but a multidimensional activity. Differences in general ability among students have been observed by all those who are deeply concerned with education. Students vary in their abilities to achieve what the teacher teaches. Hence, the knowledge of these differences helps in planning a learning programme for them. Vidhu Mohan (1972) reviewing psychological factors of academic achievement, has attempted to group them into four heads; viz. (i) Aptitude (ii) Interest (ii) Motivation and (iv) Personality, studies have been undertaken either at trait level or at type level.

**Significance of the Study**

The present education system prepares young to meet the challenges and demands of the competitive world. The students struggle to cope up with the demanding from the teachers, parents and society. The student who is able to assimilate his past experience into productive way is able to perform well in academic.

Social maturity which includes positive attitude towards work, systematic and planned approach to problem solving, logical reasoning out ability to accept one's own fault, and thorough knowledge about one's own capacity, strength and limitation helps a student to progress well in academic. Social maturity is the measure of the knowledge gained by a student during the course of study.

---

<sup>1</sup>Principal, Arulmigu Kalasalingam College of Education, Krishnankoil

<sup>2</sup>M.Ed Scholar, Arulmigu Kalasalingam College of Education, Krishnankoil

The findings of the study could be utilized for bringing changes in secondary school and higher secondary school curriculum in the subject of Bio Science studies. The result will also help NGOs and other organizations working in the area of Bio Science related issues. The findings of the study will have global implications. The Bio Science of students areas perceived by self only. . This has made the investigator choose the present study to analyze the Social maturity of higher secondary students in relation to achievement in biology. So, the investigator felt that there should be the relationship between social maturity and Achievement in Bio Science.

### **Objectives of the Study**

- To find out the level of Social Maturity among XI standard students
- To find out the level of Achievement in Bio Science among XI standard students.

### **Null Hypothesis**

- There is no significant difference in Social Maturity of XI standard students with respect to Gender.
- There is no significant difference in Achievement in Bio Science of XI standard students with respect to Gender.
- There is no significant relationship between Social Maturity and Achievement in Bio Science of XI standard students.

### **Delimitations**

- The study deals with XI standards only.
- The study is confined only to the Watrap Taluk in the Virudhunagar District Tamilnadu.
- The study is confined only to the Social Maturity and Achievement in Bio Science.

### **Methodology**

A descriptive survey method was adopted by the researcher to conduct this study.

### **Population for the Study**

The population of the present study is the XI standard students studying in Government, Government Aided, and Private higher secondary schools in Srivilliputhur Taluk, Virudhunagar district of Tamilnadu.

### **Sample for the Study**

A sample size of the sample drawn is 250 XI standard students from 10 higher secondary schools of Srivilliputtur Taluk of Virudhunagar District

### **Tool**

- Social Maturity scale is prepared and validated by Dr. N.Subramanian (2018).
- The marks secured by the students in the half yearly examination in Bioscience is taken as achievement in Bio science.

### **Statistical Techniques**

Percentage, Mean, standard Deviation, 't' test and correlation.

### **Analysis of data**

#### **Objective: 1**

To find out the level of Social Maturity among XI standard students



**Table 1 Level of Attitude Towards Environmental Education of High School Students**

<i>Low</i>		<i>Moderate</i>		<i>High</i>	
<i>Count</i>	<i>%</i>	<i>Count</i>	<i>%</i>	<i>No.</i>	<i>%</i>
26	10.4	188	75.2	36	14.4

It is inferred from the above table that 15.3% of XI standard students have low, 67.7% of them have moderate and 17.0% of them have high level of Social Maturity.

**Objective: 2**

To find out the level of Achievement in Bio Science among XI standard students.

**Table 2 Level of Attitude Towards Environmental Education of High School Students**

<i>Low</i>		<i>Moderate</i>		<i>High</i>	
<i>Count</i>	<i>%</i>	<i>Count</i>	<i>%</i>	<i>No.</i>	<i>%</i>
26	15.3	183	67.7	36	17.0

It is inferred from the above table that 15.3% of XI standard students have low, 67.7% of them have moderate and 17.0% of them have high level of Achievement in Bio Science.

**Null Hypothesis: 1**

There is no significant difference between male and female XI standard students in their Social Maturity.

**Table 3 Significant Difference between Male and Female XI Standard Students in their Social Maturity**

<b>Gender</b>	<b>Number</b>	<b>Mean</b>	<b>S. D</b>	<b>Calculated 't' Value</b>	<b>Remark At 5% Level</b>
<b>Male</b>	151	35.35	5.69	<b>2.106</b>	<b>S</b>
<b>Female</b>	99	33.76	6.05		

(At 5% level of significance the table value 't' is 1.96)

It is inferred from above table that the calculated 't' value is (2.106) greater than the table value for the (1.96) for the df of 298 at 5% level of significance. Hence the null hypothesis is **rejected**. Therefore, there is a significant difference between male and female XI standard students in their Social Maturity.

**Null Hypothesis: 2**

There is no significant difference between male and female XI standard students in their Achievement in Bio Science.

**Table 4 Significant Difference between Male and Female XI Standard Students in their Achievement in Bio Science**

<b>Gender</b>	<b>Number</b>	<b>Mean</b>	<b>S. D</b>	<b>Calculated 't' Value</b>	<b>Remark At 5% Level</b>
<b>Male</b>	151	64.54	12.18	<b>0.147</b>	<b>NS</b>
<b>Female</b>	99	64.65	6.66		

(At 5% level of significance the table value 't' is 1.96)

It is inferred from above table that the calculated 't' value is (0.147) less than the table value for the (1.96) for the df of 298 at 5% level of significance. Hence the null hypothesis is **accepted**. Therefore, there is no significant difference between male and female XI standard students in their Achievement in Bio Science.

**Null Hypothesis: 3**

There is no significant relationship between Social Maturity and Achievement in Bio Science of XI standard students.

**Table 5 Relationship between Social Maturity and Achievement in Bio Science of XI Standard Students**

Achievement in Bio Science		Social Maturity		$\Sigma XY$	Calculated 'r' value	Remarks
$\Sigma X$	$\Sigma X^2$	$\Sigma Y$	$\Sigma Y^2$			
8646	307973	8682	310114	298865	0.195	NS

*(Table value of 'r' is 0.195, S-Significant)*

It is inferred from above table that the calculated 'r' value (0.163) is less than the table value (0.195) with df (4) at 5% level of significance. Hence the null hypothesis is **accepted**. Thus, the result shows that there is no significant relationship between Achievement in Bio Science and Social Maturity of XI standard students.

