Annual Subscription: Rs. 1000/-

ENGLISH ANNUAL

CARMEL GRAPHICS

MOUNT CARMEL COLLEGE OF TEACHER EDUCATION FOR WOMEN, KOTTAYAM

(An Annual Peer Reviewed International Journal of Education)

April 2020 Vol: 8 Issue: 1 ISSN 2320 - 7299

CARMEL GRAPHICS
English Annual
Vol: 8 April, 2020 Issue: 1

Address
Carmel Graphics, Mount Carmel College of Teacher Education for Women, Kottayam -4
Website: www.mountcarmelcollege.com

Email ID:
mountcarmeltrainingcollege@gmail.com
mountcarmel_college@yahoo.com
Phone no: 0481- 2573120, 2575820

EDITORIAL

Carmel Graphics is an annual, peer-reviewed journal of Education that publishes scholarly, research-based articles on all aspects of Education. As an international journal Carmel Graphics aims to disseminate findings and discussions of educational research and to promote interest in the field of Education.

Keeping in mind the Vision and Mission of Mount Carmel College of Teacher Education for Women the journal is committed to the transformation and development of quality integral education by providing a climate for human and academic excellence with openness to research and learning.

Topics included in this issue are interdisciplinary containing experimental and survey studies, discussions of conceptual and methodological issues and of underlying assumptions in educational research. A copy of this very issue will be an invaluable resource for teachers, administrators, curriculum planners, and educational researchers as they are the framers and implementers of tomorrow's curricula.

According to Michael Faraday the secret for his success comprised of three words- work, finish and publish. Let us be fully motivated and strengthen our efforts in this direction and thus contribute significantly towards new global knowledge. I would like to acknowledge my gratitude to the Principal, members of the Editorial Board and the authors for their valuable contributions towards the publication of this journal.

Dr. Liz Kuriakose
Editor-in-Charge

CONTENTS

LIST OF CONTRIBUTERS

1. **Gayathri S.**
   TGT, Seryas Public School, Ponkunnam

2. **Dr. (Fr.) Jogimon George**
   Assistant Professor
   St. John the Baptist College of Education, Nedukunnam

3. **Dr. Biju Thomas**
   Principal in Charge & Associate Professor in Physical Education, Baselius College, Kottayam

4. **Dr. Liz Kuriakose**
   Assistant Professor
   Mount Carmel College of Teacher Education for Women, Kottayam

5. **Dr. Suma Joseph**
   Associate Professor in Physical Education
   Mount Carmel College of Teacher Education for Women, Kottayam

6. **Dr. Mary Sheba Jose**
   Associate Professor in English
   Mount Carmel College of Teacher Education for Women, Kottayam

7. **Dr. Lissy Koshi**
   Assistant Professor
   Mount Carmel College of Teacher Education for Women, Kottayam

8. **Dr. F. Deepa**
   Assistant Professor
   Department of Education and Management
   Tamil University, Thanjavur

9. **Dr. Sindhu S.**
   Assistant Professor, N.S.S. Training College, Changanacherry

10. **Dr. Manju A.**
    Principal (i/c), CPAS College of Teacher Education, Vaikom

11. **Sreeja S. Kaimal**
    Assistant Professor
    C.P.A.S. College of Teacher Education Muvattupuzha

12. **Dr. Sr. Beenamma Mathew**
    Assistant Professor, St. Thomas College of Teacher Education, Pala

13. **Sr. Rosy Leema P.W.**
    UGC Librarian
    Mount Carmel College of Teacher Education for Women, Kottayam

14. **Dr. Jaya. P. J.**
    Assistant Professor in Education
    Mount Carmel College of Teacher Education for Women, Kottayam

15. **K. Anas**
    Research Scholar, Department of Education and Management
    Tamil University, Thanjavur

16. **Sr. Bindhumol T.**
    Assistant Professor
    Mount Carmel College of Teacher Education for Women, Kottayam

17. **Dr. Anjana B. Nair**
    Guest Lecturer in Social Science
    Mount Carmel College of Teacher Education for Women, Kottayam

18. **Dr. Miliya Susan Joseph**
    Assistant Professor
    Mount Carmel College of Teacher Education for Women

19. **Asha Maria Thomas**
    Guest Lecturer in Mathematics
    Mount Carmel College of Teacher Education for Women, Kottayam

20. Jaisa P.J.
Principal, Secondary Delhi Public School, Mustafabad, Gaya, Bihar

21. Minnu Ann Mathew
B.Ed Student (English)
Mount Carmel College of Teacher Education for Women, Kottayam

22. Akhila Ramachandran Nair
B.Ed Student (Physical Science)
Mount Carmel College of Teacher Education for Women, Kottayam

23. Jerrin Aleymma John
B.Ed Student (English)
Mount Carmel College of Teacher Education for Women, Kottayam

24. Manisha M.
B.Ed Student (Physical Science)
Mount Carmel College of Teacher Education for Women, Kottayam

25. Sreeja Raju
B.Ed Student(Social Science)
Mount Carmel College of Teacher Education for Women, Kottayam

26. Krishnendu S.
B.Ed Student (English)
Mount Carmel College of Teacher Education for Women, Kottayam

NUMERICAL APTITUDE AMONG DIFFERENT STREAM OF HIGHER SECONDARY SCHOOL STUDENTS

Gayathri S.
TGT, Seryas Public School, Ponkunnam

Dr. Sr. Beenamma Mathew
Assistant Professor, St. Thomas College of Teacher Education, Pala

ABSTRACT

In the contemporary world people highly need different Mathematical skills. Today career is an important aspect of students. Education should help students to achieve the right occupation according to his potentials. For this each person need a minimum level of Numerical Aptitude. The present study aims to measure the Numerical Aptitude of Higher Secondary students and to find out whether there is any significant difference in Numerical Aptitude with respect to gender, locale, type of school and stream of discipline. The study reveals that there exists significant difference in Numerical Aptitude at all the levels.

KEY WORDS: Mathematics, Numerical ability, Numerical Aptitude

INTRODUCTION

Numeracy is the ability of using Mathematics and numbers in our everyday life. Numeracy sounds similar to literacy; the person's ability to use numbers and basic mathematics in personal and work life has great significance. It is also a tool for critical thinking and logic. Even in his personal life, s/he has to be able to carry out basic arithmetic calculations every day. Every person who is good in Mathematics or not need numerical ability to an extend to be successful in his/her life.

Career is very important aspect of student's life. When student starts choosing stream after 10th class that stream defines their future. Adolescence is the phase of shaping ones personality with high ideals. It is very sensitive age of their lives where they have to take decision for their future. Higher secondary education serves as a foundation for future education and initial direction path for university or higher education. Thus at this stage it is very essential to identify and understand their capabilities to make them aware of that, which options or subjects are suitable for them according to their own efficiency. Therefore to give proper vocational guidance to our students' teachers need to know the numerical aptitude of students also.

NEED AND SIGNIFICANCE

Mathematics is living and flourishing branch of our culture. It is both a discipline in its own right and a service subject used in all facets of life. It is a universal means of communication. In our life every day we use numbers. We need to do basic calculations like addition, subtraction, multiplication and division every day. But we also need to be able to do slightly more complicated calculations or arithmetic regularly. It could be to calculate expenses, determine savings and plan finances. A person who is highly efficient in solving problems is considered to be a better decision maker. Most business decisions involve using numbers and solving problems. The greater is one's ability to use numbers, easier will be his day to day chores at home and routine calculations at work. In fact, it wouldn't be wrong to say that skills with numbers will greatly determine a person's success. It indicates that the education sector should give prior importance to numerical ability and aptitude of students.

Assessing aptitude and interest first will help focus the job seeker, make the comparative skills testing and any subsequent training more likely to produce a trained worker who is more likely to stay on the job. Also, Career Scope can be taken with only a fourth grade reading ability. Aptitude tests typically require a higher reading level. Aptitude tests are used to predict success in a career path or course of study. For instance, a student who has not learned "the basics" in primary and secondary education - for any number of reasons - can still have the "aptitude" to do well in a career and related studies - especially if they are interested - although they might have some catching up to do. We need to cultivate aptitudes such as power of abstractness, precision in the use of words, logical thinking and skills in calculation. Curriculum of mathematics should be framed that it should help to achieve these aims.

According to George Polya, we can think of two kinds of aims for school education, that is, narrow aim and higher aim, that of developing the inner resources of the growing child with regards to school Mathematics. The former aim specifically related to Numerical Aptitude. Numerical Aptitude is the ability to handle basic arithmetic, number sequence and simple Mathematics, measurement of qualities, fractions, percentages and ratio. All these are important for numerical ability. In developing a child's inner resource, the role that Mathematics plays is, mostly about thinking. For achieving this aim, children should develop the numerical aptitude.

OBJECTIVES

1.To find out whether there is any significant difference between the means of scores on Numerical Aptitude of Eleventh standard students of Kottayam District with regard to gender, locale and type of schools.

2.To find out whether there is any significant difference between the means of scores on Numerical Aptitude among Eleventh standard students of different disciplines such as Science, Humanities and Commerce of Kottayam District.

METHODOLOGY

The investigators adopted a descriptive survey method. In the present study, the population consisted of all the Higher Secondary School Students of Kottayam District. Since it was not possible to conduct study on the entire population, the investigators decided to conduct the survey on a group consisted of four hundred students, selected from the population. In order to study the Numerical Aptitude of Eleventh standard students, the investigators prepared the tool titled 'Numerical Aptitude Test'. The reliability and intrinsic validity of the tool are 0.927 and 0.963 respectively.

ANALYSIS AND INTERPRETATION OF DATA

1. Comparison of the means of scores on Numerical Aptitude Test of students of standard Eleven of Kottayam district with respect to gender

The objective of the study was to find the significant difference if any between the means of scores on Numerical Aptitude of male and female Eleventh standard students of Kottayam district. For the analysis of the data, the investigators formulated the null hypothesis $H_{01:}$ There exists no significant difference between the means of scores on Numerical Aptitude of male and female Eleventh standard students of Kottayam district.

In order to analyze the null hypotheses the investigators used two tailed t-test for large independent sample. The value of 't' was set as 2.58 at 0.01 level of significance and also as 1.96 at 0.05 level of significance with degrees of freedom 398 (N= 400) . The result is presented in table1.

Table 1

Results of the Test of Significance of Difference between the Means of Scores on Numerical Aptitude of the male and female Eleventh Standard Students

Variable	Gender	*N*	*M*	*SD*	*df*	*t* value	Sig (2-tailed)
Numerical	Male	142	44.98	18.04	398	3.245	0.001
Aptitude	Female	258	52.22	22.10			

Note: *N*- Number of students, *M*- Mean, *SD*- Standard Deviation, *t*- Student's *t* distribution, *df*- degrees of freedom.

From the Table 1 it is noted that, the obtained‘t’ value 3.245 is greater than the table value 1.96 at 0.05 level of significance with degrees of freedom 398. In view of this, the null hypothesis ‘there exist no significant difference between the means of scores on Numerical Aptitude of male and female Eleventh standard studentsof Kottayam district’ is rejected. That is, Numerical Aptitude scores of male students and female students are significantly different at 0.05 level of significance.

2. Comparison of the means of scores on Numerical Aptitude of students of standard Eleven of Kottayam district with regard to type of schools

The objective of the study was to find out whether there is any significant difference between the means of scores on Numerical Aptitude of Eleventh standard students of Government and Aided schools of Kottayam district**.** For the analysis of the data, the investigators formulated the null hypothesis $H_{02:}$ ‘There exists no significant difference between the means of scores on Numerical Aptitude of students of standard Eleven of Kottayam district with regard to type of schools.

In order to analyze the null hypothesis the investigators used two tailed t-test for large independent sample. The value of ‘t’ was set as 2.58 at 0.01 level of significance with degrees of freedom 398 (N=400). The result is presented in the table 2.

Table 2

Results of the Test of Significance of Difference between the Means of Scores on Numerical Aptitude of the Government and Aided Eleventh Standard Students

Variable	Type of Management	*N*	*M*	*SD*	*df*	*t* value	Sig (2-tailed)
Numerical	Govt.	134	37.96	11.53	398	8.301	0.000
Aptitude	Aided	266	55.54	23.10			

Note: *N*- Number of students, *M*- Mean, *SD*- Standard Deviation, *t*- Student’s *t* distribution, *df*- degrees of freedom.

Table 2 shows that the obtained‘t’ value 8.301 is greater than the table value 2.58 at 0.01 level of significance with degrees of freedom 398. In view of this, the null hypothesis ‘there exist no significant difference between the means of scores on Numerical Aptitude of Government and Aided school students of standard Eleven of Kottayam district’ is rejected. The Numerical Aptitude scores of students from Aided schools are greater than that of students from government schools.

3. Comparison of the means of scores on Numerical Aptitude of students of standard Eleven of Kottayam District with regard to locale

The objective of the study was to find the significant difference if any between the means of scores on Numerical Aptitude of Eleventh standard students of Kottayam district with regard to Urban and Rural area. For the analysis of data, the investigators formulated the null hypothesis H_{03}: 'There exist no significant difference between the means of scores of Numerical Aptitude of students of standard Eleven of Kottayam district with regard to Urban and Rural area'.

In order to analyze the null hypothesis, the investigators used two tailed t-test for large independent sample. The value of't' was set as 2.58 at 0.01 level of significance with degrees of freedom 398 (N=400). The result is presented in the table 3.

Table 3

Results of the Test of Significance of Difference between the Means of Scores on Numerical Aptitude of the Urban and Rural Eleventh standard Students

Variable	Locale	*N*	*M*	*SD*	*df*	*t value*	Sig(2-tailed)
Numerical	Urban	172	56.51	22.53	398	5.727	0.000
Aptitude	Rural	228	44.47	19.42			

Note: *N*- Number of students, *M*- Mean, *SD*- Standard Deviation, *t*- Student's *t* distribution, df- degrees of freedom.

From Table 3 it is noted that, the obtained 't' value 5.727 is greater than the table value 2.58 at 0.01 level of significance with degrees of freedom 398. In the view of this, the null hypothesis 'there exists no significant difference between the means of scores on Numerical Aptitude of students of standard Eleven of Kottayam district with regard to Urban and Rural area' is rejected. The Numerical Aptitude scores of Urban School Students are greater than that of students from Rural area.

4. Comparison of the means of the scores on Numerical Aptitude of students of standard Eleven of Kottayam district with regard to different disciplines such as Science, Humanities and Commerce

The objective of the study was to find the significant difference if any between the means of the scores on Numerical Aptitude of students of standard Eleven of Kottayam district with regard to different disciplines such as Science, Humanities and Commerce. For the analysis of data the investigators formulated the null hypothesis H_{04}: There

exist no significant difference between the means of scores on Numerical Aptitude of students of standard Eleven of Kottayam district with regard to different disciplines such as Science, Humanities and Commerce'.

In order to analyze the null hypothesis the investigator used the analysis of variance ANOVA. The 'F' value for ANOVA test was set to 3.02 for 0.05 level of significance and 4.66 for 0.01 level of significance with degrees of freedom of, between group as 2 and that of, within group as 397. The result of the descriptive analysis and ANOVA are given in table 4 and table 5 respectively.

Table 4

Results of the Descriptive Analysis of the Scores on Numerical Aptitude of Eleventh standard students' scores with respect to different disciplines of study

Variable	Discipline	*N*	*M*	*SD*
	Science	147	70.362	18.868
Numerical	Humanities	122	31.830	8.582
Aptitude	Commerce	131	43.002	11.802
	Total	400	49.650	21.625

Note: N- Number of students, M- Mean, SD- Standard Deviation

Table 4 shows that the means of scores on Numerical Aptitude of students in Science discipline is 70.362, the means of scores of students in Humanities discipline is 31.830 and that of Commerce discipline is 43.002. The table also reveals that the students in Science discipline have more Numerical Aptitude than that of others.

ANOVA was used to find the 'F' value to determine whether there is significant difference in the means of scores on Numerical Aptitude among the students with respect to different disciplines.The results are given in table 5.

Table 5

Summary Table of ANOVA on Numerical Aptitude among the students with respect to different disciplines.

Source of variance	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	107593.518	2	53796.759	270.339	.000
Within Groups	79001.926	397	198.997		
Total	186595.444	399			

Note: *df*- Degrees of Freedom, *F*- f- value

From the Table 5 it is clear that, the 'F' value 270.339 is greater than the table value 4.66 at 0.01 level of significance with, between group degrees of freedom as 2 and within group degrees of freedom as 397. So the obtained 'F' value is significant at 0.01. In the light of this, the null hypothesis 'There exists no significant difference in the means of scores on Numerical Aptitude among the students, with respect to different disciplines' is rejected. Since, we have rejected the null hypothesis; multiple comparisons of different pairs of discipline was done. The investigators used Least significant Difference (LSD) method for pair wise comparison. Table 6 gives the multiple comparisons of different disciplines.

Table 6

The mean difference, standard error and significance of multiple comparison of the numerical aptitude of students based on different disciplines

Discipline (I)	Discipline (J)	Mean difference (I-J)	SEM	Sig.
Science	Humanities	38.532	1.727	0.000
Humanities	Commerce	11.171	1.774	0.000
Commerce	Science	27.360	1.694	0.000

The result in table 6 reveals that there is a significant difference in the Numerical Aptitude among the students with regard to different disciplines. It also showed that the students of Science discipline have higher Numerical Aptitude than that of Humanities and Commerce disciplines. The students of Commerce discipline have better Numerical Aptitude than that of Humanities.

MAJOR FINDINGS

1. The Numerical Aptitude scores of Eleventh standard students of Kottayam district shows significant difference with respect to Gender, Locale and Type of management of school.
2. The Numerical Aptitude scores of Eleventh standard students differ with different disciplines such as Science, Humanities and Commerce.

CONCLUSION

Through this study it is revealed that the Higher Secondary Students did not have a satisfactory numerical aptitude. The students in Science stream have comparatively good numerical aptitude. The Humanities students need to improve their numerical ability and aptitude. Since this period is very crucial in the career life of students, teachers must take meaningful actions along with classroom instruction to help the students to have sufficient numerical ability to be competent in the present world.