**Major Findings****Descriptive Analysis**

Findings based on objectives of the percentage analysis shows that the level of attitude of B.Ed students towards Information and Communication Technology with respect to Gender and locality of college is average.

**Inferential Analysis**

1. There is a significant difference in Social Maturity of XI standard students with respect to Gender.
2. There is no significant difference in Achievement in Bio Science of XI standard students with respect to Gender.
3. There is no significant relationship between Social Maturity and Achievement in Bio Science of XI standard students.

**Interpretation**

The 't' test result showed that there is significant difference between male and female XI standard students in their Social Maturity. The mean value of male students has better than female students. This may be due to the fact that male students may have maintained and grow more meaningful relationships with peer group and also they are easily mingle with others without any hesitation.

**Suggestions of the Study**

The following are the suggestions for further research studies.

1. The present study concentrates only on XI standard students. It would be extended to the students of high school and college level.
2. The investigator has taken the sample from Watrap Taluk, in Virudhunagar district, similar studies can be taken from other district.
3. Comparative study can be done on Achievement in Bio Science in Virudhunagar and Madurai.

**Recommendations of the Study**

1. Group study can be encouraged among the students.
2. Parents meeting should be conducted by the heads of the institutions often.
3. Personality booster programmer can be conducted to the students in schools so that they become aware social maturity and Achievement in Bio Science.

## Conclusion

The objective of the present investigation was to study the Social maturity and Achievement in Bio Science of XI standard students. This study may be found to be useful in the field of education. The recommendations given by the investigator may be very helpful for improving the Social maturity and Achievement in Bio Science of XI standard students. This study will be more powerful when the suggestions given by the investigator are applied for further study and it will be of a great help for those who study further in this field.

## References

1. Anandharaja, S., Balakrishnan, V., & Lawrence, A.J. (2016). Academic achievement of the tenth standard government and private school students in social science curriculum: A comparative study. *International Journal of Multidisciplinary Research and Modern Education*, 2(2), 73-80.
2. Brown, L. B. (2010). The impact of self-efficacy and motivation characteristics on the academic achievement of upward bound participants. (Doctoral Dissertation). Retrieved from <http://aquila.usm.edu/dissertations/390>
3. Christenson, S., & Sheridan, S. (2001). *Schools and families: Creating essential connections for learning*, New York, Guilford.
4. Clinkenbeard, P.R. (2012). Motivation and gifted students: Implications of theory and research, *Psychology in the Schools*, 49 (7), 622-630.
4. Das, A. (2010). *Educating children with disabilities in inclusive classrooms* (Unpublished doctoral dissertation). Tata Institute of Social sciences, Mumbai, India.
5. Elizabeth, H.T. (1989). The relationship between self-efficacy and academic achievement in associate degree nursing programs. [pocketknowledge.tc.columbia.edu / home.php /viewfile/ 15850](http://pocketknowledge.tc.columbia.edu/home.php/viewfile/15850).
6. Fan, X. (2001). Parental involvement and students' academic achievement: A growth modelling analysis. *The Journal of Experimental Education*, 70(1), 27-61. 200
7. Gir, S., Jain, P., & Lodha, R. (2006). Social maturity and locus of control of high achievers and low achievers: A comparative analysis. *Recent Researches in Education and Psychology*, 3, 7-11.
8. Good, C. V (1973). *The Dictionary of Education*, New Delhi: McGraw Hill Goulao, M.F. (2014). The relationship between self-efficacy and academic achievement in adult learners. *Athens Journal of Education*, 1(3), 237-246.



Adolescence is not necessarily, as was believed at one time, a period of constant stress and strain. Some people are helped to experience a gradual, relatively peaceful and successful continuation of development from early childhood to adulthood (Crow & Crow, 1996). Problem in adjustments is common in the adolescents. Due to physical, mental and emotional changes, they feel many type of adjustment problems. Some time they behave like child and some time they behave like adult, adventurous, freedom etc. these types of situations create adjustment problems with the others. They feel problems to make a balance between self and environment. There is high need know to guide and emotional support to them. So, it is necessary to know, what kind of adjustment problems face adolescents in their educational & social environment and how we can help them to make a better balance between the students and their self's. Hence the investigator is intended to do research on '**Mental Health and Adjustment Problems of Higher secondary students in Viruthunagar District**'.

### **Objectives**

- To find out the level of mental health of higher secondary students.
- To find out the level of adjustment problems of higher secondary students .

### **Null Hypotheses**

- There is no significant difference between boys and girls of higher secondary students in their mental health.
- There is no significant difference between boys and girls of higher secondary students in their adjustment problems.
- There is no significant correlation between mental health and adjustment problems of higher secondary students with the variable.

### **Delimitations of the Study**

- The present study also confined to some selected demographic variables such as gender, residence, location of school, nature of school, type of school, medium of instruction and parents monthly income.
- The study is limited to higher secondary students only staying in to Srivilliputtur Taluk only.

### **Population of the Study**

The population of the present study consists of higher secondary students studying in government, government Aided and private high schools in Srivilliputhur Taluk, Virudhunagar district of Tamil Nadu.

### **Sample for the Study**

The sample of this study consists of 300 high school students studying in Srivilliputtur taluk. The distribution of the sample is given as follows.

### **Tools used for Present Study**

- Mental Health Scale is prepared and validated by investigator and guide (2022).
- Adjustment Problems is prepared and validated by investigator and guide (2022).

### **Statistical Techniques used**

The statistical measures have used tin this study: Percentage analysis Mean, SD and 't' test.

### **Analysis of Data**

#### **Objective 1**

To find out the level of mental health of higher secondary students.

**Table 1 Level of Mental Health of Higher Secondary Students**

<i>Low</i>		<i>Moderate</i>		<i>High</i>	
<i>Count</i>	<i>%</i>	<i>Count</i>	<i>%</i>	<i>No.</i>	<i>%</i>
64	21.3	177	59.0	59	19.7

It is inferred from the above table that, 21.3 % of higher secondary students have low, 59.0 % of them have moderate and 19.7 % of them have high level of mental health.

**Objective 2**

To find out the level of adjustment problems of higher secondary students.

**Table 2 Level of Adjustment Problems of Higher Secondary Students**

<i>Low</i>		<i>Moderate</i>		<i>High</i>	
<i>Count</i>	<i>%</i>	<i>Count</i>	<i>%</i>	<i>No.</i>	<i>%</i>
38	12.7	213	71.0	49	16.3

It is inferred from the above table that, 12.7 % of higher secondary students have low, 71.0% of them have moderate and 16.3% of them have high level of adjustment problems.

**Null Hypothesis 1**

There is no significant difference between boys and girls higher secondary students in their mental health.

**Table 3 Difference Between Boys and Girls of Higher Secondary Students in their Mental Health**

<i>Gender</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>Calculated 't' value</i>	<i>Remarks at 5% level</i>
Male	171	161.78752	32.51476	1.706	NS
Female	129	161.85022	30.13808		

(At 5% level of significance, for df 298, the table value of 't' is 1.96)

It is inferred from the above table that calculated 't' value (1.706) is less than the table value (1.96) for df 298 at 5% level of significance. Hence the null hypothesis is accepted. It shows that there is no significant difference between boy and girl higher secondary students in their mental health.

**Null Hypothesis 2**

There is no significant difference between male and female higher secondary students in their adjustment problems.

**Table 4 Difference Between Male and Female of Higher Secondary Students in their Adjustment Problems**

<i>Gender</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>Calculated 't' value</i>	<i>Remarks at 5% level</i>
Male	150	81.07852	10.06338	0.813	NS
Female	150	81.06862	10.92994		

(At 5% level of significance, for df 298, the table value of 't' is 1.96)

It is inferred from the above table that calculated 't' value (0.813) is less than the table value (1.96) for df 298 and at 5% level of significance. Hence the null hypothesis is accepted. It shows that there is no significant difference between male and female higher secondary students in their adjustment problems.

### Null Hypothesis 3

There is no significant relationship between mental health and adjustment problems of higher secondary students.

**Table 5 Significant Relationship Between Mental Health and Adjustment Problems of Higher Secondary Students**

<i>Mental Health</i>		<i>Adjustment Problems</i>		$\Sigma XY$	<i>Calculated 'r' value</i>	<i>Remarks</i>
$\Sigma X$	$\Sigma X^2$	$\Sigma Y$	$\Sigma Y^2$			
32206	112662	3490384	44216406	12094992	0.021	NS

(Table value of 'r' is 0.088, S - Significant)

It is inferred from the above table that the calculated 'r' value (0.021) is less than the table value (0.088) at 0.05 level of significance. Hence the null hypothesis is accepted. This shows that there is no significant relationship between mental health and adjustment problems of higher secondary students.

### Major Findings

#### Descriptive Analysis

- 21.3 % of higher secondary students have low, 59.0 % of them have moderate and 19.7 % of them have high level of mental health.
- 33.3% of the boy students have low, 46.8% of them have moderate and 19.9% of them have high level of mental health.
- 5.4 % of the girl students have low, 75.2% of them have moderate and 19.4% of them have high level of mental health.
- 12.7 % of higher secondary students have low, 71.0% of them have moderate and 16.3% of them have high level of adjustment problems.
- 13.3% of the male higher secondary students have low, 68.7% of them have moderate and 18.0% of them have high level of Adjustment problems.
- 12.0% of the female higher secondary students have low, 73.3% of them have moderate and 14.7% of them have high level of Adjustment problems of higher secondary students.

#### Inferential Analysis

- There is no significant difference between boy and girl higher secondary students in their mental health.
- There is no significant difference between male and female higher secondary students in their Adjustment problems.
- There is no significant relationship between adjustment problems and achievement in History of Higher secondary students.

#### Interpretation

The 't' test result shows that there is significant difference between day-scholar and hosteller higher secondary students in their mental health. While comparing the mean scores of day-scholar students are better than the hosteller students in their mental health. This may be due to the fact that, the day-scholar student's parents create a positive (but realistic) attitude among their children and appreciating their activities in proper manner. Moreover they have opportunity to collaborate and express their reaction in their family members, and the students spend more time with their parents; this may help to develop mental health. So they have high level of mental health.

### **Recommendations of the Study**

- The parents should encourage a positive attitude among toward themselves, while at the same time behaving responsibly towards others.
- The teacher should encourage students to focus on how much they have improved over time instead of focusing on how their peers are doing.
- The teacher may encourage and help the higher secondary students to set reasonable goals and evaluate realistically.
- The school rules and regulates should largely and adequately be focused to the students. Research underscores the importance of school rules and perceived fairness in regard to student's problems. It is evident that schools in which rules are effectively enforced have lower rates of student victimization and student delinquency.
- A harmonious relationship among the staff should be established. Blum, Me Nelly reports that safe, caring, participatory and responsible school climate tend to foster greater attachment to school and provide the foundation for social, emotional of students.

### **Suggestions for Further Research**

- Attempt can be done in parenting skill on imparting values to their children, because the society is moving towards technological world with decline in ethical values essential for life. It is the duty of the parents to develop better citizens to the nation.
- The study was restricted to rural and urban students. It can be extended to tribal and coastal area students.
- A study can be conducted on support of teachers in building mental health.
- A comparative study can be conducted on the maternal and paternal support given to adolescent children on mental health and academic achievement.
- A study can be conducted on other contributing factors of the parents in mental health and academic achievement of the children.

### **References**

1. Athota, V. S., O'Connor, P. J., & Jackson, C. (2009). The role of emotional intelligence and personality in moral reasoning. In R. E. Hicks (ed.), *Personality and individual differences: Current directions*. Bowen Hills, QLD, Australian Academic Press.
2. Basil Gagarin, and selva kumar (2021). A Study on Cognitive Ability And Personality Traits Of Higher Secondary Students In Kanyakumari District. *Psychology and education Journal*. 58(2).
3. Chowdhury, M (2006) Students' Personality Traits and Academic Performance: A Five-Factor Model Perspective. *College Quarterly Summer 2006*.
4. Crow & Crow, (2007) *Educational Psychology*, Surjeet Publications, Delhi.
5. Ernst, J. V. (2013). Social adjustment of at-risk technology education students. *Journal of Technology Education*, 24(2).