REFERENCES

- Aggarwal, J.C. (1996). *Education research an introduction.* New Delhi: P.K. Printers.
- Aggarwal, J.C. (2007). *Essentials of Educational Psychology (2nd).* New Delhi: Vikas Publication Pvt. Ltd.
- Best, J.W. & Khan, J.V. (2005). *Research in Education (9thed.).* New Delhi: Pearson Prentice Pvt. Ltd.
- Gandhi Haneet & Varma, M. (2004). Elucidating Mathematical Problem Solving through Metacognition. *Journal of Indian Education,* 30 (3*)*, 71-77.
- James Anice & Marice, P.V. (2005). Select variables as determinants of problem solving ability. *Edutracks, 4 (11),* 29-34.
- Kichi, K.S. (1994). Problem Solving in Mathematics. *Journal of Indian Education, 10* (1), 19-23.
- Manickavasagan, T. (2018). A Study on Achievement in Chemistry and Scientific Aptitude of Higher Secndary Students. *Research Directions, 69(6),* 104-113.
- Pachaury, A.C. (2006). Arithmetic Reasoning Ability of Eleven year old convent students. *Journal of Indian Education, 32(1),* 90-95.
- Ravindra, G., Basavayya, D., & Basti, B.C. (2004).Gender Differences and Mathematical Abilities. *Journal of Indian Education,* 29(2), 113-128.
- Hwang, Wu-Yuin., Chen, Nian – Shing ; Dung, Jian – Jie ; & Yi- Lun. (2007). Multiple Representation Skills and Creativity Effects on Mathematical Problem Solving Using a Multimedia Whiteboard System. *Educational Technology & Society,10(2),* 191-212. (ERIC Document Reproduction Service No. EJ 814045).

A STUDY ON METACOGNITIVE AWARENESS AMONG SECONDARY SCHOOL STUDENTS

Dr. (Fr.) Jogimon George
Assistant Professor
St. John the Baptist College of Education, Nedukunnam

Sonia Jose
S.H. Convent, Peravoor, Kannur

ABSTRACT

The term metacognition literally means cognition about cognition or thinking about thinking. The present study is to find out the metacognitive awareness among Secondary School Students. For this 400 students were selected through simple random sampling procedure giving due representation to gender, locale and type of school. The investigator used metacognitive Awareness Inventory as tool for the study. The result showed that most of the secondary school students have average level of metacognitive awareness. It also found out that gender, locale and type of school are significant factors on the level of metacognitive awareness among secondary school students.

KEY WORD: Metacognitive Awareness

INTRODUCTION

Education is a process of human enlightenment and empowerment aiming at achieving a better and higher quality of life. Education nurtures cognitive abilities, skills and attitudes to make life worth living. In modern classroom students come with various level of Metacognitive skill. Metacognition is generally defined as the activity of monitoring and controlling one's cognition. It can further be defined as what we know about our cognition processes and how we use these processes in order to learn and remember.

The term Metacognition was introduced by John Flavell of Stanford University in 1976 to refer to the individual's own awareness and consideration of cognitive processes and strategies. It includes knowledge about when and how to use particular strategies for learning or for problem solving. It refers to self-monitoring, self-representation and self-regulation process. These are regarded as integral component of human mind. It also involves study skills, memory capabilities and the ability to monitor learning. The term metacognition literally means cognition about cognition or thinking about thinking. Metacognition is important not only in school, but throughout life.

Metacognitive strategies are essential for the twenty-first century because they enable students to cope successfully with new situations. The study assumes greater significance in this context. Schooling is to prepare the children to be a lifelong learner and it is important to help students to become aware of themselves as learners and to take control of their own activities. The vast majority of students spontaneously pick up metacognitive knowledge and skills to a certain extent from their parents, their peers and especially from their teachers. However students show a considerable variation in their metacognitive ability. Learners often show an increase in self-confidence when they build metacognitive skills.

OBJECTIVES

1. To find out the level of Metacognitive Awareness among Secondary School Students.
2. To find out the level of Metacognitive Awareness with respect to Gender, Locale and Type of School among Secondary School Students.

HYPOTHESIS

1. There exists no significant association between Metacognitive Awareness with respect to Gender, Locale and Type of School among Secondary School Students.

METHODOLOGY

The method selected for the study is normative survey method, since it is the most appropriate method for collecting data regarding present conditions. Secondary School Students in Kannur district were the population of the present study. With the help of simple random sampling technique the investigator selected 400 Secondary School Students as the sample for the study. The investigator used Metacognitive Awareness Inventory as tool for the study.

ANALYSIS AND INTERPRETATION OF DATA

1. To assess the level of Metacognitive Awareness among Secondary School Students in Kannur district

The total sample is classified into three groups high, Average and low. For the conventional procedure of 'ó' distance from mean M is used. The mean and standard deviation of the total scores of Metacognitive Awareness is 27.82 & 3.18 respectively. Students with high Metacognitive Awareness obtained scores greater than M+ ó (31.00) and those with low Metacognitive Awareness obtained scores less than M-ó (24.63) and average Metacognitive Awareness obtained score in between M+ó to M-ó (in between 31.00 to 24.63). The level of Metacognitive Awareness among Secondary School Students is given in table 1.

Table 1

Level of Metacognitive Awareness among Secondary School Students

Level	High	Average	Low
Norm	M+ó	M+ó to M-ó	M-ó
Scores	31.00	31.00 to 24.63	24.63
No. of students	52	311	37
Percentage	13%	77.75%	9.25%

Above table shows that 13% Secondary School Students have high level of Metacognitive Awareness, 77.75% Secondary School Students have average level of Metacognitive Awareness and 9.25% Secondary School Students low level of Metacognitive Awareness. Therefore, it can be tentatively concluded that the most of the Secondary School Students have average level of Metacognitive Awareness.

2. To find out the level of Metacognitive Awareness among Secondary School Students with respect to Gender, Locale and Type of School

The investigator calculated the level of Metacognitive Awareness with respect to Gender for finding out whether there is any association between two levels. For testing this investigator used $\div^2$ test. The results are given in the below table 2.

Table 2

Results of the level of Metacognitive Awareness among Secondary School Students with respect to Gender

Gender		Level of Metacognitive Awareness			Total	$\div^2$	p Value
		Low	Average	High			
Male	Count	29	159	8	196		
	%	14.8%	81.1%	4.1%	100.0%		
						37.81	0.000
Female	Count	8	151	45	204		
	%	3.9%	74.0%	22.1%	100.0%		
Total	Count	37	310	53	400		
	%	9.3%	77.5%	13.3%	100.0%		

Above table shows the association between Gender and level of Metacognitive Awareness among Secondary School Students. It is clear that 22.1% of Female students and 4.1% of Male students have high Metacognitive Awareness. 14.8% of Male students and 3.9% of Female students have low level of Metacognitive Awareness. Moreover the obtained value of $\div^2$ is significant ($\div^2$=37.81; $p < 0.05$) at 0.05 level. Thus there exist a significant association between level of Gender and Metacognitive Awareness. So it can be concluded that the Gender is a significant factor on the level of Metacognitive Awareness.

The investigator then calculated the level of Metacognitive Awareness with respect to Locale to find out whether there is any association between two levels. So, for testing this investigator used $\div^2$ test. The results are given in the below table 3.

Table 3

Results of the level of Metacognitive Awareness with respect to Locale among Secondary School Students

Locale		Level of Metacognitive Awareness			Total	$\div^2$	p Value
		Low	Average	High			
Rural	Count	27	150	23	200		
	%	13.5%	75.0%	11.5%	100.0%		
Urban	Count	10	160	30	200	9.06	0.011
	%	5.0%	80.0%	15.0%	100.0%		
Total	Count	37	310	53	400		
	%	9.3%	77.5%	13.3%	100.0%		

Above table shows the association between Locale and level of Metacognitive Awareness among Secondary School Students. It is clear that 15.0% of Urban area students and 11.5% of Rural Secondary School Students have high Metacognitive Awareness. 13.5% of rural area students and 5.0% of Urban area students have low level of Metacognitive Awareness. Moreover the obtained value of $\div^2$ is significant ($\div^2$ = 9.06; $p< 0.05$) at 0.05 level. Hence there exists a significant association between Locale and level of Metacognitive Awareness. Thus it can be concluded that the Locale is a significant factor on the level of Metacognitive Awareness.

The investigator finally calculated the level of Metacognitive Awareness with respect to Type of School for finding out whether there is any association between two levels. So for testing this investigator used $\div^2$ test. The results are given in the table 4.

\Table 4

Results of the level of Metacognitive Awareness with respect to Type of School among Secondary School Students

Type of School		Level of Metacognitive Awareness			Total	$\div^2$	p Value
		Low	Average	High			
Government	Count	19	75	6	100		
	%	19.0%	75.0%	6.0%	100.0%		
Aided	Count	12	160	28	200		
	%	6.0%	80.0%	14.0%	100.0%		
Unaided	Count	6	75	19	100	20.57	.000
	%	6.0%	75.0%	19.0%	100.0%		
Total	Count	37	310	53	400		
	%	9.3%	77.5%	13.3%	100.0%		

Above table shows the association between Type of School and level of Metacognitive Awareness among Secondary School Students. It is clear that Unaided school students (19.0%) have high level of Metacognitive Awareness than Aided (14.0%) and Government (6.0%) school students. Government school students (19.0%) have low level of Metacognitive Awareness than Aided (6.0%) and Unaided (6.0%) school students. Moreover the obtained value of $\div^2$ is significant ($\div^2$ =20.57, p<0.05) at 0.05 level. Therefore there exists a significant association between level of Type of School and Metacognitive Awareness. Thus it can be concluded that the Type of School is a significant factor on the level of Metacognitive Awareness.

CONCLUSION

Metacognitive Awareness is crucial for efficient independent learning among Secondary School Students, because it fosters forethought and self-reflection. Good metacognitive thinkers are also good intentional learners. They are able to direct their learning in the proper ways to build understanding. They know when to use strategies and how to use them. The results of study emphasize that most successful students are those with strong metacognitive skills who manage, monitor and evaluate their performance, and have confidence in their abilities to perform successfully. The teachers should guide the students by means of using appropriate instructional teaching strategies and techniques in the classroom.

REFERENCES

- Baker, L. (1989). Metacognition, comprehension monitoring, and the adult reader. *Educational Psychology Review, Vol.1*, No.1, PP3-38.
- Chowdhury, S. R. (2019). Relationship between Metacognitive Awareness and Study Habits of higher secondary School Students. *Edutracks, 18 (6),* 40-44.
- Flavell, J.H. (1976). Metacognitive aspects of problem solving. *In L.B. Resnick (ed). The nature of intelligence,* Hillsdale, NJ: Lawrance Erlbaum Associates.(pp.231-236)
- McKinnon, E.G., & Walier, T. G. (1985). *Metacogmtion Cognition and Human Performance*. pp 181-221. New York: Academic Press.
- Rajkumar, S. (2010). The analyzing the role of metacognitive skills involved in the process of the problem solving in physics among higher secondary students. *Journal of educational research and extension, 08 (1*), 13-16.
- Welton, A. D., & Mallan, J.T. (1999). *Children and their World. Strategies for Teaching,* H. Mifflin Company, USA.

THE ECONOMICAL IMPACT OF INDIAN PREMIER LEAGUE

Dr. Biju Thomas
Principal in Charge & Associate Professor in Physical Education
Baselius College, Kottayam

Ms. Githu K. Giji
Guest Lecturer, Department of Economics
Baselius College, Kottayam

Dr. Suma Joseph
Associate Professor in Physical Education
Mount Carmel College of Teacher Education for Women, Kottayam

ABSTRACT

This paper aims to analyse the economical impact of Indian Premier League. The study is based on secondary data. Indian Premier League (IPL) was started by Board of Control for Cricket in India (BCCI) in 2008 with the intention of curtailing the private Cricket League ICL (Indian Cricket League), which was getting highly famous around the World. But the Indian Cricket League was not recognized by International Cricket Council and the players participating in it were banned. In order to improve the standards of domestic Cricket and provide fair chances to domestic players, BCCI decided to start a professional Cricket League and thus came into being, one of the most popular Leagues of the Sports World, i.e., Indian Premier League (IPL). It was under the best guidance of Lalit Modi, that IPL got off to such a good start in 2008 with much fanfare.

KEY WORDS: Indian Premier League, Twenty 20, franchisees

INTRODUCTION

Cricket, more than a game is like a religion in India which has a huge fan following. According to the market research conducted by the International Cricket Council (ICC), cricket has over a billion fans globally with the Indian sub-continent alone constituting more than 90 percent of them. Even on the streets and narrow footpaths of India, one can expect to see children playing street cricket, while the elders watch or listen to cricket updates. With such a large and passionate viewer base, the Board of Control for Cricket in India (BCCI) decided to capitalize on the situation by introducing a domestic cricket league. This led to the birth of Indian Premier League (IPL) in 2008. Within few years after its inception, it became the most lucrative annual sporting event of BCCI.

Indian Premier League (IPL) was started by Board of Control for Cricket in India (BCCI) in 2008 with the intention of curtailing the private Cricket League ICL (Indian Cricket League), which was getting highly famous around the World. But the Indian Cricket League was not recognized by International Cricket Council and the players participating in it were banned. In order to improve the standards of domestic Cricket and provide fair chances to domestic players, BCCI decided to start a professional Cricket League and thus came into being, one of the most popular Leagues of the Sports World, i.e., Indian Premier League (IPL). It was under the best guidance of Lalit Modi, that IPL got off to such a good start in 2008 with much fanfare.

Huge investments, consistent ratings, unparallel consumer satisfaction, massive brand imagery and never-seen-before returns, these are just a few traits of the Indian Premier League that drew its comparisons with the NBA in the United States and the Premier League in the United Kingdom. Already a rich sport in India, cricket is about to get richer this year with Star India set to reimagine IPL 2018 by engaging more fans across the country. The league will be broadcast live in six different languages targeting an unprecedented reach of 700 million fans across TV and Digital. One of the richest sports events across the globe, IPL has gone through its fair share of ups and downs. It has witnessed match-fixing scandals and off-field controversies aplenty. But, IPL has managed to keep itself going through thick and thin and yet get a huge amount of money, turning BCCI into a superpower in world cricket.

The league has undoubtedly provided a major platform to domestic as well as international cricketers who are sold and bought for millions of dollars in the IPL auction. With broadcast rights, central and team sponsorships, gate receipts and merchandise sales, IPL has taken Indian cricket's financial health to the best position it can be and more is set to come over the years. But, its contribution to the nation is more than what has been acknowledged so far.

According to the data provided by BCCI, the Indian Premier League (IPL) contributed Rs 11.5 billion ($182 million) to India's Gross Domestic Product (GDP) in 2015. In that season, a total of 60 matches were played between 8 franchises over 44 days in 13 host venues in 12 cities across the country. The data was compiled by KPMG Sports Advisory Group through an economic survey which revealed that the economic output associated with IPL in India stood at Rs 26.5 billion ($418 million).

OBJECTIVES

1. To analyse the impact of Indian Premier League in financial sector.
2. To analyse the different areas from where the money came.

METHODOLOGY

The study uses mainly secondary data for analysis. The secondary data was collected through various sports journals, cricket websites etc.

1. To analyse the impact of Indian Premier League in financial sector Background and Revenue Implications of IPL

The IPL is a tournament with approximately eight to nine teams on board. Much like the English Premier League of football, the model envisaged a home and away match for each team. It is basically a T20 tournament which means that it is a twenty over match between the qualified cricket clubs of India. It was planned and executed under the leadership of Lalit Modi, the then BCCI commissioner who believed that it would be a good way to popularize T20 cricket in India. He wanted to make cricket more exciting, and enlisted the help of celebrities and businessmen to take various roles including the ownership of these cricket clubs. These teams were named after various cities and were brought under professional teams of management. Also, the system was developed in such a manner that the teams were allotted to the owners through a bidding process, followed by the auctioning of domestic and international cricket players. The main source of revenue for the teams was sponsorship and prize money.

Interestingly, the launch of the IPL brought in huge revenue for the BCCI and coincidentally for the Indian economy. The study of KPMG revealed that in 2015, the IPL had an economic output of Rs.2605 crores and its contribution to India's Gross Domestic Product was Rs.1150 crores. It simply highlights the possible economic implications of the ongoing IPL tournament. Therefore, an analysis of the economics of the IPL with respect to its macro-level contributions to the Indian economy and micro-level contributions to the teams and the players makes good sense at this juncture.

Micro Level Implications

At a micro level, it is interesting to see how the IPL gains revenue for the BCCI and what exactly makes IPL so lucrative. The IPL generates a lot of revenue through sponsorship, ticket sales, and advertisement and broadcasting rights. In fact, the IPL has signed a five-year contract worth $2.55 billion, with a $510 million annual fee, for its worldwide broadcasting and digital rights with Star India. Star India competed with other bidders like Facebook for the IPL broadcasting rights. Since the IPL lasts only 60 matches across six weeks in April and May, it means that each game has a cost of $8.5 million. However, the large viewership makes up the costs for Star India and gains through the advertisement contracts. A reason for the large viewership is due to the shortest version of cricket matches. These matches last typically three hours and people are quite comfortable watching these types of matches as it jams in a lot of action very quickly unlike the other versions of the game such as test and one-day matches.

Furthermore, a large chunk of the viewers fall in the category of the middle class with high disposable income, and of the legal drinking age which is of great significance as many sponsors stay connected with breweries. There is a heavy load of beer advertisements broadcasted during the IPL. The IPL teams earn revenue through their sponsors and through the sale of merchandise of their kits and garbs. They also earn revenue from stalls set up in stadiums, and through the

revenue shares that are paid to the teams by the BCCI. Of course, the biggest revenue a team can earn is the prize money, but that is just for the winning teams.

Since the IPL earns so much through the sponsorship, there is greater income available to purchase cricketers. The cricketers earn their revenues based on how much they are bought for during the auctions. The money a player can earn here can even at times be greater than what the player could earn playing for the national teams. As a result, there have been many contractual arguments between cricket clubs and countries. One such example is of Andrew Flintoff who chose to play the entire season of IPL 2009, instead of playing for England's national team as he earned so much more from the IPL than from his 12-month central contract. Similarly, players from West Indies earn a lot more money in these cricket leagues than from the national side. For Instance, Chris Gayle who is a very prominent T20 cricketer plays for many T20 cricket leagues around the world for different clubs but has not played for his national team for a very long time, and the reason remains the same. Cricketers face expenses in terms of where they choose to play and where they forego, as not every cricket event happens in isolation. There exists a possibility of clashes with cricket league matches and national team matches.