---

**ATTITUDE TOWARDS GAME-BASED LEARNING AMONG PERSPECTIVE TEACHER**

---

<sup>1</sup>Dr. M. Nithya Kalyani<sup>2</sup>S. Mehala**Abstract**

The present study is entitled as "Attitude towards Game-Based Learning among Perspective Teacher". The term Game-based learning has been adopted by a number of different learning constituencies. Many terms have been used to define Game-based learning in the past. For example web-based training, computer-based training or web-based learning, and online learning. Our educational system is complex, massive and highly resistant to change. It takes a major and continuing effort to produce a significant change in our educational system. Therefore, the present study has need and importance. In this connection, the purpose of the present study was to find out the Attitude towards Game-Based Learning among Perspective Teacher. The research type was a survey method, which consists of purposive sampling of 300 Perspective Teacher in Virudhunagar district. The interpretation of data was done with statistical techniques in percentage analysis, mean, standard deviation and 't'-test. The majority of the Perspective Teachers have moderate level of Game-Based Learning.

**Keywords:** Attitude, Game-Based Learning, Perspective Teacher and Statistical Techniques.

**Introduction**

Education is a human development effort, which contributes towards the cultural transformation of the citizens. It is powerful instrument of social, economic and cultural development. If education is to achieve this end it must be planned to enable every individual in a society to develop innate potentialities and aptitude to the maximum extent so that country can achieve full economic growth and healthy social order. Suzan Kwegyir (2008) explains that Game-based learning is a way of teaching and learning. It comprises of instructions delivered through electronic media including the Internet, Intranets, extranets, satellite broadcasts, audio/video tapes, interactive television (TV) and CD-ROMs. It facilitates access to knowledge that is relevant and useful. Game-based learning involves the delivery of education to anyone, anytime and anywhere. The development and delivery of Game-based learning materials in recent times by several organizations and institutes is under-pinned by a desire to solve authentic, learning, teaching and performance problems. They can easily get it through Game-based learning. So Game-based learning can play a dominant role in students' achievements. In the complex society everybody has got so by (engaged) with his own task that he has no time for others. The student lives in the scenario of Game-based learning. Students can access any information through internet.

**Need and Significance of the Study**

The Present social scenario, its demands and complexities has brought a remarkable change in the life of modern student. He is no more social now. The Progress in the use of computers and internet has not only modified the behavior of a man but it has also affected the study habits of the students. Science and Technology has changed the Game-based learning. If they find any problem regarding the concepts, preparation of projects, sample of question papers, meaning of difficult terms etc., they need not to wait for contact with teacher. Though they are living under the same roof yet there is no sharing between them. They consider that they are living together and work for each other but somewhere the sense of belongingness is missing. Change in the Game-based learning has also changed the study habits of the students.

---

<sup>1</sup> Assistant Professor in Mathematics, Arulmigu Kalasalingam College of Education, Krishnankoil

<sup>2</sup> M.Ed Scholar, Arulmigu Kalasalingam College of Education, Krishnankoil

On the basis of these results, it is realized that some more efforts must be made in this direction. So there is a need proving in the problem. Nation's future is determined by the perspective teacher and the atmosphere in which they grow up. Game-based learning plays a vital role in polishing and flourishing the personality of perspective teacher. So, Game-based learning is the most crucial period of human life and deeply influenced by all these changes. This study presents an opportunity for additional knowledge in the area of attitude towards game-based learning among perspective teacher.

### Objectives

- To find out the level of attitude towards Game-based learning among perspective teacher.
- To find out the level of attitude towards Game-based learning among perspective teacher with respect to gender.

### Hypotheses

1. There is no significant difference between male and female perspective teacher in their attitude towards Game-based learning.
2. There is no significant difference between rural and urban perspective teacher in their attitude towards Game-based learning.

### Delimitations of the Study

- The study was conducted Virudhunagar district only.
- The present study has been confined with a sample of 300 perspective teacher from 10 education colleges only.

### Population for the Study

The population for the present study is perspective teacher in Virudhunagar district.

### Sample for the Study

The sample size is 300 perspective teacher from 10 education colleges in Virudhunagar district.

### Tools Used for Present Study

Attitude towards Game-based learning. Constructed and validated by the Investigator and Guide (2022).

### Statistical Techniques Used

The statistical measures have used in this study: Percentage analysis Mean, SD and 't' test.

### Data Analysis

#### Descriptive Analysis

##### Objective: 1

To find out the level of attitude towards Game-based learning of perspective teacher.

**Table 1 Level of Attitude Towards Game-Based Learning of Perspective Teacher**

Low		Moderate		High	
Count	%	Count	%	Count	%
147	49.0	86	28.7	67	22.3

It is inferred from the above table that 49.0% of perspective teacher have low, 28.7% of them have moderate and 22.3% of them have high level of perspective teacher.

**Objective: 2**

To find out the level of attitude towards game-based leaning among perspective teacher with reference to gender

**Table 2 Level of Attitude Towards Game-based Leaning Among Perspective Teacher with Reference to Gender**

Gender	Low		Moderate		High	
	Count	%	Count	%	Count	%
Male	61	46.9	42	32.1	28	21.4
Female	86	50.9	44	26.0	39	23.1

It is inferred from the above table that, 46.9% of the male perspective teacher have low, 32.1% of them have moderate and 21.4% of them have high level of attitude towards e-learning. 50.9 % of the female perspective teacher have low, 26.0% of them have moderate and 23.1% of them have high level of attitude towards e- leaning.

**Inferential Analysis****Null Hypothesis: 1**

There is no significant difference between male and female perspective teacher in their attitude towards Game-based learning.

**Table 3 Difference between Male and Female Secondary College Students in their Attitude towards Game-based Learning**

Gender	N	Mean	SD	Calculated 't' value	Remarks at 5% level
Male	131	136.557	14.7706	3.691	S
Female	169	141.580	8.5764		

(At 5% level of significance, for df 298, the table value of 't' is 1.96)

It is inferred from the above table that calculated 't' value (3.691) is greater than the table value (1.96) for df 298 and at 5% level of significance. Hence the null hypothesis is rejected. It shows that there is a significant difference between male and female perspective teacher in their attitude towards Game-based learning.