Macro Level Implications

The most prominent macro aspect is the contribution of IPL to the size of India's GDP as highlighted by the KPMG survey. It was also brought to light that during IPL season, there was a significant rise in tourism with large number of international visitors from countries like, United Kingdom, South Africa and Australia. These are cricket loving nations with large fan bases. During the IPL season, cricketers from these countries come to India to play for various clubs, thus bringing with them their fans, which result in increased sport tourism in India. Another area highlighted by the study is the employment generation during these months owing to huge demand for staff members. This includes demand for medical teams for every team, club specific cheerleaders, coaches, stadium employees, security and so on. In short, it generates a vast number of employment opportunities across various sectors.

Another important highlight of the same study was the upliftment of tier-2 cities because of media exposure. Since IPL cricket matches are played all over India, they bring vast media coverage. Tier-2 cities are investing more in the city's infrastructure and development benefits from IPL's media exposure, and see a rise in tourism related activities which can generate greater revenues for the city.

Furthermore, while the IPL has increased the BCCI revenues, it also resulted in greater tax contributions, which means higher government revenues. BCCI has paid around Rs 3,500 crore as tax since the financial year 2007 – 2008. Until the IPL, the BCCI did not pay taxes as it was considered a charitable organization. However, after the commencement of the IPL, the Income Tax department declared IPL to be a commercial activity and ever since then the BCCI has been taxed amounting to Rs 350 crore a year.

2. To analyse the different areas from where the money came

The business model goes something like this. The teams, named after cities or states, are owned by corporate houses and bollywood celebrities like Mukesh Ambani, Vijay Mallya, Shahrukh Khan, Shilpa Shetty and Priety Zinta. Owners are allotted teams through a bidding process and, once the teams are allotted, cricketers from India and other countries were put to auction. A cap on the maximum amount was fixed to make bidding more fruitful. That meant teams would 'buy' cricketers within the maximum amount equally fixed for all the teams. This model was similar to the ones used by- yes; you're right- the EPL. They could let go of any player the next year or retain the players by buying them again. Yeah, it reads like they were treating humans like horses but that's the nature of bidding and cricketers didn't mind. The IPL has made many players rich overnight. Eight teams were announced in 2008 with a base price of $400 Million that went on to fetch approx. $723 Million.

The BCCI and the IPL itself would make their money via the auction of broadcasting rights, title sponsorship and corporate sponsorship, ticket sales, auction of franchise rights and official umpire sponsorship. The umpires are sponsored too. Their sources of income included a share in revenue from broadcasting rights, a share in the sponsorship money, a share from ticket sales, revenue from in-stadium advertising, sale of players to other franchises and revenue from own sponsorship and corporate sponsorship.

In 2008, all revenue was initially directed to a central pool. From this pool, 40% share went to the IPL, 54% to the franchises and 6% was given out as prize money to the players. This was to be the revenue distribution model for 10 years, that is until 2017. The broadcasting rights went to Sony Entertainment Television Network and Singapore based World Sports Group for $1.026 Billion for a period of ten years. Sony-WSG then licensed these rights geographically to other companies around the world.

The IPL was valued at $3.2 billion dollars in 2014 and $5.3 billion after the 10th edition last year. In 2018, we are now in what the BCCI calls the second cycle of the IPL. There's a new business model including the option for teams to go the IPO route. Let's take a closer look at the ways IPL has made T20 cricket to a festival of cricket and become a phenomenal success.

Sponsorships

Around 60 percent of the IPL's revenue is from sponsorships. Fifty percent of this is distributed amongst the franchises. In January this year, the BCCI invited bids for a maximum of six official partners of the 2018 IPL. There will also be two other partners, for the strategic timeouts, those annoying breaks which are essentially extended ad breaks- as well as sponsors for the umpires. If there is one thing that the BCCI is good at, it is spotting opportunities for revenue.

Official IPL sponsorships rake in serious money. DLF, the real estate company, was made the official partner from 2008 to 2012 after paying 200 crores. In 2013, Pepsi paid 397 crores to

become official sponsor. Pepsi signed on for 5 years but pulled out in 2016 following the spot fixing scandal that saw two teams suspended.

This brought the Chinese mobile brand Vivo into cricket. Vivo, a part of Chinese manufacturer BKK Electronics that also makes Oppo and OnePlus phones, rescued the BCCI and bagged the sponsorship rights for IPL in 2016 and 2017, reportedly at a price of 100 crores per year. Vivo again successfully bid for IPL rights for 5 years, from 2018-2022, for 2199 crores or 330 million dollars! It works out to 440 crores per year. That's a crazy amount of money for a company that's trying to find its feet in the Indian mobile market. This profligacy by Vivo left many analysts unhappy but the BCCI wasn't complaining.

Earlier this year, PayTM signed on as the Official Umpire Partner until 2022. PayTM is already BCCI's title sponsor for cricket in India. CEAT Tyres is the official timeout partner for IPL for another 5 years. The Future Group is also an official partner as is Tata Nexon.

Broadcasting rights

The other big IPL story this year, before the tournament began, was the broadcasting deal between the BCCI and Star Sports. Last year, Star had won IPL rights for a record Rs. 16,347 crore or $2.55 billion. The deal holds good until 2023. Star also own the rights for all ICC tournaments - men's and women's 50-over World Cup, World T20 etc.

Media reports stated that Star Sports will enjoy a near monopoly over broadcasting Indian cricket after signing another deal for all of India's home cricket series as well as domestic tournaments for 6138 crores or ~944 million dollars.

The IPL broadcasting deal works out to over 54 crores per match. As per the agreements between BCCI and the team owners, 50% of this money goes to the franchises.

Star Sports also announced that 34 brands signed on as commercial partners for IPL 2018 - both TV and digital. While Vivo, Coca Cola and Reliance Jio came on board as co-presenting sponsors, brands like Polycab, Parle, AMFI, Make My Trip, Vimal Pan Masala, Asian Paints, and Dream 11 are associate sponsors.

Analysts estimate that the co-presenting sponsors have paid around Rs 80 crores each for the association while associate sponsors are likely to have paid around Rs 40 crores. Sources claimed Star India had set itself a stiff revenue target of Rs 2000 crores for this year's IPL. Star's asking price for advertisements is around Rs 10 lakh per 10 seconds. As mentioned earlier, the network expected to reach an audience of 700 million across TV and digital media.

Viewership for the 2017 edition of IPL is estimated at 535 million. IPL 10 broadcaster Sony had garnered 1,300 crores from the league sponsorships, while the Star-owned mobile platform Hotstar had sold advertisement inventory worth 140 crores. Further, with the money it raked in thanks to broadcasting rights, as per the IPL contract, BCCI will share 40% of what it receives among the eight IPL franchises. That's 150 crores per team.

Individual team sponsors

Every IPL team has its own set of sponsors. Dedicated sponsorships play a huge role in generating revenue for team owners. One analysis succinctly summed up the business model - *"The IPL promised instant and far reaching visibility to brands. The brands, in turn, poured millions into the T20 league in sponsorships* — IPL tracker chose to phrase it. Most of the teams in IPL are guilty of overspending - on talent, marketing, fan-building etc. They seem to have done this while ignoring the bottomline. Startups do that too sometimes, going all out to acquire customers and build a loyal, returning base.

Successful international sports leagues and teams - like the EPL, La Liga, Bundesliga - have fiercely passionate fan bases that translate into tangible incomes by way of huge ticket and merchandise sales. Think Man U or Arsenal or Barcelona or Real Madrid. However, in India, most cricket fans follow individual players, not the franchises per se. If a player moves to a different team, the fans shift loyalties. Of course, there are exceptions to this – Chennai Super Kings, Mumbai Indians and Kolkata Knight Riders are the exceptions. They have a strong vocal and loyal fan base.

But overall this has hurt franchise profitability across the IPL board. Barring the Kolkata franchise, which is the most valuable IPL franchise, none of the other franchises have been able to convert fan loyalty to profitability. For Kolkata Knight Riders too, the $58.6 million valuation is largely due to owner Shah Rukh Khan's charisma and popularity as an A-list movie star, more than its players.

Direct sponsorship forms 20 to 30 percent of a team's revenues. Franchises are usually able to sign on 12-15 sponsors each season. Popular franchises like Kolkata, Mumbai and Chennai are able to sign more. They also command better rates than teams like Delhi, Punjab, and Rajasthan. The bottom teams sometimes struggle to get sponsorships even at discounted rates. This reminds one of Formula One teams. The teams that don't do well just fall away because there simply aren't enough sponsors. Their ability to earn sponsorships depends not just on league performance, but also the talent they have and the locations they play in.

Experts say sponsorship revenues have segregated IPL teams into two halves. Leading franchises earn between Rs 50 and 60 crore through direct sponsorships, while the rest make 30 to 35 crore. This impacts the teams' bottom line directly.

Ticket sales

Ticket sales are another source of revenue for the teams, accounting for roughly 10% of team revenues. The Delhi franchise claims it had 92% occupancy in the stadium for home matches last year. They also claimed to have the highest number of hospitality seats and already have 400,000 registrations this year. In 2016, IPL as a whole, generated nearly 160 crore rupees through just

ticket sales. In terms of revenue from tickets, Bangalore with Rs 25 crore, Mumbai with 24 and Delhi with Rs 22 led the field. The BCCI netted almost Rs 10 crore from ticketing revenue.

Merchandising

Every IPL franchise sells merchandise that includes T-shirts, Caps, Wrist watches etc. And IPL has just about scratched the surface of merchandising. There's a lot more to come. While sports are one of the largest areas of licensing globally, according to data from International Licensing Industry Merchandisers' Association, it plays a minuscule role with a mere 1.3% of the total sales of licensed merchandise. In 2016, Indian retail sales of licenced products were at $1.4 billion, of which only $18 million was through sports merchandise. Globally, sports retail sales make up $25.3 billion, which constituted 9.6% of the overall $262.9 billion of global retail sales of licensed merchandise.

CONCLUSION

Like other events, IPL has its pros and cons. It has really shifted the paradigm of Cricketing World to new heights. IPL provides a brilliant platform for youngsters where they can catch the eye of selectors for their inclusion in their respective National squads. IPL, because of its huge fanfare and higher brand value is surely one of the mega events in the World of sports. It acts as a great promoter of cultural heritage of India to the World. IPL serves as a source of entertainment for millions throughout the World. It is surely a billion dollar baby. IPL is providing the players a fair amount of money with which they can fulfil all their needs & secure future. Moreover the franchisees are also earning huge profits from the League. IPL also contributes a significant amount towards GDP of India.

The biggest source of income remains sponsorship. BCCI distributes a certain percentage of the income that the tournament generates from its sponsors (around 60%) equally among the franchises. The second major source of income is broadcasting rights. Again, the board distributes this amount among the franchises.

Then, the teams have their own set of dedicated sponsors which include jersey sponsors, sleeve sponsors and others. A large amount of money is generated from ticket sales which the franchises have to share with the cricket associations hosting the tournament. It goes without saying that a huge part also comes from the prize money which is pretty humongous.

REFERENCES

- Seema A.S. (2015). A study on relationship among performance and value price of the Cricket player's Batsman in Indian Premier League. *Kadakia International Journal of Research in Multidiscipline, 1(4),* March 2015, 61-72.
- Hemanta S., & Dibyojytoi, B. (2011). On classification of All rounder's of the Indian Premier League (IPL): A Bayesian Approach. *Vikalpa, 36(4),* 51-66.

- Siddhartha K. T., & Satish Y. D. (2009). Player Pricing and valuation of Cricketing attributes: Exploring the IPL Twenty 20 vision, *Vikalpa, 34(2)*, 15-23.
- Indian Premier League – *Wikipedia*, the free encyclopedia en-m.wikipedia.org Retrieved on 21 June, 2016 from http://en.m.wikipedia.org/wiki/Indian-premier-League.
- IPL: Boon or Bane to Cricket? www.Carerride.com Retrieved on 15 June, 2016 from http://www.careerride.com/view. aspx?id=24128.

DEMOGRAPHIC DIFFERENCES IN INFORMATION LITERACY AMONG HIGHER SECONDARY STUDENTS OF KOTTAYAM

Dr. Liz Kuriakose
Assistant Professor
Mount Carmel College of Teacher Education for Women, Kottayam

Dr. Pushpa Marian
Principal
Mount Carmel College of Teacher Education for Women, Kottayam

ABSTRACT

The Digital age generates opportunities never dreamed before. Digital technologies move beyond rigid contents and time limits for children and youth to learn and at the same time, the way information is produced or communicated. Information Literacy is essential inorder to access the needed information at the right time and use them to make intelligent decisions. The present study is an attempt to identify whether there exist any difference in the mean scores of Information Literacy of Higher Secondary Students of Kottayam with respect to (a) Gender (b) Locale (c) Type of Management (d) Stream of Study and (e) SES. The findings of the study revealed that there is no significant difference between the mean scores of Information Literacy with respect to Gender, Locale and Stream of Study. Further there exists significant difference among the mean scores of Information Literacy with respect to Type of Management and SES.

KEY WORD: Information Literacy

INTRODUCTION

Digital media and technologies are redesigning the world around us. Majority of the world's population are saturated in the hyper connected digital world. In this digital world, people are exposed to enormous fund of information through various digital media and devices. Information is all around us; it comes in different formats and it is essential to know how to seek, evaluate and use it effectively whether at work, in education or at home. To survive and thrive in a digital world, children and adolescents need a new array of tools to go beyond the simple technical ability. The knowledge and skills that help an individual of locate, access, evaluate and to use the required information appropriately is essential. They must be able to identify what is real and relevant for learning, life and work. Hence Information Literacy skills are the skills we need

throughout our lives if we have to function effectively in the current society.

Information literacy, the knowledge and skills to access and use information appropriately is essential in this digital age. It supports learning and decision making in all areas of human activity. According to Association of College and Research Libraries (2000), "Information literacy is a set of abilities requiring individuals to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information". Thus in the present knowledge society, one needs to acquire high levels of information literacy skill to develop the absorbing, analyzing and integrating abilities and to understand how to use the information to bring real value to everything they undertake.

The CILIP Information Literacy Group (ILG) defined Information literacy as "the ability to think critically and make balanced judgements about any information we find and use. It empowers us as citizens to reach and express informed views and to engage fully with society" (CILIP, 2018). UNESCO has declared that Information Literacy is a basic human right and the foundation for lifelong learning (UNESCO Prague Declaration, 2003). Information literacy is important for today's learners as it promotes problem solving approaches and thinking skills like asking questions and seeking answers, finding information, forming opinions, evaluating sources and making decisions fostering successful learners, effective contributors, confident individuals and responsible citizens.

OBJECTIVES

1. To compare the mean scores of Information Literacy of Higher Secondary Students of Kerala with respect to (a) Gender (b) Locale (c) Type of Management (d) Stream of Study (e) SES

METHODOLOGY

Survey method was adopted for the present study. The sample of the present study consists of 931 Higher Secondary Students studying in standard XI from various schools belonging to Kottayam district. In the present study Information Literacy Test prepared and standardised by the investigator was used to assess the knowledge and ability of Higher Secondary Students to locate, evaluate and use information effectively. The Information Literacy test contains 40 items based on the three components identified namely develop topic and search strategies, identify potential sources, and evaluate and use of information ethically.

ANALYSIS AND INTERPRETATION OF DATA

1. Comparison of the mean scores of Information Literacy of Higher Secondary Students with respect to (a) Gender (b) Locale (c) Type of Management (d) Stream of Study and (e) SES

In this section the comparison of the mean of the scores of Information Literacy is studied under the following headings

(i). Comparison of the mean scores of Information Literacy with respect to Gender, Locale and Stream of Study using t-test

(ii). Comparison of the mean scores of Information Literacy with respect to Type of Management and SES using ANOVA

(i). Comparison of the mean scores of Information Literacy with respect to Gender, Locale and Stream of Study using t-test

The subsamples on the basis of Gender, Locale and Stream of Study are compared with respect to the mean scores of Information Literacy using t-test. The details are given in table 1.

Table 1

Data and results of the test of significance of difference in mean scores of Information Literacy with respect to Gender, Locale and Stream of Study

Subsample		N	Mean	SD	t-value	Level of significance
Gender	Boys	490	16.14	3.87	1.22	p>0.05
	Girls	441	15.82	4.13		
Locale	Urban	454	15.79	3.28	1.48	p>0.05
	Rural	477	16.18	4.57		
Stream of Study	Science	466	15.99	3.53	0.008	p>0.05
	Humanities	465	15.99	4.41		

From table 1, the calculated value of 't' for significance of difference between the mean scores of Information Literacy with respect to Gender is t = 1.22, with respect to Locale is t = 1.48 and with respect to Stream of Study is t = 0.008.

The calculated t- values are not significant at 0.05 level. This indicates that there exist no significant difference between the mean scores of Information Literacy with respect to Gender, Locale and Stream of Study.

(ii). Comparison of the mean scores of Information Literacy with respect to Type of Management and SES using ANOVA

Subsamples formed on the basis of Type of Management and SES is compared with respect to the mean scores of Information Literacy using ANOVA. The details are given in table 2.

Table 2

Summary of Analysis of Variance (ANOVA) of Information Literacy with respect to Type of Management and SES

Demographic variables	Source	Sum of squares	df	Mean s square	F-ratio	Level of Significance
Type of management	Between groups	426.54	2	213.27	13.69	p<0.01
	Within groups	14456.39	928	15.57		
	Total	14882.94	930			
SES	Between groups	681.66	2	340.83	22.27	p<0.01
	Within groups	14201.28	928	15.30		
	Total	14882.94	930			

F value for df (2, 928) at 0.05 level = 3 and 0.01 level = 4.63

From the table 2 it is evident that the calculated F-value for Type of Management is 13.69 and the calculated F value for SES is 22.27. The calculated values of F are much higher than the table value at 0.01 level of significance. This indicates that there is significant difference between the scores of Information Literacy with respect to Type of Management and SES. Hence for detail analysis, pair wise comparison of this was done by Scheffe test. The details of Scheffe's test are given in table 3 and 4.

Table 3

Pair wise comparison of Information Literacy of Higher Secondary Students with respect to Type of management using Scheffe's Test

Subsample	N	Mean	SD	(I) Type of Management	(J) Type of Management (I-J)	Mean Difference	CR	Levelof sig.
Government	301	15.02	2.40	Government	Aided	-1.34	4.23	p<0.01
					Unaided	-1.53	4.80	p<0.01
Aided	320	16.36	5.27	Aided	Government	1.34	4.23	p<0.01
					Unaided	-0.19	0.61	p>0.05
Unaided	310	16.55	3.52	Unaided	Aided	0.19	0.61	p>0.05
					Government	1.53	4.80	p<0.01

From table 3 it is evident that values of critical ratio for the pair wise comparison of the Information Literacy scores of Unaided and Government school students, and Aided and Government School students are 4.80 and 4.23 respectively. These values are significant at 0.01 level of significance. Hence it can be concluded that there exists significant difference in Information Literacy among Unaided and Government school students, and Aided and Government school students. The value of critical ratio for the pair wise comparison of the Information Literacy scores of Unaided and Aided School students is 0.61. This value is not significant at 0.05 level of significance. Hence it can be concluded that there exists no significant difference in Information Literacy among Unaided and Aided school students. From the mean values, it is evident that Unaided School Students have more Information Literacy when compared to Aided and Government schools.