**Null Hypothesis: 2**

There is no significant difference between rural and urban perspective teacher in their attitude towards Game-based learning

**Table 4 Difference between Rural and Urban Perspective Teacher in their Attitude towards Game-based Learning**

Locality	N	Mean	SD	Calculated 't' value	Remarks at 5% level
Rural	157	141.796	9.7137	3.743	S
Urban	143	136.741	13.5182		

(At 5% level of significance, for df 298, the table value of 't' is 1.96)

It is inferred from the above table that calculated 't' value (3.743) is greater than the table value (1.96) for df 298 and at 5% level of significance. Hence the null hypothesis is rejected. It shows that there is a significant difference between rural and urban perspective teacher in their attitude towards Game-based learning.

## Major Findings

### Descriptive Analysis

- 49.0% among perspective teacher have low, 28.7% of them have moderate and 22.3% of them have high level of perspective teacher.
- 46.9% of the male perspective teacher have low, 32.1% of them have moderate and 21.4% of them have high level of attitude towards e-learning.
- 50.9 % of the female perspective teacher have low, 26.0% of them have moderate and 23.1% of them have high level of attitude towards e- leaning.

### Inferential Analysis

- There is a significant difference between male and female perspective teacher in their attitude towards Game-based learning.
- There is a significant difference between rural and urban perspective teacher in their attitude towards Game-based learning.

### Interpretation

1. The 't' test result point out that there is significant difference between male and female perspective teacher in their attitude towards Game-based learning. Female students (141.50) have more attitude than male students (136.55) in their attitude towards Game-based learning. This is may be due to fact that female students have favorable attitude shows a greater probability that learners will accept the new learning system. Factors such as patience, self-discipline, easiness in using software, good technical skills, abilities regarding time management impact on students attitude towards Game-based learning.
2. The 't' test result reveals that there is significant difference between rural and urban perspective teacher in their attitude towards Game-based learning. Rural students (141.79) have more attitude than urban students (136.74) in their attitude towards Game-based learning.

### Recommendations of the Study

- Curriculum framers can also incorporate some of the inspiring contents of Game-based learning.
- Development of different kinds of software/mobile apps, available open to teachers and students to cater the local needs will be encouraged and facilitated.
- Special efforts should be made by the teachers in order to make the students interested in studies and to enable them to put on well with studies. Individual attention should be given and proper use of e-learning should be made while teaching.

### Suggestions for Further Research

- A similar study can be conducted on students of CBSE board or ICSE board.
- A sample from other state of the country can also be taken to conduct a similar study.
- The present study has been done on perspective teacher and similar studies can be done on elementary college students and college students.

### Conclusion

The researchers can replicate the study to review and validate the findings of the present study. The study can also be conducted in different streams to find out whether these dimensions and factors are stream specific. The dimensions which have not emerged to be significant in the present study need to be looked into again by the researchers amongst various study groups. Longitudinal study can be conducted to explore whether these dimensions and factors are age specific, discipline specific, or universal. The major challenge faced by Game-based learning is that it cannot replace human being. Hence, it is necessary for the online learning designers to realize that the learners are not isolated. The policy makers of higher education like A Game-Based Learning and UGC can promote Game-based

learning as a supporting medium to the main stream education and also to the present methodologies of teaching and learning. It provides learner with the opportunity to enjoy the students.

### References

1. Arora, R. (2016). Academic achievement of adolescents in relation to study habits The International Journal of Indian Psychology, 3(2), 47-54. Retrieved on October 4, 2016 from [oaji.net/articles/2016/1170-1458329796.pdf](http://oaji.net/articles/2016/1170-1458329796.pdf)
2. Arul, A.S. (2014). Relationship between Study Habits and Academic Achievement of Higher
3. Bakare, C. A. M. (1970) game based learning inventory manual. Ibadan, Psycho-Educational Production.
4. Banas, E. & Emory, F. (1998). History and Issues of game based learning. Public Administration Quarterly, 22(3), 365-383.
5. Gururajan, V. & Low, E. K. (2004). Using ICT tools to manage knowledge: A student perspective in determining the quality of education. Retrieved from [http://eprints.usq.edu.au/218/1/QIK\\_2005\\_Conference\\_viji's\\_paper.pdf](http://eprints.usq.edu.au/218/1/QIK_2005_Conference_viji's_paper.pdf)
6. Gustafsson, J. E., & Undheim, J. O. (1996). Individual differences in cognitive functions. In D. C. Berliner & R. C. Calfee (Eds.), Handbook of educational psychology (186-242). New York, NY: Simon & Schuster Macmillan Gutman, L. & Feinstein, L. (2007). Parenting.
7. Yadav, V.S., Ansari, M.R., & Savent, P.A. (2000). A critical analysis of study habits and academic achievement of Collage students. Karnatka. Journal of Agriculture Science, 13(4) 914-918.
8. Yasin, K. & Luberisse, Y. (1997). Meeting the Needs of a New Democracy: Multichannel Learning and Interactive Radio Instruction in Haiti: A Case Study. Washington, DC: USAID. Online at <http://ies.edc.org/pubs/book11.htm>
9. Zhang, D., Zhao, J., Zhou, L., & Nunamaker, J. (2004). Can e-learning replace classroom learning? Communication of the ACM. 47 (5), 75-79



### **Significance of the Study**

Science education places a prominent place in curriculum both at school and university stages of education in India. Science as a subject has two important virtues. That is the study of science imparts training in "Scientific methods" and develops "Scientific attitude" in the learner. Teacher are instructed to memorize a series of facts like density of different substances, atomic mass of different elements etc. It is clear that knowledge is the only one component to remember these. Otherwise they will be forgotten.

The science teaching at elementary level must be both broad and balanced. Science must be taught in qualitative manner rather quantitative one. Completion of course in requisite period is necessary but it must be covered by following qualitative learning. Science is a social practice. The two halves of a coin are science and technology. If science education fails to make the small step from science to its' technological applications, how can it take the much larger step to the implication for the society in which it is embedded? It is assumed that the study of science facilitates critical thinking or logical analysis which may then be applied to other subjects of study. Teacher must be allowed to think critically. They must be instructed to involve themselves in learning science. Some teachers are much more knowledgeable but they are unable to explain scientific concepts before elementary teacher according to their understanding level. So in these ways the study on Problems Faced by Science Teacher in Teaching Learning Process.