Table 4

Pair wise comparison of Information Literacy of Higher Secondary Students with respect to SES using Scheffe's Test.

Subsample	N	Mean	SD	(I) SES	(J) SES	Mean Difference	CR	Level of significance
				Low	Average			
Low SES	390	15.08	4.06	SES	SES	-1.29	4.77	p<0.01
					High SES	-2.45	6.12	p<0.01
Average								
SES	416	16.38	3.91	Average	Low SES	1.29	4.77	p<0.01
				SES	High SES	-1.15	1.15	p>0.05
High SES	125	17.53	3.37	High	Low SES	2.45	6.12	p<0.01
				SES	Average	1.15	1.15	p>0.05
					SES			

From table 4, it is evident that values of critical ratio for the pair wise comparison of the Information Literacy scores of students belonging to High SES and Low SES, and Average SES and Low SES are 6.12 and 4.77 respectively. These values are significant at 0.01 level of significance. Hence it can be concluded that, there exists significant difference in Information Literacy among students belonging to High SES and Low SES, and Average SES and Low SES. The value of critical ratio for the pair wise comparison of the Information Literacy scores of students belonging to High SES and Average SES is 1.15. This value is not significant at 0.05

level of significance. Hence it can be concluded that, there exists no significant difference in Information Literacy among students belonging to High SES and Average SES. From the mean values, it is evident that students belonging to High SES have more Information Literacy when compared to the students of Average SES and Low SES.

FINDINGS AND CONCLUSION

The findings of the study indicate that there is no significant difference between the mean scores of Information Literacy with respect to Gender, Locale and Stream of Study. Further there is significant difference among the scores of Information Literacy with respect to Type of Management and SES. Students studying in Unaided Schools and belonging to High SES have more Information Literacy. In this digital age, finding dependable information is important especially when millions of ideas can be discovered in fraction of a second but where much of that information is outdated or worthless. Attempts to empower students especially those who are studying in Aided and Government Schools as well as students belonging to Average and Low SES with necessary Information literacy skills are crucial as these skills will help them to access the needed information at the right time, to use them to make intelligent decisions and to become independent lifelong learners. A restructuring of the existing curriculum in schools is required to impart proper and sufficient Information Literacy skills to students of Higher Secondary Schools.

REFERENCES

- Deursen, S., & Diepen. (2013). Information and strategic Internet skills of secondary students: A performance test. Computers & Education, 63, 218–226
- Kilic, A. F., & Guzeller, C. O. (2017). Demographic Factors Affecting Internet Using Purposes of High School Students. Malaysian Online Journal of Educational Technology, 5 (1), 34-45.
- Mallikarjuna, B., Pallavi Choudhary., & Kalikadevi, G. (2017). Information literacy: Need and importance. *International Journal of Applied Research, 3(7*): 173-175.
- Olatokun, W. (2009). Analysing Socio-Demographic Differences in Access and Use of ICTs in Nigeria Using the Capability Approach. Retrieved from https://www.researchgate.net/publication/320663792
- Ritzhaupt, A. D., Liu, F., Dawson, K., & Barron, A. E. (2013). Differences in student information and communication technology literacy based on socio-economic status, ethnicity, and gender: Evidence of a digital divide in Florida schools. Journal of Research on Technology in Education, 45(4), 291–307.

CORONARY HEART DISEASES AND PHYSICAL ACTIVITY

Dr. Suma Joseph

Associate Professor in Physical Education
Mount Carmel College of Teacher Education for Women, Kottayam

ABSTRACT

Cardiovascular disease continues to be a leading cause of death worldwide. Physical activity plays a major role in preventing or delaying the onset of coronary artery disease and hypertension. Regular physical activity independently decreases the risk of coronary heart disease while also having a positive, dose-related impact on other cardiovascular risk factors; it has increasingly become a focus of cardiovascular disease prevention.

Physical activityadherence can be fostered with a multilevel approach that involves active individual participation, physician counseling and health coaching, community involvement, and policy change, with incorporation of cardiac rehabilitation for patients requiring secondary prevention. Community-wide, home-based and internet-based prevention initiatives may also offer a developing pool of resources that can be tapped into to promote education and physical activity compliance.

KEYWORDS: Coronary Heart Diseases, Physical Activity and Cardiovascular Diseases

INTRODUCTION

Physical activity has been proven effective in reducing the risk of coronary artery diseases. Epidemiological evidence shows that 100 research papers have been dealing with physical activity and coronary heart disease. General studies have found the risk in heart attack in sedentary male populations to be about thrice that of men who are active physically in their work or their recreational activity. Many studies published over 20 years showed essentially the same results. Those who were occupationally sedentary were at twice the risk for death coronary artery disease than those who were very active.

In 2002, a group of scientists from Harvard University reported in the Journal of the American Medical Association, and the results of their epidemiological study of the relationship of exercise type and intensity to coronary artery disease (CAD) in more than 44,000 men enrolled in the Health Professional's Follow-Up Study. These men were followed every 2 years from 1986 to 1998 to assess potential coronary artery disease risk factors, to identify newly diagnosed cases of coronary heart disease, and to assess the level of leisure-time physical activity. Men who ran 6 mph or faster or 1hour or more per week had a 42% risk reduction when compared with men

who didn't run. Men who trained with weights for 30 minutes or more per week had a 23% risk reduction when compared with men who didn't train with weight. Brisk walking for 30 minutes or more per day was associated with an 18% risk reduction, as was rowing for one or more hours per week. This was the first to show the direct benefits of weight training on coronary heart disease risk and that exercise intensity is also a critical consideration, with higher intensities providing greater risk reduction.

From epidemiological studies, it has been established that physical activity reduces the risk of coronary artery disease. It is equally clear that low-intensity activity is sufficient to reduce the risk of coronary artery disease.

Types of Cardiovascular Disease

- Coronary Artery Disease
- Hypertension
- Congestive Heart Failure
- Stroke
- Other Cardiovascular Diseases

Coronary Heart Disease

Coronary circulation is the circulation within the heart itself. According to human's age, their coronary arteries which supply the blood flow within the myocardium (heart muscles) itself, becomes progressively narrower due to the formation of fatty plaque along the inner walls of the artery. This progressive narrowing of the arteries is referred to as atherosclerosis, and when the coronary arteries are involved, it is termed Coronary Artery Disease (CAD).

When the disease progresses and the coronary arteries become narrower, the capacity to supply blood to the myocardium is progressively reduced. As the narrowing worsens the myocardium can't receive enough blood to meet all of its needs. When this occurs, the portion of the myocardium that is supplied by the narrowed arteries becomes ischemic, meaning it suffers a deficiency of blood. Ischemia of the heart usually causes severe chest pain, referred to as angina pectoris. This may be first experienced during period of physical exertion or stress, when the demands on the heart are greatest.

When blood supply to a part of the myocardium is severely or totally restricted, ischemia can lead to a heart attack or myocardial infarction. It happens due to the cardiac muscle cells that are deprived of blood for several minutes are also deprived of oxygen, which leads to irreversible damage and necrosis (Cellular death). This can lead to mild, moderate, or severe disability or even death, depending on the location of infarction and the extent of damage.

Hypertension

Hypertension is the medical term for high blood pressure, a condition in which blood pressure is chronically elevated above levels 120/80mm of Hg. Systolic blood pressure is the highest pressure in the arteries at any time where as diastolic blood pressure is the lowest pressure in the arteries at any time. The normal systolic/diastolic blood pressure is 120/80mmHg.

Hypertension causes the heart to work harder than normal, because it has to expel blood from the left ventricle against a greater resistance. Hypertension places great strain on the systemic arteries and arterioles. This stress can cause the heat to enlarge and the arteries and arterioles to become scarred, hardened and less elastic. Eventually this can lead to atherosclerosis, heart attacks, heart failure, stroke, and kidney failure.

Stroke

Stroke is a form of cardiovascular disease that affects the cerebral arteries which supplies oxygen to the brain. The most common cause of stroke is cerebral infraction which typically results from

- Cerebral thrombosis, in which a thrombus (blood clot) forms in a cerebral vessel, often at the site of atherosclerotic damage to the vessel.
- Cerebral embolism, in which an embolus (an undissolved mass of material, such as fat globules, bit of tissue or a blood clot) breaks loose from another site in the body and lodges in a cerebral artery; or
- Atherosclerosis that leads to narrowing and damage to a cerebral artery.

In cerebral infraction, blood flow beyond the blockage is restricted, and the part of the brain that relies on that supply becomes ischemic, is oxygen deficient, and can die. Hemorrhage is the other major cause of stroke. The two major types are cerebral hemorrhage, in which one of the cerebral arteries ruptures in the brain, and subarachnoid hemorrhage, in which one of the brain's surface vessels ruptures, dumping blood in to the space between the brain and the skull. In both cases, blood flow beyond the rupture is diminished because the blood leaves the vessel at the sight of injury. Brain damage from stroke can affect the senses, speech, body movement, thought patterns and memory. Paralysis on one side of the body is common, as is the inability to verbalize thoughts.

Congestive Heart Failure

Congestive Heart Failure is a clinical condition in which the heart muscles become too weak to maintain an adequate cardiac output to meet the body's oxygen demands. This usually results either from damage to or overworking of the heart. Hypertension, atherosclerosis and heart attack are among the possible causes of this disorder.

When cardiac output is inadequate, blood begins to back up in the veins. This causes excess

fluid to accumulate in the boy, particularly in legs and ankles. This fluid accumulation (edema) also can affect the lungs (pulmonary edema), disrupting breathing and causing shortness of breath. Congestive heart failure can progress to the point of irreversible damage to the heart, and the patient becomes a candidate for a heart transplant.

Other Cardiovascular Diseases

Peripheral vascular diseases involve the systemic arteries and veins, as opposed to the coronary vessels. Arteriosclerosis refers to numerous conditions in which the walls of the arteries become thickened, hard and less elastic. Atherosclerosis is a form of arteriosclerosis. Arteriosclerosis obliterans, in which an artery becomes completely occluded, is another form. Peripheral venous disease involves various veins and phlebitis. Varicose veins result from incompetency of the valves in the veins, allowing blood to back up in the veins and causing them to become enlarged, tortuous and painful. Phlebitis is the inflammation of a vein and is also very painful.

Valvular heart diseases involve one or more of the four valves that control the direction of blood flow into and out of the four heart chambers. Rheumatic heart disease is one form of valvular heart disease involving a streptococcal infection that has caused acute rheumatic fever, especially in children between ages 5 and 15. Rheumatic fever is an inflammatory disease of the connective tissue and commonly affects the heart, specifically the heart valves. The damage to the valves causes difficulty in their opening, hindering blood flow out of the chamber or difficulty in their closing, allowing blood to flow back in to the previous chamber**.**

Congenital heart disease includes any heart defects that are present at birth. These defects occur when the heart or the blood vessels near the heart do not develop normally before birth. These include contraction of the aorta, in which the aorta is abnormally constricted; valvular stenosis, in which one or more heart valves are narrowed; and septal defects, in which the septum separating the right and let sides o the heart is defective, allowing the blood from the systemic side to mix with that from the pulmonary side and vice versa.

The Factors that increase the risk of Coronary Heart Disease

The first three factors that can increase the risk of coronary heart diseases are beyond the control and the others can be controlled include

- Age
- Sex
- Family History
- Hypertension
- Elevated Cholesterol and Triglycerides
- Physical Inactivity

- Obesity
- Hypertension
- Cigarette smoking

Risk factors of coronary artery disease that we cannot control are heredity (and family history), male sex and advanced age. Those that we can control are elevated blood lipid, hypertension, cigarette smoking, physical inactivity, obesity and diabetes. Primary risk factors are those that have proven to be strongly associated with the disease. For coronary artery disease, these are smoking, hypertension, abnormal blood lipids, physical inactivity and obesity.

LDL-C is thought to be responsible for depositing cholesterol in the arterial walls. VLDL-C is also implicated in the development of atherosclerosis. However, HDL-C acts as a scavenger, removing cholesterol from the vessel walls. Thus, high HDL-C levels provide some degree of protection from coronary artery disease.

The ratio of total cholesterol to HDL-C might be the best indicator or personal risk for coronary artery disease. Values below 3 reflect a low risk, but values above 5 reflect a high risk.

Risk factors for hypertension that can't be controlled include heredity, advanced age and race. Those we can control are insulin resistance, obesity, diet (excess sodium), use o oral contraceptives, stress and physical activity.

Training adaptations that might reduce risk

The importance of regular physical activity in reducing the risk of coronary artery disease becomes apparent when we consider anatomical and physiological adaptations in response to exercise training. Due to exercise training the size of the heart increases primarily through an increase in the left ventricular chamber size and also in the left ventricular wall thickness. This training adaptation is very important for improved contractility and increased cardiac work capacity. The capacity of coronary circulation appears to increase with training. Many studies show that the size of major coronary vessels increases, which implies an increased capacity for blood flow to all parts of the heart.

The resistance training can affect cardio-respiratory fitness, specifically the risk factors associated with cardio-vascular disease. Due to resistance training, the heart rate is reduced at sub-maximal rates of exercise, which results in the increase in the cardio-vascular fitness. The heart can be enlarged by resistance training, because of the increase in the thickness (hypertrophy) of the inter-ventricular septum and the left ventricular wall. Due to resistance training

- heart rate is decreased
- cardio-vascular fitness is increased
- size of the heart is increased
- resting blood pressure is reduced

- resting heart rate is decreased
- decrease in the ratio of total cholesterol to HDL-C or of LDL-C
- increase in insulin sensitivity
- reduces the risk of obesity
- reduces the risk of osteoporosis

  Several studies have demonstrated that the peak flow rate in the major coronary arteries increases following an exercise program.

Biological Mechanisms by which Exercise may contribute to the Prevention of Coronary Artery Disease

Maintain or increase myocardial oxygen supply

- Delay progression of coronary atherosclerosis
- Improve lipoprotein profile (increase HDL-C/LDL-C ratio)
- Improve carbohydrate metabolism (increase insulin sensitivity)
- Decrease platelet aggregation and increase fibrinolysis.
- Decrease adiposity
- Increase epicardial artery diameter
- Increase coronary blood flow (myocardial perfusion) or distribution

Decrease myocardial work and oxygen demand

- Decrease HR at rest and submaximal exercise
- Decrease systolic and mean systemic arterial pressure during submaximal exercise and at rest
- Decrease cardiac output during submaximal exercise
- Decrease circulating plasma catecholamine levels at rest and at submaximal exercise

Increase myocardial function

- Increase stroke volume at rest and at submaximal and maximal exercise
- Increase ejection fraction at rest and during exercise
- Increase intrinsic myocardial contractility
- Increase myocardial function resulting from decreased "afterload"
- Increase myocardial hypertrophy

Increase electrical stability of myocardium

- Decrease regional ischemia at submaximal exercise
- Decrease catecholamines in myocardium at rest an at submaximal exercise
- Increase ventricular fibrillation threshold attributable to reduction of cyclic AMP

CONCLUSION

Due to endurance training the systolic and diastolic pressure is decreased. Many studies have reported that there will be increase in HDL-C and decrease in triglycerides due to endurance training. With respect to the remaining risk factors, exercise plays an important role in weight reduction and also in the control of diabetics. Aerobic training produces a favorable anatomical and physiological change that decreases the risk of heart attack, including larger coronary arteries, increased heart size and increased pumping capacity. Aerobic training also has a favorable effect on most of the other risk factors for coronary heart disease.

Some evidences show that the heart's collateral circulation improves with exercise training. The collateral circulation is a system of small vessels that branch off the major coronary vessels and are important in providing blood to all parts of the heart, particularly when there are major blockages in the major coronary arteries. The collateral circulation development is more the result of blockages and compromised circulation than of exercise training.

REFERENCES

- N. Haapanen., S. Miilunpalo., I. Vuori., P. Oja., M. Pasanen. (1997). Association of leisure time physical activity with the risk of coronary heart disease, hypertension and diabetes in middle-aged men and women. *International Journal of Epidemiology*, *Volume 26,* Issue 4, Pages 739–747. https://doi.org/10.1093/ije/26.4.739
- Mary Bronson Merki. (1990). *Teen Health*, Glencoe Division, Macmillan/ McGraw-Hill
- www.humankinetics.com/physiologyofsportsandexercise.
- http://dx.doi.org/10.1136/heartjnl-2015-308773.

TREADING THE DIFFERENT GENRES OF ENGLISH LITERATURE FROM THE PERSPECTIVE OF THE LEARNER

Dr. Mary Sheba Jose
Associate Professor in English
Mount Carmel College of Teacher Education for Women, Kottayam

ABSTRACT

Being acquainted with the different genres of literature will help the learner of English to look for meaningful and relevant features of the textual matter they are reading. The article thus stresses upon providing an exposure to the learners to be aware of the different genres of literature. It is presumed that this will prepare the path for a fruitful reading experience for the learner.

KEY WORD: Genres of English Literature

INTRODUCTION

Literature is important in everyday life because it connects individuals with larger truths and ideas in a society. It creates a way for people to record their thoughts and experiences in a way that is accessible to others, through fictionalized accounts of the experience.

The logic of learning literature is that our horizons are broadened; we can learn about and come to understand people who are different from us. We can discover that our exact thoughts and feelings have also been experienced by someone else. Literature encourages us to be sensitive to the whole spectrum of human experience and to consider this when making decisions in our day-to-day lives. Academically, studying literature also helps us to refine our own writing skills and expand our vocabularies.

In order to understand the intricate beauties of literature, we should be aware of the different genres that constitute literature. A genre means a type of art, literature, or music characterized by a specific form, content, and style. For example, literature has four main genres: poetry, drama, fiction, and non-fiction. All of these genres have particular features and functions that distinguish them from one another. Hence, it is necessary on the part of readers to know which category of genre they are reading in order to understand the message it conveys, as they may have certain expectations prior to the reading concerned.