### **Objectives of the Study**

- To find out the level of problems in teaching learning process and its dimension of Science teacher with regard to background variables.

### **Null Hypothesis**

- There is no significant difference in teaching learning process and its dimension of problems faced by Science teacher with regard to gender.
- There is no significant difference in teaching learning process and its dimension of problems faced by Science teacher with regard to locality of student.

### **Methodology**

A descriptive survey method was adopted by the researcher to conduct this study.

### **Population for the Study**

The population of the present study is the primary, middle, high and Science teachers in Srivilliputtur taluk.

### **Sample for the Study**

In the present study, random sampling technique is employed. The sample consists of 300 primary, middle, high and Science teachers from 10 schools in Srivilliputtur Taluk.

### **Tool**

Problems faced by Science teacher in Teaching Learning process concept Scale prepared and validated by the investigator and the guide

### **Statistical Techniques**

Percentage, Mean, standard Deviation, t-test, ANOVA and F-test.

### **Analysis of Data**

#### **Null Hypothesis 1**

There is no significant difference in teaching learning process and its dimension of problems faced by Science teacher with regard to gender.

**Table 1 Significant Difference in Teaching Learning Process and its Dimension of Problems Faced by Science Teacher with Respect to Gender**

Dimensions	Gender	N	Mean	SD	't' Value	Remarks
Classroom and laboratory based problems in teaching learning process	Male	107	21.21	1.692	0.406	NS
	Female	193	21.12	1.803		
Curriculum based problems in teaching learning process	Male	107	27.36	1.949	0.53	NS
	Female	193	27.37	1.993		
Teacher's based problems in teaching learning process	Male	107	25.21	1.889	1.989	S
	Female	193	24.82	1.977		
Family based problems in teaching learning process	Male	107	13.88	1.219	0.834	NS
	Female	193	13.76	1.211		
<b>Total</b>	Male	107	87.65	4.218	1.103	NS
	Female	193	87.06	4.578		

It is inferred from the above table that the calculated values (0.406, 0.53, 0.834, 1.103) are lesser than the table value (**1.96**) for df (298) at 5% level of significance. Hence the null hypothesis is accepted. It shows that there is no significant difference in teaching learning process and its dimension of Classroom, Curriculum based problems and family based problems faced by Science teacher. But there is significant difference in teacher's based problems in teaching learning process and its dimension of problems faced by Science teacher with regard to gender.

#### Null Hypothesis 2

There is no significant difference in teaching learning process and its dimension of problems faced by Science teacher with respect to locality of student.

**Table 2 Significant Difference in Teaching Learning Process and Its Dimension of Problems Faced by Science Teacher with Respect to Locality of Student**

Dimensions	Locality of student	N	Mean	SD	't' Value	Remarks
Classroom and laboratory based problems in teaching learning process	Rural	150	21.15	1.662	0.33	NS
	Urban	150	21.15	1.862		
Curriculum based problems in teaching learning process	Rural	150	27.56	1.855	1.731	NS
	Urban	150	27.17	2.074		
Teacher's based problems in teaching learning process	Rural	150	25.07	1.867	0.946	NS
	Urban	150	24.85	2.035		
Family based problems in teaching learning process	Rural	150	13.80	1.210	0.000	NS
	Urban	150	13.80	1.221		
<b>Total</b>	Rural	150	87.58	4.074	1.193	NS
	Urban	150	86.97	4.800		

It is inferred from the above table that the calculated values (0.33, 1.731, 0.946, 0.000, 1.193) are lesser than the table value (**1.96**) for df (298) at 5% level of significance. Hence the null hypothesis is accepted. It shows that there is no significant difference in teaching learning process and its dimension of problems faced by Science teacher with respect to locality of student.

#### Major Findings

- Findings based on the percentage analysis the level of teaching learning process of problems faced by Science teacher is average with respect to the background variables Gender, Locality of student,



Locality of school, Standard, Medium of instruction, Family type, Type of school, Nature of school, Father's Education, Mother's Education, Father's Occupation, Mother's Occupation, Parent's annual income.

- There is no significant difference in teaching learning process and its dimensions of Classroom, Curriculum and family based problems faced by Science teacher. But there is significant difference in teaching learning process and its dimension of teacher's based problems faced by Science teacher with respect to gender.
- There is no significant difference in teaching learning process and its dimension of problems faced by Science teacher with respect to locality of student.

### **Interpretation**

The 't' test reveals that there is a significant difference in difficulties of Science teacher in Learning Science concept with respect to gender. The lack of gender equality in science teacher is not just a problem that affects women. It also impedes country's development. Moreover, when we limit the size of the talent pool by making it harder for women teacher and men teacher choose a career in science.

### **Suggestions of the Study**

The following are the suggestions for further research studies.

- The present study carried out only in higher secondary schools which may be extended to college level.
- The same study could be carried out in other subjects such as chemistry and Mathematics.
- A study to analyze +2 Science text books may be conducted.
- The sample size may be increased.
- This study may be conducted with English medium school teacher as CBSE

### **Recommendations of the Present Study**

- Thank the science teacher for their time and effort
- Mention something specific that you observed that you thought was positive.
- Explain how the positive behavior impacted student learning.
- Give an examples of how the teacher could continue improve in this area.
- Teachers and students should have cordial relationship between them.

### **Conclusion**

In this study Science learning difficulties encountered by Science teacher in learning Science concept has been discussed in four dimensions. The present study concluded that the Science teacher face difficulties in learning Science concepts is average level. On the basis of the findings appropriate suggestions and recommendations were made also the scope for further research in this area was suggested

### **References**

1. Asiya Maqbool, Hafiz Mudasir, Andleep Zehta, (2014). Scientific temper of Govt. and private secondary school students-A comparative study. Reports and Opinions 6(1):18-20.
2. Balasubramanian, P. (2005, September 22). Scientific temper and the argumentative Indian. The Hindu. P.2.
3. Chirag C.Swami (2012) "A Study Of Scientific Attitude Among The Students Of Secondary School", International Research Journal, Vol ( 3) Issue (34)
4. Davis, Ira. C. (1935) "The Measurement of Scientific Attitudes", Journal of Science Education. Vol (19), Pg. 177-192.
5. Joy, M. (2006). Relationship between scientific temper and academic achievement among the pupil of standard X (Unpublished master's thesis), Alagappa University.

6. Kalam, A. P. J. (2002, June 19). Every Indian must develop scientific temper. *The Hindu*, P.3.
7. Maqbool, A., & Sofi, A. (2013). To study the scientific temper and academic achievement of science and social science stream adolescents in educational zone. *Elite Research Journal of Education and Review*, 1 (5), 44 - 47.
8. Nadeem N.A. & Sabahat (2015).Scientific temper, Career preferences and Academic achievement of rural and urban secondary school students, Department of Education, University of Kashmir, (Unpublished).
9. Surendra (2002). *Scientific temper: Egalitarian society and value education*, Mumbai: Bharatiya Vidya Bhavan.
10. U. Narmadha and S. Chamundeswari (2013), "Attitude towards Learning of Science and Academic Achievement in Science among Students at the Secondary Level" *Journal of Sociological Research*, Vol. (4), No. (2).



**ATTITUDE OF B.Ed. STUDENTS TOWARDS INFORMATION AND COMMUNICATION TECHNOLOGY IN  
VIRUDHUNAGAR DISTRICT**

<sup>1</sup>Dr. A. R. Anandha Krishnaveni

<sup>2</sup>A. Annie Thomas Mary

### Abstract

*This investigation was done to see if there is any significant relationship in attitude of B.Ed. students towards information and communication technology in virudhunagar district. The sample comprises of 300 students acquired from ten college of educations in Virudhunagar district through simple random sampling technique. The collected data is analysed statistically in SPSS software. The findings reveal that there is no significant association among B.Ed student in ICT with respect to locality of college.*

**Keywords:** Information and Communication Technology Attitude, Descriptive, Survey Method and SPSS.

### Introduction

Technology is defined as "a science of techniques and methods of doing / getting things done, related to any art, science or to a particular profession". It deals with tools and techniques for carrying out the plans. It implies the application of science to arts. When the science of learning and communication are applied to teaching, a technology is evolved.

According to Kapur (1998), ICT has revolutionized education; teachers can give their assignment in a specified home page for the course on the internet and students can copy from there or can get printed copies of the assignment from their computers. After the teacher has corrected the assignment, the teacher gives the complete solution of the assignment, the marking scheme and mistakes made by students on the internet, so that the students can check not only their marks, but know also the types of mistakes that they usually commit in the problem given in the assignment. In fact, sometimes the teachers allow the students to mark the assignments themselves according to the marking assignment scheme given and usually the difference in the marks given by the teachers and the students to themselves is very little.

The main aim of education is to modify the behavior of the child according to the needs and expectancy of the society behavior is composed of so many attributes. One of these important attribute is attitude.

The quality of teachers is known in virtually all countries to be a key predictor of student learning. Therefore, teacher training is crucial using ICTs, because ICTs are tools that on the one hand can facilitate teacher training and on the other hand help them to take full advantage of the potential of technology to enhance student learning (UNESCO, 2003). Correspondingly, ICTs have introduced a new era in traditional methods of teaching and offering new teaching and learning experiences to both teachers and students. B.Ed institutions are facing with the challenge of preparing a new generation of teachers to effectively use the new learning tools in their teaching practices. For many B.Ed programmes, this daunting task requires the acquisition of new resources, expertise and careful planning.

### Significance of the Study

B.Ed plays a pivotal role in the development of a country, as it is viewed as a powerful means to build knowledge based society. In India, Teacher education imparted by universities is facing challenges in terms of Access, Equity and Quality. ICT has occupied the whole world in every corner of life. But, its effective usage at educational sector only can yield greater benefits.

---

<sup>1</sup> Principal, Arulmigu Kalasalingam College of Education, Krishnankoil

<sup>2</sup> M.Ed Scholar, Arulmigu Kalasalingam College of Education, Krishnankoil

This is in the hands of student teachers. Particularly at B.Ed level, effective teaching can be provided to large mass using ICT. To effectively infuse technology into the curriculum, teachers need to participate in intense curriculum based technology training that move them beyond the attainment of basic computer skills to activities that teach them how to seamlessly infuse ICT into the curriculum. Successful integration did not require teachers to be proficient in a larger variety of technology applications but instead, teachers need to feel comfortable and confident in instructional methods of ICT infusion. Teachers needed proficiency in a few ICT applications but knowledge of instructional methods of integration was a greater indicator of success, suggesting a need for more focus on instructional methods of integrating technology.

The present investigation fulfils the research gap of the study. The present study may reveal the modes of ICT education imparted in colleges of education. The level of attitude of ICT by the B.Ed students shall be found. . So the study focuses on the topic entitled, "*Attitude Of B.Ed. Students Towards Information And Communication Technology In Virudhunagar District*".

### **Objectives of the Study**

- To find out the level of attitude of B.Ed students towards Information and Communication Technology with respect to Gender.
- To find out the level of attitude of B.Ed students towards Information and Communication Technology with respect to locality of college.

### **Null Hypothesis**

- There is no significant difference in attitude of B.Ed students towards Information and Communication Technology with respect to Gender.
- There is no significant difference in attitude of B.Ed students towards Information and Communication Technology with respect to locality of college.

### **Delimitations**

- The sample has been taken from the Virudhunagar District only.
- The present study is limited to B.Ed students.
- The size of the sample is 300 only.

### **Methodology**

A descriptive survey method was adopted by the researcher to conduct this study.

### **Population for the Study**

The population for the present study is the students studying in the College of Education, Virudhunagar District

### **Sample for the Study**

The sample for the present study consists of 300 B.Ed students from 6 colleges of education in Virudhunagar District by simple random sampling method.

### **Tool**

Information and Communication Technology Scale prepared and validated by Dr. N.Chendil Prasath (2018)

### **Statistical Techniques**

Percentage, Mean, standard Deviation, 't' test and correlation.

**Analysis of Data****Objective: 1**

To find out the level of attitude of B.Ed students towards Information and Communication Technology with respect to Gender.

**Table 1 Level of Attitude of B.Ed Students Towards Information and Communication Technology with Respect to Gender**

Gender	LOW		AVERAGE		HIGH	
	N	%	N	%	N	%
Male	14	13.5	74	71.2	16	15.4
Female	39	19.9	125	63.8	32	16.3

It is inferred from the above table that, with regard to male B.Ed students 13.5% of students have low level, 71.2% of students have average level and 15.4% of them have high level of attitude towards ICT.