The five main genres of literature students should be familiar with are Poetry, Drama, Prose,

Nonfiction, and Media each of which is explained in more detail below.

Poetry

This is often considered the oldest form of literature. Before writing was invented, oral stories were commonly put into some sort of poetic form to make them easier to memorize and recite. Poetry today is usually written down but is still sometimes performed.

A lot of people think of rhymes and counting syllables and lines when they think of poetry, and some poems certainly follow strict forms. But other types of poetry are so free-form that they lack any rhymes or common patterns. There are even kinds of poetry that cross genre lines, such as prose poetry. In general, though, a text is a poem when it has some sort of meter or rhythm, and when it focuses on the way the syllables, words, and phrases sound when put together. Poems are heavy in imagery and metaphor and are often made up of fragments and phrases rather than complete, grammatically correct sentences. And poetry is nearly always written in stanzas and lines, creating a unique look on the page.

Prose

Prose can be defined as any kind of written text that doesn't resemble poetry. The most typical varieties of prose are novels and short stories, while other types include letters, diaries, journals, and non-fiction. Prose is written in complete sentences and organized in paragraphs. Instead of focusing on sound, which is what poetry does, prose tends to focus on plot and characters. Prose is the type of literature read most and often taught in English classrooms. Like poetry, prose is broken down into a large number of other sub-genres. Some of these genres revolve around the structure of the text, such as novellas, biographies and memoirs, and others are based on the subject matter, like romances, fantasies, and mysteries.

Drama

Any text meant to be performed rather than read can be considered drama. In layman's terms, dramas are usually called plays. When written down, the bulk of a drama is dialogue, with periodic stage directions. Of all the genres of literature, drama is the one given the least time in most classrooms. Students respond best to dramas, and grasp their mechanics more fully when exposed to film or theatre versions or encouraged to read aloud or act out scenes during class.

Non-Fiction

Poetry and drama both belong to the broader category of fiction-texts that feature events and characters that have been made up. Then there is non-fiction, a vast category that is a type of prose and includes many different sub-genres. Non-fiction can be creative, such as the personal essay, or factual, such as the scientific paper. Sometimes the purpose of non-fiction is to tell a story, but most of the time the purpose is to pass on information and educate the reader about certain facts, ideas, and/or issues.

Some genres of non-fiction include histories, textbooks, travel books, newspapers, self-help books, and literary criticism. The varieties most often used in the classroom are textbooks, literary criticism, and essays of various sorts. Most of what students practice writing in the classroom is the non-fiction essay, from factual to personal to persuasive.

Media

The newest type of literature that has been defined as a distinct genre is media. This categorization was created to encompass the many new and important kinds of texts in our society today, such as movies and films, websites, commercials, billboards, and radio programmes. Any work that doesn't exist primarily as a written text can probably be considered media, particularly if it relies on recently developed technologies. Media literature can serve a wide variety of purposes-among other things it can educate, entertain, advertise, or persuade. Teaching media literacy is also a great way for educators to help students become participants in their own culture, through lessons on creating their own websites or home movies or commercials.

OTHER TYPES OF LITERATURE

Oral Literature

This is the oldest type of literature, and the foundation on which culture was built. Now, most oral texts have been written down, of course, and are usually taught in the form of epic poems or plays or folk tales.

Folklore/Folk Tales/Fables

A distinction is often made between regular prose and folklore. Most folk tales were originally oral literature, and are short stories meant to pass on a particular lesson or moral. They often have a timeless quality, dealing with common human concerns that are just as relevant to us today, while still being products of a very specific culture and time period.

Graphic Novels and Comic Books

It used to be that most educators saw comic books as the lowest form of literature, not suitable or valuable for children. But times have changed, and many teachers have come to realize that comic books and the more modern graphic novels are both appealing to kids and are a valid form of literature in their own right.

CONCLUSION

Learning about the features of different genres helps readers recognize what they are reading and quickly adjust their reading styles. As students become more skilled; they can use the features of different genres to help them learn information quickly and efficiently-for example, using headings to get through informational text. When students know that a text is created by a writer for a

certain purpose and look for features that will help them understand that purpose, they can easily learn new information from the text. Teaching students how to cope with new genres will prepare them for a lifetime of reading.

REFERENCES

- Altay, Ismail Firat. (2010). *A suggested syllabus for advanced writing skills at English language teaching departments. Cambridge* : Cambridge University Press.
- Block, Carrie. (2002). *Comprehensive instruction: Research based test practices.* New York: Guilford Press.
- Nunan, D. (1998). *The learner- centred curriculum*. Cambridge: Cambridge University Press.
- www.brighthubeducation.com>homework-help-literature
- www.Utoledo.edu>English>programs>composition>studio>pdf
- www.courses.byui.edu>academicsupport>writing-center>pdf>new

RELATIONSHIP BETWEEN HUMAN RIGHTS AWARENESS AND SOCIAL SKILLS DEVELOPMENT AMONG SECONDARY SCHOOL STUDENTS

Dr. Lissy Koshi
Assistant Professor
Mount Carmel College of Teacher Education for Women, Kottayam

ABSTRACT

Human Rights Awareness means one's knowledge of rights relating to life, liberty, equality, and dignity of the individual, guaranteed by the constitution. Social Skills development refers to the development of socially acceptable learned behaviors that enable an individual to interact effectively with others. A normative survey on a sample of 300 students from Kottayam district revealed a significant relationship between human rights awareness and social skills development among secondary school students.

KEY WORDS: Human Rights Awareness, Social Skills development

INTRODUCTION

Human rights are legal rights to which any human being is inherently entitled, regardless of their language, nation, religion, location, ethnic origin or any other status. It examines Human Rights issues without bias and form diverse perspectives through a variety of educational practices. Human rights awareness aims to develop an acceptable human rights culture. It helps to develop informed critical thinking essential to a democracy. It provides multicultural and historical perspectives on the universal struggle for justice and dignity.

Social Skills are components of behaviour that help an individual understand and adapt across a variety of social settings. Walker (1983) defines "Social Skills as a set of competencies that allows an individual to initiate and maintain positive social relationships, peer acceptance and a satisfactory school adjustment andto cope effectively with the larger social environment".

OBJECTIVES

1. To study the level of Human Rights Awareness among Secondary School Students
2. To study the level of Social Skills Development among Secondary School Students
3. To find out the relationship between Human Rights Awareness and Social Skills Development among Secondary School Students

4. To find out the relationship between Human Rights Awareness and Social Skills Development among Secondary School Students with respect to

   a. Boys and Girls Students

   b. Government and Aided School Students

HYPOTHESES

1. There is no relationship between the Human Rights Awareness and Social Skills Development among the Secondary School Students
2. There is no relationship between the Human Rights Awareness and Social Skills Development among the Secondary School Students with respect to

   a. Boys and Girls Students

   b. Government and Aided School Students

METHODOLOGY

The method used in this study is a normative survey method, which is intended to measure the relationship between Human Rights Awareness and Social Skills Development among Secondary School Students. In this present studythe sample selected is 300 secondary school students in Kottayam district. The tool used to collect data consists of Social Skill Scale and Human Rights AwarenessQuestionnaire prepared by the investigator.

ANALYSIS AND INTERPRETATION

1. To find out the level of Human Rights Awareness and Social Skills Development among Secondary School Students

The level of Human Rights Awareness and Social Skills Development among Secondary School Students is given in table 1 and 2 respectively.

Table 1

Level of Human Rights Awareness among Secondary School Students

Below Average	Average	Above Average
13%	75%	12%

Table 2

Level of Social Skills Development among Secondary School Students

Below Average	Average	Above Average
15%	72%	13%

Table 1 shows that out of the 300 students, 12% are above average, 75% are average and 13% are below average in Human Rights Awareness. It is clear from table 2 that out of the 300 students, 13% are above average, 72% are average and 15% are below average in Social Skills Development.

2. Relationship between Human Rights Awareness and Social Skills Development of Secondary School Students

The relationship between Human Rights Awareness and Social Skills Development of Secondary School Students was estimated and is given in table 3.

Table 3

Relationship between Human Rights Awareness and Social Skills Development of Secondary School Students

Groups	N	r	t	Level of significance (0.01 level)
Total	300	0.607	3.24	Significant
Boys	150	0.603	2.99	Significant
Girls	150	0.61	3.26	Significant
Govt. school students	150	0.60	3.82	Significant
Aided school students	150	0.616	3.93	Significant

Table 3 shows that the obtained co- relation value of boys is 0.603. Therefore it is concluded that there is positive correlation between Human Rights Awareness and Social Skills Development of Secondary School Boys Students. The obtained co- relational value for girls is 0.61. Therefore it is concluded that there is positive correlation between Human Rights Awareness and Social Skills Development of Secondary School Girl's Students. Also the obtained co- relational value of Government School Students is 0.60. Therefore it is concluded that there is positive correlation between Human Rights Awareness and Social Skills Development of Secondary School Students with respect to the Government School Students. The obtained co- relational value of Aided School Students is 0.616. Therefore it is concluded that there is positive correlation between Human Rights Awareness and Social Skills Development of Secondary School Students with respect to the Aided School of Students.

MAJOR FINDINGS AND CONCLUSION

The study revealed that majority of Secondary School Students possess average level of Human Rights Awareness (75%) and Social Skills Development (72%). The researcher concluded in this study that there exist a positive relationship between the Human Rights Awareness and the Social Skills Development among the Secondary School Students.

REFERENCES

- National Council of Educational Research and Training.(1996). *Human Rights. A Source Book*. New Delhi.
- NCERT. (2005). *National Curriculum Framework*. New Delhi.
- Srivastav, Rajesh Kumar.(2011). A Study of Adolescents Attitude towards Human Rights in Relation to their Academic Achievement. *International Journal of Educational Planning & Administration, Vol.1,* Number 1, pp. 91-97.
- Tiwari, K. K. & Tiwari Sarika. (2012). A Study of the Determinants of Adolescents' Attitude towards Human Rights in Relation to Social Competence. *Shodh Distri, Vol.3,* No.1, pp. 108-111.
- Lodder G., Goossens L., Scholte R., Engels R., Verhagen M.(2016). Adolescent loneliness and social skills: Agreement and discrepancies between self-, meta-, and peer-evaluations. *J. Youth Adolesc,45*:2406–2416. doi: 10.1007/s10964-016-0461-y.
- Dobbins N., Higgins K., Pierce T., Tandy R.D., Tincani M.(2010). An analysis of social skills instruction provided in teacher education and in-service training programs for general and special educators. *Remedial Spec. Educ., 31:358*–367.

EMOTIONAL INTELLIGENCE OF HIGHER SECONDARY STUDENTS IN RELATION TO THEIR ACADEMIC ACHIEVEMENT

Dr. F. Deepa

Assistant Professor
Department of Education and Management
Tamil University, Thanjavur

ABSTRACT

The purpose of the present study was to determine the relationship between Emotional Intelligence and Academic Achievement of higher secondary students. The sample of the study consisted of 300 higher secondary students of Pudhukottai district. To measure the Emotional Intelligence and Academic Achievement, Emotional Intelligence scale and Achievement test in Zoology were used. The Results indicated a low positive correlation between Emotional Intelligence and Academic Achievement of students.

KEY WORDS: Emotional Intelligence, Academic Achievement

INTRODUCTION

Emotional intelligence is the capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in us and in our relationship through the research it is showed that emotional intelligence is highly beneficial in the areas of education, work, and mental health. When it comes to long-term success and success in varied life situations, being high in emotional intelligence is more important than being high in academic abilities. It is claimed about IQ; we can teach and improve in children some crucial emotional competencies. Emotionally intelligent people are more likely to succeed in everything they undertake. Teaching emotional and social skills is very important at school; it can affect academic achievement positively not only during the year they are taught, but during the years that follow as well. Teaching these skills has a long-term effect on achievement. In short emotionally intelligent student would have better academic achievement or through Emotional Intelligence there is a possibility of improvement of academic achievement.

High emotional intelligence can contribute to a student in the learning process. Emotional and social competencies can accurately predict academic achievement. The same understanding has been shared by Low and Nelson, "emotional intelligence abilities play a key role in academic achievement and test performance of high school and college students respectively. Academic

achievement and emotional intelligence are related with one another. Hence, the researcher has made an attempt to investigate the Emotional Intelligence of Higher Secondary Students in relation to their Academic Achievement.

OBJECTIVES

1. To find out if there is any significant difference in the meanscores of Emotional Intelligence and Academic Achievement of higher secondary students with respect to study habit.
2. To find out if there is any significant difference in the meanscores of Emotional Intelligence and Academic Achievement of higher secondary students with respect to type of family.
3. To find out if there is any significant difference in the meanscores of Emotional Intelligence and Academic Achievement of higher secondary students with respect to parent's annual income.
4. To find out if there is any significant relationship between Emotional Intelligence and Academic Achievement of higher secondary students.

HYPOTHESES

1. There is no significant difference in the mean scores of Emotional Intelligence and the Academic Achievement of higher secondary students with respect to study habit.
2. There is no significant difference in the mean scores of Emotional Intelligence and the Academic Achievement of higher secondary students with respect to type of family.
3. There is no significant difference in the mean scores of Emotional Intelligence and the Academic Achievement of higher secondary students with respect to parent's annual income.
4. There is no significant relationship between Emotional Intelligence and Academic Achievement of higher secondary students.

METHODOLOGY

In the present study, the researcher has chosen Normative-Survey method for analysing the Emotional Intelligence and Academic Achievement of higher secondary students in the study area. Simple random sampling technique was used for selecting the sample for this investigation. The researcher has selected 350 higher secondary students who were studying in the Government, Government aided and Self-financing schools of Pudhukottai district.

TOOLS USED

i. Emotional Intelligence scale (constructed and standardized by Jane katherin, 2015).

ii. Achievement test in zoology constructed and standardized by the researcher

ANALYSIS AND INTERPRETATION OF DATA

1. Comparing the mean scores of Emotional Intelligence and Academic Achievement of higher secondary students with respect to study habits

Table 1

Test of significance of difference in the mean score of the Emotional Intelligence and the Academic Achievement of high school students with respect to study habit

Variables	Study Habit	N	Mean	Standard Deviation	t-value	Level of Significance
Emotional	Self Study	221	380.97	32.24		
Intelligence	Group study	129	383.03	34.51	0.56	Not Significant
Academic	Self-study	137	33.47	5.32		
Achievement	Group study	213	34.17	4.95	1.20	Not Significant

The above table 1 indicates that the calculated 't' value (0.56) is less than the critical value of 1.97 at 0.05 level of significance and hence it is not significant. Consequently the null hypothesis is not rejected and it can be said that there is no significant difference in the mean scores of Emotional Intelligence of higher secondary school students with respect to study habits.

The above table 1 indicates that the calculated 't' value (1.20) is less than the critical value of 1.97 at 0.05 level of significance and hence it is not significant. Consequently the null hypothesis is not rejected and it can be said that there is no significant difference in the mean scores of Academic Achievement of higher secondary students with respect to study habits.

2. Comparing the mean scores of Emotional Intelligence and Academic Achievement of higher secondary students with respect to type of family

Table 2

Test of significance of difference in the mean scores of Emotional Intelligence and Academic Achievement of higher secondary students with respect to type of family

Variables	Type of family	N	Mean Deviation	Standard	t-value	Level of Significance
Emotional	Joint family	89	387.67	27.44		
Intelligence	Nuclear family	261	379.71	34.58	1.92	Not Significant
Academic	Joint family	89	33.08	5.16		
Achievement	Nuclear family	261	33.95	5.19	1.35	Not Significant

The above table 2 indicates that the calculated 't' value (1.92) is less than the critical value 1.97 at 0.05 level of significance and hence it is not significant. Consequently the null hypothesis is not rejected and it can be said that there is no significant difference in the mean scores of Emotional Intelligence of higher secondary students with respect to type of family.

The above table also indicates that the calculated 't' value (1.35) is less than the critical value 1.97 at 0.05 level of significance and hence it is not significant. Consequently the null hypothesis is not rejected and it can be said that there is no significant difference in the mean scores of Academic Achievement of higher secondary students with respect to type of family.

3. Comparing the mean scores of Emotional Intelligence and Academic Achievement of higher secondary students with respect to Parent's Annual Income

Table 3

Test of significance of difference in the mean scores of Emotional Intelligence and Academic Achievement of high school students with respect to Parent's Annual Income

Variables squares	Sources of variation	Sum of	df	Mean variation of Squares	F Value	Level of significance
Emotional	Between groups	1490.79	2	745.39		
Intelligence	Within groups	379923.02	347	1084.87	0 .68	Not Significant
Academic	Between groups	131.76	2	65.88		
Achievement	Within groups	9284.52	347	26.75	2.46	Not Significant

The above table 3 indicates that the calculated 'F' value (0.68) is less than the critical value of 3.03 at 0.05 level of significance and hence it is not significant. Consequently the null hypothesis is not rejected and it can be said that there is no significant difference in the mean scores of Emotional Intelligence of higher secondary students with respect to Parent's annual income.

The above table indicates that the calculated 'F' value (2.46) is less than the critical value of 3.03 at 0.05 level of significance and hence it is not significant. Consequently the null hypothesis is not rejected and it can be said that there is no significant difference in the mean scores of Academic Achievement of higher secondary school students with respect to Parent's annual income.

4. Testing the significant relationship between Emotional Intelligence and Academic Achievement of higher secondary school students

Table 4

Test of significance of relationship between Emotional Intelligence and Academic Achievement of higher secondary school students

		Emotional Intelligence	Academic Achievement
Emotional	Pearson Correlation	1	0.208*
Intelligence	Sig (2 tailed)		0.000
	N	350	350
Academic	Pearson Correlation	0.208*	1
Achievement	Sig (2 tailed)	0.000	
	N	350	350

***** Significant at 0.05 level

The above table 4 indicates that the calculated 'r' value (0.208) is greater than the critical value of 0.113 at 0.05 level of significance and hence it is significant. Consequently the null hypothesis is rejected and it can be said that there is a significant relationship between Emotional Intelligence and Academic Achievement of higher secondary school students.Even though the value of 'r' is positive, the relations is low.

FINDINGS OF THE STUDY

1. There is no significant difference in the mean scores of Emotional Intelligence and Academic Achievement of higher secondary students with respect to study habits.

2. There is no significant difference in the mean scores of Emotional Intelligence and Academic Achievement of higher secondary students with respect to type of family.

3. There is no significant difference in the mean scores of Emotional Intelligence and Academic Achievement of higher secondary students with respect to parent's annual income.

4. There is a low positive relationship between Emotional Intelligence and Academic Achievement of higher secondary students.

CONCLUSION

Individuals with high emotional intelligence are aware of their own emotions and that of others, are able to regulate their feelings and are able to use these emotions for the growth and development of their personality. The study on the relationship between emotional intelligence and academic achievement focuses on significance of EI skills in the academic settings of contemporary education system. Students with sound knowledge of emotions are more capable of concentrating on problem solving skills which increases their cognitive abilities. The positive correlation between emotional intelligence and academic achievement in the current investigation suggests to take serious steps to integrate emotional intelligence at all levels of education.

REFERENCES

- Aggarwal, J.C. (2002). *Educational Research; an Introduction.* New Delhi: Arya Book Depot.
- Aggarwal, Y.P. (1989). *Statistical methods - concepts, application and computation.* New Delhi: Sterling Publishers Private Limited.
- Best, J.W., & Kahn, J.R. (1995). *Research in Education.* New Delhi: Printice Hall.
- Chauhan, S.S. (2007). *Advanced Educational Psychology.* New Delhi: Vika Publishing House Private Limited.
- Gardner, H. (1983). *Frames of Mind: the Theory of Emotional Intelligences.* New York: Basic Books.
- Kubir Singh sidhu. (2001). *Methodology of Research in Education.* New Delhi: Sterling Publishers Private Limited.
- Mangal, S.K. (2008).*Advanced Educational Psychology.* New Delhi: Tata M.C.Grow Publication Company limited.
- SalihaKhatoon.(2010).Effect of Emotional Intelligence on Academic Achievement of Student-Teachers. *International Educator, 22*(1).

- Stephane Cote Christopher & Miners. (2008*).*A study on emotional intelligence, cognitive intelligence and job performance.*Administrative Science Quarterly*, 51, 1-28.
- Wechsler, D. (1958).*The measurement of Adult Intelligence.* NewYork: Williams and Wilkings Co.
- Zhang, Li-Fang. (2002).*Thinking styles: Their relationships with modes of thinking and academic performance.* New Delhi: Educational Publications.

INTEGRATION OF SUSTAINABLE DEVELOPMENT IN TEACHER EDUCATION

Dr. Sindhu S.

Assistant Professor, N.S.S. Training College, Changanacherry

ABSTRACT

Education for Sustainable Development allows every human being to acquire the knowledge, skills, attitudes and values necessary to shape a sustainable future. Education for Sustainable Development means including key sustainable development issues into teaching and learning; for example, climate change, disaster risk reduction, biodiversity, poverty reduction, and sustainable consumption. It also requires participatory teaching and learning methods that motivate and empower learners to change their behaviour and take action for sustainable development. Education for Sustainable Development consequently promotes competencies like critical thinking, imagining future scenarios and making decisions in a collaborative way. Educationfor Sustainable Development requires far-reaching changes in the way education is often practised today. Reorienting education to address sustainability is a multi-layered process that involves changes in policy and practices as well as awareness, knowledge, skills, values, and acceptance of the sustainability paradigm. Reorienting is also a reflective process that takes time, intentionality, and effort to accomplish. Reorienting teacher education typically takes years of work within teacher education institutions to create enduring changes.

KEY WORDS: Sustainable Development, Teacher Education

INTRODUCTION

Sustainable development is a concept that appeared for the first time in 1987 with the publication of the Brundtland Report, warning of the negative environmental consequences of economic growth and globalisation, which tried to find possible solutions to the problems caused by industrialisation and population growth.

Sustainable development is the organizing principle for meeting human development goals while simultaneously sustaining the ability of natural systems to provide the natural resources and ecosystem services based upon which the economy and society depend. The desired result is a state of society where living conditions and resources are used to continue to meet human needs without undermining the integrity and stability of the natural system. Sustainable development

can be defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

How to Achieve Sustainable Development

Many of the challenges facing humankind, such as climate change, water scarcity, inequality and hunger, can only be resolved at a global level and by promoting sustainable development: a commitment to social progress, environmental balance and economic growth.

As a part of a new sustainable development roadmap, the United Nations approved the 2030 Agenda, which contains the Sustainable Development Goals, a call to action to protect the planet and guarantee the global well-being of people. These common goals require the active involvement of individuals, businesses, administrations and countries around the world.

17 Goals for a Better World (Sustainable Development Goals)

The Sustainable Development Goals (SDG), also known as the Global Goals, are a call from the United Nations to all countries around the world to address the great challenges that humanity faces and to ensure that all people have the same opportunities to live a better life without compromising our planet.

These 17 objectives are interrelated and often the key to one's success will involve the issues most frequently linked to another. They can be summarised as follows:

1. No Poverty – End poverty in all its forms everywhere
2. Zero Hunger – End hunger, achieve food security and improved nutrition and promote sustainable agriculture
3. Good Health and Well-Being – Ensure healthy lives and promote well-being for all at all ages
4. Quality Education – Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
5. Gender Equality – Achieve gender equality and empower all women and girls
6. Clean Water and Sanitation – Ensure availability and sustainable management of water and sanitation for all
7. Affordable and Clean Energy – Ensure access to affordable, reliable, sustainable and clean energy for all
8. Decent Work and Economic Growth – Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
9. Industry, Innovation and Infrastructure – Build resilient infrastructure, promote inclusive and

sustainable industrialization and foster innovation

10. Reduced Inequalities – Reduce inequality within and among countries
11. Sustainable Cities and Communities – Make cities and human settlements inclusive, safe, resilient and sustainable
12. Responsible Consumption and Production – Ensure sustainable consumption and production patterns
13. Climate Action – Take urgent action to combat climate change and its impacts
14. Life below Water – Conserve and sustainably use the oceans, seas and marine resources for sustainable development
15. Life on Land – Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
16. Peace, Justice and Strong Institutions – Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
17. Partnerships for the Goals – Strengthen the means of implementation and revitalize the global partnership for sustainable development

Sustainable Development Goal 4 –Quality Education

"Education for Sustainable Development (ESD) allows every human being to acquire the knowledge, skills, attitudes and values necessary to shape a sustainable future.

Education for Sustainable Development means including key sustainable development issues into teaching and learning; for example, climate change, disaster risk reduction, biodiversity, poverty reduction, and sustainable consumption. It also requires participatory teaching and learning methods that motivate and empower learners to change their behaviour and take action for sustainable development. Education for Sustainable Development consequently promotes competencies like critical thinking, imagining future scenarios and making decisions in a collaborative way. Education for Sustainable Development requires far reaching changes in the way education is often practised today."

Quality Education – Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Education is at the heart of the 2030 Agenda for Sustainable Development: it is identified as a stand-alone goal (Sustainable Development Goal 4) and is also present as targets under other SDGs on health, growth and employment, sustainable consumption and production, and climate change.

"A fundamental change is needed in the way we think about education's role in global development, because it has a catalytic impact on the well-being of individuals and the future of our planet. … Now, more than ever, education has a responsibility to be in gear with 21st century challenges and aspirations, and foster the right types of values and skills that will lead to sustainable and inclusive growth, and peaceful living together" (Irina Bokova, Director-General of UNESCO).

ESD can develop cross-cutting key competencies for sustainability that are relevant to all SDGs. ESD can also develop specific learning outcomes needed to work on achieving a particular SDG.

Cross-cutting Key Competencies for achieving all SDGs

As societies around the world struggle to keep pace with the progress of technology and globalization, they encounter many new challenges. These include increasing complexity and uncertainty; more individualization and social diversity; expanding economic and cultural uniformity; degradation of the ecosystem services upon which they depend; and greater vulnerability and exposure to natural and technological hazards. A rapidly proliferating amount of information is available to them. All these conditions require creative and self-organized action because the complexity of the situation surpasses basic problem-solving processes that go strictly according to plan. People must learn to understand the complex world in which they live. They need to be able to collaborate, speak up and act for positive change (UNESCO, 2015). We can call these people "sustainability citizens" (Wals, 2015; Wals and Lenglet, 2016).

There is general agreement that sustainability citizens need to have certain key competencies that allow them to engage constructively and responsibly with today's world. Competencies describe the specific attributes individuals need for action and self-organization in various complex contexts and situations. They include cognitive, affective, volitional and motivational elements; hence they are an interplay of knowledge, capacities and skills, motives and affective dispositions. Competencies cannot be taught, but have to be developed by the learners themselves. They are acquired during action, on the basis of experience and reflection (UNESCO, 2015; Weinert, 2001).

Key competencies represent cross-cutting competencies that are necessary for all learners of all ages worldwide (developed at different age-appropriate levels). Key competencies can be understood as transversal, multifunctional and context-independent. They do not replace specific competencies necessary for successful action in certain situations and contexts, but they encompass these and are more broadly focused (Rychen, 2003; Weinert, 2001).

Key Competencies

The following key competencies are generally seen as crucial to advance sustainable development (see de Haan, 2010; Rieckmann, 2012; Wiek et al., 2011).

- *Systems thinking competency:* the abilities to recognize and understand relationships; to analyse complex systems; to think of how systems are embedded within different domains and different scales; and to deal with uncertainty.
- *Anticipatory competency:* the abilities to understand and evaluate multiple futures – possible, probable and desirable; to create one's own visions for the future; to apply the precautionary principle; to assess the consequences of actions; and to deal with risks and changes.
- *Normative competency:* the abilities to understand and reflect on the norms and values that underlie one's actions; and to negotiate sustainability values, principles, goals, and targets, in a context of conflicts of interests and trade-offs, uncertain knowledge and contradictions.
- *Strategic competency*: the abilities to collectively develop and implement innovative actions that further sustainability at the local level and further afield.
- *Collaboration competency:* the abilities to learn from others; to understand and respect the needs, perspectives and actions of others (empathy); to understand, relate to and be sensitive to others (empathic leadership); to deal with conflicts in a group; and to facilitate collaborative and participatory problem solving.
- *Critical thinking competency:* the ability to question norms, practices and opinions; to reflect on own one's values, perceptions and actions; and to take a position in the sustainability discourse.
- *Self-awareness competency:* the ability to reflect on one's own role in the local community and (global) society; to continually evaluate and further motivate one's actions; and to deal with one's feelings and desires.
- *Integrated problem-solving competency:* the overarching ability to apply different problem-solving frameworks to complex sustainability problems and develop viable, inclusive and equitable solution options that promote sustainable development, integrating the abovementioned competences.

The sustainability key competencies represent what sustainability citizens particularly need to deal with today's complex challenges. They are relevant to all SDGs and also enable individuals to relate the different SDGs to each other – to see "the big picture" of the 2030 Agenda for Sustainable Development.

The specific learning objectives outlined below are to be seen in conjunction with the cross-cutting sustainability competencies. For example, one specific learning objective for SDG 1, "No Poverty – End poverty in all its forms everywhere", can be defined as "The learner knows about causes and impacts of poverty". This knowledge could be acquired by conducting case studies on poverty in selected countries. At the same time, this learning activity contributes to a person's system thinking competency by facilitating the perception that multiple factors influence poverty.

But system thinking competency is not limited to system thinking concerning poverty. As a key competency, it enables the learner to understand the complex interrelations in the fields of other SDGs as well.

It is vital to set specific learning objectives for the different SDGs. But we must also remember that these objectives must not be viewed as isolated from the sustainability key competencies that will support us in our transition to a sustainable world. Learning objectives and key competencies must be pursued together. The learning approaches and methods outlined in this document are therefore informed by best practice for developing competencies. When using this guidance framework, educators are encouraged to consider what key competencies their educational activities are facilitating, in addition to the specific learning objectives described for each SDG in the following section.

Specific Learning Objectives for the SDGs

What follows is the description of specific learning objectives for all SDGs. For each SDG, learning objectives are described in the cognitive, socio-emotional and behavioural domains.

- *The cognitive domain* comprises knowledge and thinking skills necessary to better understand the SDG and the challenges in achieving it.
- *The socio-emotional domain* includes social skills that enable learners to collaborate, negotiate and communicate to promote the SDGs as well as self-reflection skills, values, attitudes and motivations that enable learners to develop themselves.
- *The behavioural domain* describes action competencies.

Learning Objectives for SDG 4 "Quality Education"

Cognitive Learning Objectives

1. The learner understands the important role of education and lifelong learning opportunities for all (formal, non-formal and informal learning) as main drivers of sustainable development, for improving people's lives and in achieving the SDGs.
2. The learner understands education as a public good, a global common good, a fundamental human right and a basis for guaranteeing the realization of other rights.
3. The learner knows about inequality in access to and attainment of education, particularly between girls and boys and in rural areas, and about reasons for a lack of equitable access to quality education and lifelong learning opportunities.
4. The learner understands the important role of culture in achieving sustainability.
5. The learner understands that education can help create a more sustainable, equitable and peaceful world.

Socio-Emotional Learning Objectives

1. The learner is able to raise awareness of the importance of quality education for all, a humanistic and holistic approach to education, ESD and related approaches.
2. The learner is able through participatory methods to motivate and empower others to demand and use educational opportunities.
3. The learner is able to recognize the intrinsic value of education and to analyse and identify their own learning needs in their personal development.
4. The learner is able to recognize the importance of their own skills for improving their life, in particular for employment and entrepreneurship.
5. The learner is able to engage personally with ESD.

Behavioural Learning Objectives

1. The learner is able to contribute to facilitating and implementing quality education for all, ESD and related approaches at different levels.
2. The learner is able to promote gender equality in education.
3. The learner is able to publicly demand and support the development of policies promoting free, equitable and quality education for all, ESD and related approaches as well as aiming at safe, accessible and inclusive educational facilities.
4. The learner is able to promote the empowerment of young people.
5. The learner is able to use all opportunities for their own education throughout their life, and to apply the acquired knowledge in everyday situations to promote sustainable development.

Suggested Topics for SDG 4 "Quality Education"

- ✓ Education as a public good, a global common good, a fundamental human right and a basis for guaranteeing the realization of other rights
- ✓ The Education 2030 agenda, and innovative and successful case studies from across the globe
- ✓ The relevance of inclusive and equitable quality education and lifelong learning opportunities for all (formal, non-formal and informal learning, including the use of ICT) and at all levels for improving people's lives and sustainable development
- ✓ Reasons for a lack of access to education (e.g. poverty, conflicts, disasters, gender inequality, lack of public financing of education, growing privatization)
- ✓ Global attainment of literacy, numeracy and basic skills
- ✓ Diversity and inclusive education

- ✓ Basic skills and competencies needed in the 21st century
- ✓ Knowledge, values, skills and behaviours needed to promote sustainable development
- ✓ The concept of education for sustainable development (ESD), whole-institution approach as a key strategy to scale up education for sustainable development, and pedagogy for developing sustainability competencies
- ✓ Youth empowerment and empowerment of marginalized groups

Integrating ESD in Teacher Education

Educators are powerful change agents who can deliver the educational response needed to achieve the SDGs. Their knowledge and competencies are essential for restructuring educational processes and educational institutions towards sustainability. Teacher education must meet this challenge by reorienting itself towards ESD. The monitoring and evaluation of the DESD has identified many good examples of integrating ESD in teacher education and shown that the support of teachers has been a key condition to the successful adoption and implementation of ESD (UNESCO, 2014a).

However, efforts to prepare teachers to implement ESD have not advanced sufficiently. More work still needs to be done to reorient teacher education to approach ESD in its content and its teaching and learning methods. That is why the GAP's Priority Action Area 3 focuses on building capacities of educators. One of the proposed actions in this area is to integrate ESD into pre-service and in-service teacher education programmes (UNESCO, 2014b).

In order for teachers to be prepared to facilitate ESD, they must develop sustainability key competencies (including knowledge, skills, attitudes, values, motivation, and commitment). But in addition to general sustainability competencies, they also need ESD competencies, which can be described as a teacher's capacity to help people develop sustainability competencies through a range of innovative teaching and learning practices.

To facilitate the development of ESD competencies in teacher education, changes in the content and structure of pre-service and in-service teacher education are necessary. ESD should provide the fundamental orientation to teacher education programmes. Subject disciplines, subject didactics, educational sciences and practice-oriented studies should include methodology principles and subject knowledge from ESD.

Learning on the basis of real societal challenges in local contexts requires cooperation with external partners. Modules should thus enable access to external partners (such as communities, non-formal educational institutions and ESD networks) and include possibilities for project oriented collaboration.

Learning Objectives for Teachers to Promote ESD

- ✓ Know about sustainable development, the different SDGs and the related topics and challenges
- ✓ Understand the discourse on and the practice of ESD in its local, national and global context
- ✓ Develop their own integrative view of the issues and challenges of sustainable development by taking into account the social, ecological, economic and cultural dimensions from the perspective of the principles and values of sustainable development, including that of intergenerational and global justice
- ✓ Take disciplinary, interdisciplinary and transdisciplinary14 perspectives on issues of global change and their local manifestations
- ✓ Reflect on the concept of sustainable development, the challenges in achieving the SGDs, the importance of their own field of expertise for achieving the SDGs and their own role in this process
- ✓ Reflect on the relationship of formal, non-formal and informal learning for sustainable development, and apply this knowledge in their own professional work
- ✓ Understand how cultural diversity, gender equality, social justice, environmental protection and personal development are integral elements of ESD and how to make them a part of educational processes
- ✓ Practice an action-oriented transformative pedagogy that engages learners in participative, systemic, creative and innovative thinking and acting processes in the context of local communities and learners' daily lives
- ✓ Act as a change agent in a process of organizational learning that advances their school towards sustainable development
- ✓ Identify local learning opportunities related to sustainable development and build cooperative relationships
- ✓ Evaluate and assess the learners' development of cross-cutting sustainability competencies and specific sustainability-related learning outcomes

Additionally, ESD requires internationalization as an element of teacher education, in particular by having international debates about ESD and discussions about cultural diversity as integral components of modules. This means that students should be given the opportunity to study abroad, facilitating practical experiences.

To integrate ESD more fully into teacher education, the content and the organization of teacher education programmes should be developed with the participation of key stakeholders such as students, teachers, local NGOs and ESD experts. To facilitate innovation, it is crucial for the

educational institution to have the necessary structural conditions as well as the freedom to engage in organizational learning processes.

As there are still many teachers who have not learned about ESD in their pre-service training, they need to have access to in-service training on the subject. On one hand, it opens up opportunities for developing the necessary knowledge and competencies to participate in the process of sustainable development. On the other, this professional development is a prerequisite for reorienting educational processes and educational institutions. Here it is essential that professional development for ESD be available to more than one teacher per institution, and that it be recognized by the educational systems regarding applications, promotions, etc. National and regional centres of expertise for ESD can also develop opportunities for professional development and advisory services, using the potential of government and non-governmental organizations, universities and other institutions of higher education.