It is inferred from the above table that, with regard to female B.Ed students 19.9% of students have low level, 63.8% of students have average level and 16.3% of them have high level of attitude towards ICT.

**Objective: 2**

To find out the level of attitude of B.Ed students towards Information and Communication Technology with respect to Locality of College.

**Table 2 Level of Attitude of B.Ed Students Towards Information and Communication Technology with Respect to Locality of College**

Locality of College	Low		Average		High	
	N	%	N	%	N	%
Rural	22	18.2	78	64.5	21	17.4
Urban	31	17.3	121	67.6	27	15.1

It is inferred from the above table that, with regard to rural college B.Ed students 18.2% of students have low level, 64.5% of students have average level and 17.4% of them have high level of attitude towards ICT.

It is inferred from the above table that, with regard to urban college B.Ed students 17.3% of students have low level, 67.6% of students have average level and 15.1% of them have high level of attitude towards ICT.

**Null Hypothesis: 1**

There is no significant difference between male and female B.Ed students in their attitude towards ICT.

**Table 3 Significance Difference in Attitude of B.Ed Students Towards Information and Communication Technology with Respect to Gender**

Gender	Number	Mean	S.D	Calculated 't' Value	Remark at 5% Level
Male	133	125.17	13.44	4.793	S
Female	167	117.61	13.65		

(At 5% level of significance the table value 't' is 1.97)

It is inferred from above table that the calculated 't' value 4.793 is greater than the table value. Therefore there is a significant difference between male and female B.Ed students in attitude towards ICT. Hence the null hypothesis is rejected.

**Null Hypothesis: 2**

There is no significant difference between Rural and Urban college B.Ed students in their attitude towards ICT.

**Table 4 Significance Difference in Attitude of B.Ed Students Towards Information and Communication Technology with Respect to Locality of College**

Locality of College	Number	Mean	S.D	Calculated 't' Value	Remark at 5% Level
RURAL	163	121.00	14.38	0.77	NS
URBAN	137	120.91	13.80		

(At 5% level of significance the table value 't' is 1.97)

It is inferred from above table that the calculated 't' value 0.77 is greater than the table value. Therefore there is no significant difference between rural and urban college students in their attitude towards ICT. Hence the null hypothesis is accepted.

**Major Findings****Descriptive Analysis**

Findings based on objectives of the percentage analysis shows that the level of attitude of B.Ed students towards Information and Communication Technology with respect to Gender and locality of college is average.

**Inferential Analysis**

1. There is a significant difference between male and female B.Ed students in attitude towards ICT.
2. There is no significant difference between rural and urban located college B.Ed students in their attitude towards ICT.

**Interpretation**

On comparing the mean values, the B.Ed male students have more attitudes towards ICT than that of the B.Ed female students of college of education.. Because of the utility of ICT facilities in B.Ed male students, the B.Ed male students studying more favourable attitude towards ICT than that of the B.Ed s female students college of education.

**Suggestions of the Study**

The following are the suggestions for further research studies.

- The university may suggest colleges to impart few courses through online, web-based, mobile, social media in the teacher education programme, so that the trainees will be aware of various resources available in the internet and use the same for teaching-learning effectively. The knowledge level of the trainees will be enhanced if they are exposed various styles of teaching such as blended learning, flipped classroom etc.,
- The teacher educators should be teaching creatively by using appropriate e-resources and kindle the interest of the students to use the wide range of apps and software that are available that make teaching and learning not only interesting but also effective and long lasting.

**Recommendations of the Study**

- The teacher educators should be teaching creatively by using appropriate e-resources and kindle the interest of the students to use the wide range of apps and software that are available that make teaching and learning not only interesting but also effective and long lasting.
- B.Ed students should be encouraged to use ICT tools while they go for internship and they should be capable of using variety of tools and apps as per the need which hones their techno skills during the

pre service programme itself. The class room teaching supplemented by the electronic appliances develop creativity, novelty, originality and individuality of the teacher trainee.

### Conclusion

ICT plays a dominant role in the society and education system. ICT based instruction may lead to effectiveness and efficiency of education in general and B.Ed in particular. In India, the University Grants Commission and the National Council for B.Ed have initiated appropriate measures for the creation of ICT infrastructure facilities. Sensitizing the relevance and importance of ICT in teacher education, an attempt is made to study the information and communication technology in colleges of education. Based on the findings, appropriate recommendations are made and the scope for further investigation in ICT area is suggested.

### References

1. Avdhesh, S.Jha.(1984). *Research Methodology*. New Delhi: APH Publishing.
2. Baljeet Singh Patial (2016) Environmental Awareness Level amongst Secondary School Students in Kangra District Based on Different Variables. *Journal of Environmental Science, Toxicology and Food Technology*, 10(12), 20-25.
3. Cokcaliskan, Halil; Celik, Ozkan (2017) Investigation of Pre-Service Classroom Teachers' Environmental Awareness and Attitudes. *International Electronic Journal of Environmental Education*, 7 (2), 73-83 2017.
4. Dave, R. H. & Rajput, J. S. (1998). *Competency based and commitment oriented teacher education for quality education*. New Delhi: NCERT Sri Aurobindo Marg.
5. He, Xueqin; Hong, Ting; Liu, Lan; Tiefenbacher, John(2011) conducted a comparative study of environmental knowledge, attitudes and behaviors among university students in China. *International Research in Geographical and Environmental Education*, 20(2),91-104
6. Jayagandhi,T Suganthi, M (2019). A study on environmental awareness among student teachers. *Indian Journal of Research*, 8(6), 10-11
7. Kanchan Sinha (2018). Personal values and socio-economic status as predictors of environmental awareness. *Indian Journal of research*,7(9), 32 -33
8. Nagarajan,K.(1994). *Research Methodology in Education*, Chennai: Ram publishers, Saligramam.
9. Okur-Berberoglu, Emel; Ozdilek, Hasan Göksel; Yalcin-Ozdilek, Sükran(2015)The Short Term Effectiveness of an Outdoor Environmental Education on Environmental Awareness and Sensitivity of In-Service Teachers. *International Electronic Journal of Environmental Education*, v5 n1 p1-19 Jan 2015.