Possible Modules of a Teacher Education Curriculum with ESD as a Key Element

- ✓ Basic concepts of sustainable development from a local, national and international perspective ESD concepts from a local, national and international perspective
- ✓ Disciplinary, interdisciplinary and transdisciplinary views of key examples of sustainability challenges
- ✓ Project-oriented work on specific problems of local, national and global importance in cooperation with educational institutions and other (local) partners
- ✓ Research-based analysis of ESD processes in different learning settings (such as schools, colleges or non-formal educational institutions)
- ✓ Practical experiences with ESD approaches and their critical reflection

CONCLUSION

ESD can contribute to achieving the SDGs by, first, developing cross-cutting sustainability competencies that are needed to deal with many different sustainability challenges and to relate the different SDGs to each other. Second, ESD can equip learners with the specific cognitive, socio-emotional and behavioural learning outcomes that enable them to deal with the particular challenges of each SDG.

To make it possible for everyone around the world to take action in favour of the SDGs, all educational institutions must consider it their responsibility to deal intensively with sustainable development issues, to foster the development of sustainability competencies and to develop the specific learning outcomes related to all SDGs. Therefore it is vital not only to include SDG-related contents in the curricula, but also to use action-oriented transformative pedagogy.

Education officials, policy-makers, educators, curriculum developers and others are called upon to rethink education in order to contribute to the achievement of the SDGs within their

timeframe, between now and 2030. This guidance provides an orientation to the sustainability competencies and specific cognitive, socio-emotional and behavioural learning outcomes that are relevant to this goal, and it outlines what is needed to implement learning for the SDGs through ESD.

REFERNCES

- Haan, G. (2010). The development of ESD-related competencies in supportive institutional frameworks. *International Review of Education*, Vol. 56, No. 2, pp. 315–328.
- German-speaking network Teacher Education for Sustainable Development. (2015). *Teacher education for a sustainable development from pilot projects and initiatives to new structures. A memorandum on reorienting teacher education in Germany, Austria and Switzerland*.http://www.leuphana.de/fileadmin/user_upload/portale/netzwerklena/Memorandum_LeNa_English_Stand_ August_15.pdf (Accessed 22 June 2016).
- Rieckmann, M. (2012). Future-oriented higher education: Which key competencies should be fostered through university teaching and learning? *Futures, Vol. 44*, No. 2, pp. 127–135.
- Rieckmann, M. (2017). *Education for Sustainable Development Goals: learning objectives.* United Nations Educational, Cultural and Scientific Organization: Paris.
- Rychen, D.S. (2003). Key competencies: Meeting important challenges in life. Rychen, D.S. and Salganik, L.H. (eds). Key competencies for a successful life and well-functioning society. Cambridge, MA, Hogrefe and Huber, pp. 63–107.
- UNESCO. (2014). Shaping the Future We Want. UN Decade of Education for Sustainable Development (2005-2014). Final Report. http:// unesdoc.unesco.org/images /0023/002301 /230171e.pdf (Accessed 14 June 2016).
- UNESCO. (2014b). *UNESCO Roadmap for Implementing the Global Action Programme on Education for Sustainable Development.* http:// unesdoc.unesco.org/images /0023 /002305/230514e.pdf (Accessed 14 June 2016).
- UNESCO. (2015b). Thematic Indicators to Monitor the Education 2030 Agenda. Technical Advisory Group Proposal. http://www.uis. unesco.org/Education/Documents /43- indicators-to-monitoreducation2030.pdf (Accessed 29 October 2016)
- Wals, A.E.J. (2015). *Beyond unreasonable doubt. Education and learning for socio-ecological sustainability in the Anthropocene.* Wageningen, Wageningen University. https:/ /arjenwals.files.wordpress.com/2016/02/8412100972_rvb_inauguratie-wals_ oratieb oekje_ v02.pdf (Accessed 14 June 2016)
- Wiek, A./Withycombe, L., Redman, C.L. (2011). *Key competencies in sustainability: a reference framework for academic program development*. Sustainability Science, Vol. 6, No. 2, pp. 203–218

EFFECTIVENESS OF VALUE ANALYSIS MODEL IN DEVELOPING SOCIAL SENSITIVITY

Dr. Manju A.

Principal (i/c), CPAS College of Teacher Education, Vaikom

ABSTRACT

Value education is a planned educational action aimed at the development of proper attitudes, values, emotions and behaviour patterns of the learner. The present study intends to find the Effectiveness of Value Analysis Model in Developing Social Sensitivity among Secondary School Students. The study revealed that Value Analysis Model is effective in developing Social Sensitivity among Secondary School Students.

KEY WORDS: Value Analysis, Social Sensitivity

INTRODUCTION

The purpose of education is the integral development of a child. The most important aim of education since the beginning of human culture was that of character formation. It is possible only through the inculcation of values in the process of education. It is the ultimate end of education. Values are principles, which guide man's desires, feelings and actions. It also viewed as socially approved goals and desires and as social end. Values give direction and firmness to life.

Values in general could be classified broadly under four headings: Personal, Social, Moral and Spiritual. All type of values is equally important which shapes the personality. These values could be generated in the young minds only through proper education.

Man is social being who lives in the society that makes him socialized and cultured. Social values refer to those values, which are others oriented. These values are cherished and practiced because of our association with others. These values are concerned with the welfare of society. Social values are always practiced in relation to our neighbours, community, society, nation and the world. Accountability, brotherhood, concern for environment, courtesy, tolerance, justice, sympathy, social conformity, social adjustment, friendship, social sensitivity, friendship, helpfulness, cooperation, kindness etc., are the examples of social values. Social values change with the

change of social circumstances. These are external relationship of the individual with society.

Value education means value oriented education that is, inculcating in the children a sense of humanism, a deep concern for the well-being of others and the nation. It does not mean value imposition. It is to develop the social, moral, aesthetic and spiritual side of a person which are often undermined in formal education. The inculcation of values is by no means a simple matter. In all its comprehensiveness, value education involves developing sensitivity to values, an ability to choose the right values, realizing them, internalizing them and living in accordance with them. Therefore, it is a long process. Values can be achieved directly, indirectly or incidentally.

In most of the schools and institutions value education is imparted through direct method. In this approach the values to be inculcated and developed are explained, discussed and illustrated through stories, anecdotes, moral dilemmas and real life events. In this approach, a model of teaching in value education plays a prominent role. It is a way of thinking and doing for the development of moral caring, judging and acting.

here are different models of teaching in value education. For the present study, Value Analysis Model is used to develop social sensitivity among secondary school students. The value analysis model starts with presenting the value dilemma and this model is suited for solving the value conflicts related to society by using various strategies. It is necessary to study the effectiveness of value analysis model in developing the Social Sensitivity. The present study is entitled as "Effectiveness of Value Analysis Model in developing Social Sensitivity.

OBJECTIVES

1. To find out the Social Sensitivity of Secondary School Students.
2. To find out the significant difference if any between the Social Sensitivity of Secondary School Students due to the variation in their gender, locality and type of management.
3. To find out the effectiveness of Value Analysis Model in developing Social Sensitivity among Secondary School Students.
4. To compare the Social Sensitivity of Secondary School Students after the application of Value Analysis Model based on gender, locality and type of management.

HYPOTHESES

1. There will be no significant difference between the means of scores of Social Sensitivity of Secondary School Students based on gender, locality and type of management before the implementation of instructional material on Value Analysis Model.

2. There will be no significant difference between means of scores of pre-test and post-test of Social Sensitivity of Secondary School Students.
3. There will be no significant difference between the means of scores of Social Sensitivity of Secondary School Students based on gender, locality and type of management after the implementation of instructional material on Value Analysis Model.

METHODOLOGY

Experimental Research Method was adopted in the study. The sample selected for the study consisted of fifty-three Secondary school students of Kottayam District. The sample includes male and female students; students from aided and unaided schools and students from urban and rural area. Stratified random technique was used for selecting sample from the population. The samples were drawn from two schools in terms of Management.

TOOLS OF THE STUDY

1. Social Sensitivity Scale prepared and standardized by Dr. P.P. Shajimon and Jinny Jacob
2. Instructional material based on Value Analysis model prepared by the investigator
3. Worksheets on Value Analysis Model

PROCEDURE OF THE STUDY

For the present study, Pre-test Post-test Single group design was employed. After the selection of sample, investigator was administered Social Sensitivity Scale as pre-test. All the students were exposed to Value Analysis Model of teaching to develop Social Sensitivity. After the completion of the instruction again Social Sensitivity Scale as post-test was administered to sample. The data collected was analysed using statistical treatments. Mean, Standard deviation and‘t’ test was employed for the analysis of data.

ANALYSIS AND INTERPRETATION

1. Comparison of the means of scores of Social Sensitivity of Secondary school students based on Gender, Locality and Type of Management before the implementation of instructional material on Value Discussion Model

To find out the significant difference between means of scores of Social Sensitivity of Secondary school students based on Gender, Locality and Type of Management, ‘t’- test was used.

Table 1

The significant difference between means of scores of Social Sensitivity of Secondary School Students based on Gender, Locality and Type of Management before the implementation of instructional material on Value Discussion Model

Category		Number	Mean	SD	't' value	Level of Significance
Gender	Male	25	97.21	6.89	2.33	Significant at
	Female	28	92.10	9.06		0.05 level
Locality	Urban	25	90.02	9.24	2.40	Significant at
	Rural	28	84.24	8.11		0.05 level
Type of	Aided	26	98.44	7.98	2.31	Significant at
Institution	Unaided	27	94.11	5.39		0.05 level

Table 1 shows that all the calculated't' values 2.31,2.33 and 2.40 is greater than the table value 1.98 at 0.05 level of significance. This shows that there is a significant difference between the means of scores of Social Sensitivity of Secondary school students based on Gender, Locality and Type of Management before the implementation of instructional material on Value Discussion Model. So, the Null Hypotheses "there will be no significant difference between the means of scores of Social Sensitiveness of Secondary school students based on Gender, Locality and Type of Management before the implementation of instructional material on Value Discussion Model" is rejected.

2. Comparison of the means of scores of Social Sensitivity of Secondary school students based on Gender, Locality and Type of Management after the implementation of instructional material on Value Discussion Model

To find out the significant difference between means of scores of Social Sensitivity of Secondary school students based on Gender, Locality and Type of Management, 't'- test was used.

Table 2

The significant difference between means of scores of Social Sensitivity of Secondary School Students based on Gender, Locality and Type of Management after the implementation of instructional material on Value Discussion Model

Category		Number	Mean	SD	't' value	Level of Significance
Gender	Male	25	104.48	10.45	0.99	NS
	Female	28	102.15	5.8		
Locality	Urban	25	101.07	7.53	1.66	NS
	Rural	28	105.23	10.78		
Type of	Aided	26	106.58	5.79	1.58	NS
Institution	Unaided	27	103.73	7.26		

Table 2 shows that all the calculated't' values 0.99, 1.66 and 1.58 is less than the table value 1.98 at 0.05 level of significance. This shows that there is no significant difference between the means of scores of Social Sensitiveness of Secondary school students based on Gender, Locality and Type of Management after the implementation of instructional material on Value Discussion Model. So, the Null Hypotheses "there will be no significant difference between the means of scores of Social Sensitiveness of Secondary school students based on Gender, Locality and Type of Management after the implementation of instructional material on Value Discussion Model" is accepted.

3. Effect of Instructional Material Based on Value Analysis Model in Developing Social Sensitivity of Secondary School Students

To find out the effectiveness of Value Analysis Model, the significant difference between the means of scores of Pre-test and Post-test of Social Sensitivity of Secondary School Students was calculated and interpreted using the inferential statistics namely 't'-test.

Table 3

The significant difference between means of scores of Pre-test and Post-test of Social Sensitivity of Secondary School Students.

Test	Number	Mean	SD	't' value	Level of Significance
Pre-test	53	98.32	6.4	2.64	Significant at 0.01 level
Post-test	53	101.87	7.42		

From the table 3, it is clear that the calculated't' value 2.64 is greater than the table value 2.58 at 0.01 level of significance. This shows that there is a significant difference between the means of scores of pre-test and post-test of Social Sensitivity of Student Teachers. So, the Null Hypothesis "there will be no significant difference between the means of scores of pre-test and post-test of Social Sensitivity of Secondary school students" is rejected.

MAJOR FINDINGS

1. The Social Sensitivity of Secondary School students, before the implementation of instructional material on Value Analysis Model based on Gender, locality and Type of Management is significant.
2. The Social Sensitivity of Secondary School students, after the implementation of instructional material on Value Analysis Model based on Gender, locality and Type of Management is not significant.
3. The analysis of pre-test and post-test scores of Social Sensitivity of Secondary School students using 't' test revealed that the obtained 't' value 2.64 is significant at 0.01 level. The mean scores of pre-test and post-test helped the investigator to state that the students scored higher in the post-test compared to the pre-test which shows the effectiveness of instructional material on Value Analysis Model in developing Social Sensitivity.

CONCLUSION

The study revealed the effectiveness of instructional material on Value Analysis Model in inculcating and developing Social Sensitivity among Secondary School students. The findings would lead to a better understanding of the importance of Social Sensitivity which makes an individual to become a socially acceptable human being. It helps a person to lead a successful life in all spheres.

REFERENCES

- Manju, A. (2010). Developing valuing competencies among secondary level student teachers through value discussion model. *Proceedings of International Seminar on Peace Education: An orientation for Gen Next,* St. Thomas college of teacher education, Pala, Kerala, India.
- Passi. B.K., & Singh, P. (1990). *Effectiveness of Value Analysis Model in developing Value Clarifying Competencies of Student Teachers*. Indore, DAVV.
- Goel, A., & Goel, L. (2005). *Human values and Education*. Deep & Deep Publication, New Delhi.
- Ruhela, S.P. (1986). *Human Values and Education.* Sterling publishers Pvt Ltd.
- Garret, H.E. (1979). *Statistics in psychology and education*. Bombay: Fetter and Simons.
- H. Dhand et al. (1995). *Value Clarification Strategies*. National Psychological Corporation, Agra.

EFFICACY OF CONCEPT ATTAINMENT MODEL ON PROCESS SKILLS IN PHYSICS

Sreeja S. Kaimal
Assistant Professor
C.P.A.S. College of Teacher Education Muvattupuzha

ABSTRACT

This study aimed at finding the efficacy of Concept Attainment Model on Process Skills in Physics by using experimental method. A sample of 60 students was selected from Venkideswara H.S.S Tripunithura. Among them 30 Students were randomly selected for each Controlled and Experimental group. In this study Quasi-experimental group design was used. The data were collected and analysed with the help of statistical procedures such as Mean, Standard deviation and Analysis of Covariance. The major findings of the study are 1) the effect of Concept Attainment Model is significantly higher than that of the Existing Activity Oriented Method. 2) The effect of Concept Attainment Model on Process Skills in Physics in terms of its components- Recognising and defining a problem, Formulating hypotheses, Collecting data, Interpreting data, Evaluating hypotheses, Formulating generalizations are significantly higher than that of the Existing Activity Oriented Method.

KEY WORDS: Concept Attainment Model, Process Skills in Physics

INTRODUCTION

The progress, welfare and security of a nation depend on a rapid planned and sustained growth in the quality and extent of education and research in science. Science is universal and so can be its benefits. We are in a crucial stage in the progress of development and transformation. In this context, the role of Science is of utmost importance. Science education being an important component of the education system should contribute to the solution of the problems of the country by developing desirable understanding of skills. "Science in fact is more than a subject: it is a method of acquiring knowledge" (Griggs, 1990). This is an age where all the modern society is completely drawn in to the scientific environment and Science has become an integral part of our life. Thus knowledge in Science is necessary to lead a successful life and also to cope up with numerous problems in life. Report of the Education Commission (1964-66) has remarked "There is of course one thing about which we feel no doubt or hesitation: education, Science based and

in coherence with Indian culture and values can alone provide the foundation and also the instrument for nation's progress, security and welfare."

Science as a Process

The process of doing 'Science' is the science process skills that scientists use in the process of doing science. The Science Process Skills forms them foundations for scientific method. Science process skills are the set of procedures which are employed by scientist during investigation and discoveries. SAPA (Science: A Process Approach) describes that scientific process skills are defined as transferable skills that are applicable to many sciences that reflect the behaviour of scientists. By observing the above definitions it can be inferred that science process skills are the set of intellectual skills which are performed by our mind in association with sensory organs during the process of science. Curriculum reforms and projects stresses on process skills through different approaches for teaching science. All the Curriculum reforms and projects findings reveals that the process approach is more effective in increasing pupils' science achievement. At present, there is a shift in the Science curriculum to emphasise from content of science to process.

The American Association for the Advancement of Science (AAAS), UNESCO (1992) identified thirteen process skills under two major classification namely Basic and integrated. Basic Science Process Skills (BSPS) are Observing, Classifying, Communicating, Measuring, Predicting and Inferring. These basic process skills are foundation for acquiring the integrated process skills. Integrated Science Process Skills (ISPS) are identifying and defining variables, describing the relationship between variables, formulating and testing hypothesis, collection of data, designing investigation and experimentation, manipulating the variables, identifying the cause and effects, acquiring organising and displaying the data with charts, graphs, tables. All these process skills are interrelated; there is no sequence or particular order of these skills.

Integrated Science Process Skills (ISPS) during the process of doing science, scientist and students employ both Basic and integrated science process skills. By employing the process skills one can acquire the procedural of doing science and conceptual clarity Nature of Science. Process Skills domain has its own values and 14 identity in science. It is the most important domain wherein all other domains of science can be developed. Process skills are inventive and exciting activity to search the knowledge. These skills must be nurtured among the students in a systematic manner so that they become scientifically literate in their life. The nature of science process skills describes the systematic method of knowing science. Science is a part of school Education and it act as a starting point for children intellectual and personal development results individual can prepare better life. Such teaching methods should be adopted so that school science should prepare the children to understand basic scientific concepts and process skills and its application. It was stated by reports and documents that one of the main objectives of science teaching is development of process skills Harlen (1999) stated that the process skills and content of science are inseparable, "Process skills must be taught in relation to some type of

content". Curriculum for science education (NCERT, 1990; NCF, 2000; NCF, 2005) also emphasising the process skills. The present science education is far away from the above vision. Science is being taught in the schools as a body of established facts obtained by individuals using infallible methods.

The present classroom practices emphasize on the product side of science rather than the method of acquiring the knowledge, which is the scientific method that forms the process side of science. Science Teaching should move away from rote learning. Even though educators have tried as much as possible to design teaching and learning activities in a variety of ways so that students can be active, only a few students can be active, while others are only passive to take lessons and receive material delivered by educators. This happened because the students lacked the courage to ask questions and express their opinions and the lack of enthusiasm of students in following the learning process. This can be seen when educators provide questions related to the material that has been submitted. From the questions given, only a few students responded. When educators ask students to ask for material that has not been understood, the response of students is just silent. From the above events, of course, this can lead to not achieving a goal of the teaching and learning process. Teachers of science need to give ample scope for the students to expose themselves so that children can involve physically and intellectually in the learning process and acquire concepts and skills for their personal long term academic and personal success learning through one's own experience is more realistic, personal and meaningful.

CAM is one such a method facilitates the students to participate actively in the learning process for acquiring knowledge and skills. Concept attainment is "the search for and listing of attributes that can be used to distinguish exemplars from non-exemplars of various categories" (Bruner, Goodnow & Austin, 1967). It is designed to teach students to attain concepts and analyse thinking strategies (Joyce & Weil, 2004). This model has been developed from the study of thinking. This model is concerned with two separate but related ideas: the nature of concepts themselves and the thinking processes used by individuals to learn concepts. Bruner's ideas regarding this have been shaped into a model of teaching by Joyce and Weil (1980).

OBJECTIVES

1. To prepare instructional materials in Physics based on Select Information Processing Models of Teaching for the students of standard IX.
2. To find out the effect of Concept Attainment Model on Process skills in Physics when compared with Existing Activity Oriented Method of teaching among the students of standard IX.
3. To compare the effect of Concept Attainment Model with Existing Activity Oriented Method of teaching in terms of Process Skills in Physics

   a. Recognising and defining a problem

b. Formulating hypotheses

c. Collecting data

d. Interpreting data

e. Evaluating hypotheses

f. Formulating generalizations among the students of standard IX in the secondary schools of Ernakulum District.

HYPOTHESES

1. There is significant difference between the means of scores on post-test on process skills in physics among the students of experimental and control group
2. There is significant difference between the means of scores on post-test on process skills in terms of components.

   a. Recognising and defining a problem

   b. Formulating hypotheses

   c. Collecting data

   d. Interpreting data

   e. Evaluating hypotheses

   f. Formulating generalizations among the students of experimental group and the control group.

METHODOLOGY

Quasi-experimental method was employed for the studies with pre-test post-tests non-equivalent group design, with purposive sample in the form of enact sections of class IX of the same school. The routine treatment with existing activity oriented method was applied to the first group, the control group, and the one experimental factor " teaching with CAM as treated to the second group, during the academic session 2012-2013. The sample consisted of 60 students. Among the sample of 60 students, group 1 comprised of 30 students, group 2 comprised of 30 students, following Kerala state syllabus. A purposive sample was used for the study drawn from the population of class IX students of Kerala state. The two classes were randomly termed as the control and the one experimental group. Each group contained male and female students, having age group 13-15 year.

TOOLS USED FOR THE STUDY

1. Lesson transcripts for teaching the representative units using Concept Attainment Model
2. Process Skills in Physics for pre and post-tests.

ANALYSIS AND INTERPRETATION

1. Effect of Concept Attainment Model of Teaching compared with the Existing Activity Oriented Method on Process Skills in Physics

In order to test the effect of the Concept Attainment Model of teaching compared with the Existing Activity Oriented Method on Process Skills in Physics, the investigator formulated the null hypothesis $H_0$1.

$H_0$1: There is no significant effect of the Concept Attainment Model of teaching compared with the Existing Activity Oriented Method on Process Skills in Physics.

The investigator tested the null hypotheses $H_0$1 using the statistical technique, ANCOVA. The result of the Analysis of the effect of CAM of teaching on the post test scores on Process Skills in Physics are given in the table 1.

Table 1

Result of the Analysis of the Effect of Concept Attainment Model of Teaching on the Post test Scores on Process Skills in Physics.

Source of variance	Type III sum of squares	df	Mean square	F	p value
Between Groups	1690.62	1	1690.617	59.845*	.000
Pretest on Process Skills in Physics	30.385	1	30.385	1.076	.304
Within Groups	1553.76	55	28.250		
Corrected Total	4512.333	59			

From the table 1, it is observed that F value $F_{(1, 55)} = 59.85$, $p < .05$), is significant at .05 level, so the null hypothesis that 'There is no significant effect of the Concept Attainment Model of teaching compared with the Existing Activity Oriented Method on Process Skills in Physics" is rejected. Therefore the Concept Attainment Model of teaching is found to be more effective than the Existing Activity Oriented Method on the attainment of Process Skills in Physics

Table 2

Estimated Marginal Means of the Posttest Scores on Process Skills in Physics of the CAM and the Control Group

Experimental condition	Mean	Mean Difference	SD	Sig. (p value)	95% Confidence Interval Lower Bound	Upper Bound
CAM group	40.126					
		13.92*	1.799	.000	10.312	17.523
Control group	26.208					

*Significant at .05 level

The table 2 shows that the adjusted mean or estimated marginal mean of the posttest scores on Process Skills in Physics of the CAM group is 40.13and that of Existing Activity Oriented Method group (control group) is 26.21. The mean difference 13.92 is significant at .05 level. Therefore it is clear that CAM group is superior to EAOM group in terms of posttest score on Process Skills in Physics.

2. Effect of Concept Attainment Model of Teaching Compared with the Existing Activity Oriented Method on the Components of Process Skills in Physics

In order to test the effectiveness of the Concept Attainment Model of teaching compared by the Existing Activity Oriented Method on the components of Process Skills in Physics, The investigator used ANCOVA.

a) Effect of Concept Attainment Model of teaching over the Existing Activity Oriented Method for the component Recognising and defining the problem

To compare the effect of CAM over Existing Activity Oriented Method on Process Skills in Physics with respect to the component Recognising and defining the problem, the investigator formulated a null hypothesis $H_0$2.

$H_0$2: There is no significant effect of the Concept Attainment Model of teaching over the Existing Activity Oriented Method for the component Recognising and defining the problem

The data related to this hypothesis is analysed using ANCOVA. The details of the effect of CAM over Existing Activity Oriented Method on Process Skills in Physics with respect to the component Recognising and defining the problem, when the effect of pre-test scores on process skills in Physics is controlled by ANCOVA is given in the table 3.

Table 3

Sum of Squares, Degrees of Freedom, Mean Square and F value for the Components of Process Skills in Physics

Source of variance	Type III sum of squares	df	Mean square	F	p value
Between Groups	63.32	1	63.32	28.40*	.000
Pre-test on Process Skills in Physics	2.59	1	2.59	1.16	.286
Within Groups	122.61	55	2.23		
Corrected Total	2267.00	60			

Table 3 shows that the calculated F value for the component, Recognising and defining, $F_{(1, 55)}$ =28.40, p< .05), is significant at .05 level. So the null hypothesis $H_0$2 'There is no significant effect of the Concept Attainment Model of teaching over the Existing Activity Oriented Method on the post test scores on component of Process Skills in Physics is not accepted. Hence the investigator concludes that the effect of Concept Attainment Model over the Existing Activity Oriented Method is significant on the components of Process Skills in Physics.

b) Effect of Concept Attainment Model of teaching over the Existing Activity Oriented Method for the component formulating hypothesis:

To compare the effect of CAM over Existing Activity Oriented Method on Process Skills in Physics with respect to the component Formulating hypothesis, the investigator formulated a null hypothesis $H_0$3.

$H_0$3: There is no significant effect of the Concept Attainment Model of teaching over the Existing Activity Oriented Method for the component Formulating hypothesis.

The data related to this hypothesis is analysed using ANCOVA. The details of the effect of CAM over Existing Activity Oriented Method on Process Skills in Physics with respect to the component Formulating hypothesis, when the effect of pre test scores on process skills in Physics is controlled by ANCOVA is given in the table 4.

Table 4

Sum of Squares, Degrees of Freedom, Mean Square and F value for the Components of Process Skills in Physics

Source of variance	Type III sum of squares	df	Mean square	F	p value
Between Groups	45.98	1	45.98	23.99*	.000
Pretest on Process Skills in Physics	2.48	1	2.48	1.295	.260
Within Groups	105.45	55	1.92		
Corrected Totals	2141.00	60			

From the table 4, the investigator observes that the calculated F values for the component, Formulating hypothesis $F_{(1, 55)}$ =23.99, p< .05), is significant at .05 level. So the null hypothesis $H_0$3, 'There is no significant effect of the Concept Attainment Model of teaching over the Existing Activity Oriented Method on the post test scores on components of Process Skills in Physics is not accepted with respect to the components of Process Skills in Physics. Hence the investigator concludes that the effect of CAM over the EAOM is significant on the components of Process Skills in Physics.

c) Effect of the Concept Attainment Model of teaching over the Existing Activity Oriented Method for the component collecting data

To compare the effect of CAM over Existing Activity Oriented Method on Process Skills in Physics with respect to the component Formulating hypothesis, the investigator formulated a null hypothesis $H_0$4.

H_0 4: There is no significant effect of the Concept Attainment Model of teaching over the Existing Activity Oriented Method for the component collecting data.

The data related to this hypothesis is analysed using ANCOVA. The details of the effect of CAM over Existing Activity Oriented Method on Process Skills in Physics with respect to the component collecting data, when the effect of pre test scores on process skills in Physics is controlled by ANCOVA is given in the table 5.

Table 5

Sum of Squares, Degrees of Freedom, Mean Square and F value for the Components of Process Skills in Physics

Source of variance	Type III sum of squares	Df	Mean square	F	p value
Between Groups	25.17	1	25.17	11.08*	.002
Pretest on Process Skills in Physics	.652	1	.652	0287	.594
Within Groups	124.93	55	2.27		
Corrected Total	2036.00	60			

Table 5 reveals that the calculated F value for the component Collecting data $F_{(1, 55)}$ =11.08, p< .05), are significant at .05 level. So the null hypothesis H_0 5, 'There is no significant effect of the Concept Attainment Model of teaching over the Existing Activity Oriented Method on the post test scores on components of Process Skills in Physics is not accepted .Hence the investigator concludes that the effect of CAM over the EAOM is significant on the components of Process Skills in Physics.

d) Effect of the Concept Attainment Model of teaching over the Existing Activity Oriented Method for the component Interpreting data

To compare the effect of CAM over Existing Activity Oriented Method on Process Skills in Physics with respect to the component Interpreting data, the investigator formulated a null hypothesis $H_0$5.

$H_0$5: There is no significant effect of the Concept Attainment Model of teaching over the Existing Activity Oriented Method for the component Interpreting data

Table 6

Sum of Squares, Degrees of Freedom, Mean Square and F value for the Components of Process Skills in Physics

Source of variance	Type III sum of squares	Df	Mean square	F	p value
Between Groups	58.94	1	58.94	27.62*	.000
Pretest on Process	2.73	1	2.73	1.281	.263
Skills in Physics					
Within Groups	117.31	55	2.13		
Corrected Total	2153.00	60			

From the table 6, the investigator observes that the calculated F value for the component, Interpreting data $F_{(1, 55)}$ = 27.62, p< .05), is significant at .05 level. So the null hypothesis $H_0$5 'There is no significant effect of the Concept Attainment Model of teaching over the Existing Activity Oriented Method for the component interpreting data' is not accepted.

e) Effect of the Concept Attainment Model of teaching over the Existing Activity Oriented Method for the component Evaluating hypothesis

To compare the effect of CAM over Existing Activity Oriented Method on Process Skills in Physics with respect to the component evaluating hypothesis, the investigator formulated a null hypothesis $H_0$5

$H_0$5: There is no significant effect of the Concept Attainment Model of teaching over the Existing Activity Oriented Method for the component Evaluating Hypothesis

Table 7

Sum of Squares, Degrees of Freedom, Mean Square and F value for the Components of Process Skills in Physics

Source of variance	Type III sum of squares	Df	Mean square	F	p value
Between Groups	38.34	1	38.34	14.24*	.000
Pretest on Process Skills in Physics	.212	1	.212	.079	.780
Within Groups	148.09	55	2.56		
Corrected Total	1909.00	60			

Table 7 shows that the calculated F value for the component, Evaluating hypothesis $F_{(1, 55)} = 14.24$, $p < .05$), is significant at .05 level. So the null hypothesis $H_0$5 'There is no significant effect of the Concept Attainment Model of teaching over the Existing Activity Oriented Method for the component evaluating hypothesis' is not accepted. Hence the investigator concludes that the effect of Concept Attainment Model over the Existing Activity Oriented Method is significant on the component of Process Skills in Physics.

f) Effect of the Concept Attainment Model of teaching over the Existing Activity Oriented Method for the component Formulating generalization

To compare the effect of CAM over Existing Activity Oriented Method on Process Skills in Physics with respect to the component formulating generalizations, the investigator formulated a null hypothesis $H_0$7

$H_0$7: There is no significant effect of the Concept Attainment Model of teaching over the Existing Activity Oriented Method for the component formulating generalizations

The data related to this hypothesis is analysed using ANCOVA. The details of the effect of CAM over Existing Activity Oriented Method on Process Skills in Physics with respect to the component formulating generalizations, when the effect of pre test scores on process skills in Physics is controlled by ANCOVA is given in the table 8

Table 8

Sum of Squares, Degrees of Freedom, Mean Square and F value for the Components of Process Skills in Physics

Source of variance	Type III sum of squares	df	Mean square	F	p value
Between Groups	49.08	1	49.08	19.17*	.000
Pre test on Process Skills in Physics	1.48	1	1.48	.577	.451
Within Groups	122.61	55	2.23		
Corrected Total	1832.00	60			

From the table 8, the investigator observes that the calculated F value for the component, Formulating generalisation $F_{(1, 55)} = 19.17, p < .05$), is significant at .05 level. So the null hypothesis $H_0 7$ 'There is no significant effect of the Concept Attainment Model of teaching over the Existing Activity Oriented Method for the component formulating generalizations' is not accepted. Hence the investigator concludes that the effect of Concept Attainment Model over the Existing Activity Oriented Method is significant for the component of Process Skills in Physics.

MAJOR FINDINGS OF THE STUDY

1. There is significant effect of Concept Attainment Model on Process Skills in Physics over Existing Activity Oriented Method.
2. There is significant effect of Concept Attainment Model of teaching over the Existing Activity Oriented Method for the component Recognising and defining a problem, , when pre test scores on Process Skills in Physics were treated as covariate
3. There is significant effect of Concept Attainment Model of teaching over the Existing Activity Oriented Method for the component Formulating hypotheses, when pre test scores on achievement in Physics were treated as covariate
4. There is significant effect of Concept Attainment Model of teaching over the Existing Activity Oriented Method for the component Collecting data,, when pre test scores on achievement in Physics were treated as covariate
5. There is significant effect of Concept Attainment Model of teaching over the Existing Activity Oriented Method for the component Interpreting data, when pre test scores on Process Skills in Physics were treated as covariate
6. There is significant effect of Concept Attainment Model of teaching over the Existing Activity Oriented Method for the component Evaluating hypotheses, when pre test scores on Process Skills in Physics were treated as covariate
7. There is significant effect of Concept Attainment Model of teaching over the Existing Activity

Oriented Method for the component Formulating generalizations, when pre test scores on Process Skills in Physics were treated as covariate

CONCLUSION

The study proved the potential of CAM in enhancing Process Skills in Physics over the Existing Activity Oriented Method with respect to the components of Process Skills in Physics viz. Recognising and defining a problem, Formulating hypotheses, Collecting data, Interpreting data, Evaluating hypotheses, Formulating generalizations. Therefore CAM for teaching suitable topics will lead the children and the science instructions to the desired end. The investigator anticipates that the findings of the study enrich the teaching-learning process of Physics at Secondary level.

REFERENCES

- Bruner, J. (1966). *Toward a theory of instruction*. Cambridge, MA: Harward University Press.
- Bruner, J. (1967). *A Study of Thinking*. New York, Science Edition.
- Celene & Suresh, K.P. (2012), *Science Process Skills*. Shipra Publications.
- Chitriv, U.G. (1983) *Evaluating Differential Effectiveness of Ausubel and Bruner Strategies for Acquisition of Concepts in Mathematics*. In Ausuble v/s Bruner Model for Teaching in School. New Delhi: Sterling publisher's Pvt. ltd.
- Joy, Mayer. R. (2012). Effects of Using the Concept Attainment Model with Inductive Reasoning with High School Biology Students. *Thesis and Disseration Monnata University*. Retrieved from http://scholarworks.montana.edu/xmlui/handle/1/1808.
- Joyce, Bruce & Weil, Marsha. (2005). *Models of teaching (5 ed)*. Prentice Hall of India Pvt.Ltd.
- Joyce, B. and Weil, M. (2005). *Models of Teaching*. (6th ed.). New Jerssey. Prentice-Hall of India Pvt. Ltd.
- Kaur, J. & Kaur, S. (2011). Effect of Concept Attainment Model of Teaching on Mathematical Achievement of Secondary School Students. *Journal of Educational Research & Extention*, 48(3), 37-45. Retrieved from indianjournals.com
- Kulkarni, U.K. (2006). *Skills and Strategies of Teaching*.Vijaya Publications, Pvt.Ltd Gadag.

7E LEARNING CYCLE - AN EFFECTIVE DESIGN TO RECTIFY MISCONCEPTIONS IN GEOMETRY

Dr. Sr. Beenamma Mathew
Assistant Professor, St. Thomas College of Teacher Education, Pala

ABSTRACT

Mathematics is the discipline which is incorporated with all disciplines. The effective schooling at secondary level is possible if the students are able to learn and use mathematics in a proper manner. As a rigor subject deep understanding of Mathematical concepts is a basic requirement for Mathematics learning. The learner in a constructivist classroom is not an empty slate and is not a passive listener. There is the chance for developing / constructing new mathematical ideas that may vague or wrong. Therefore a mathematics teacher should be capable enough to use appropriate instructional design to face the challenges occur during instruction. In this paper the investigator prepare an instructional material based on 7E Learning Cycle Model to help the students to overcome their Misconceptions during instruction.

KEY WORDS: Misconceptions in Geometry, 7E Learning Cycle Model

INTRODUCTION

The method of student learning in the 20th century was the exercise of rote memorisation. The focus of the class was the teacher surrounded with a disciplined and quiet environment. This procedure was unable to satisfy the needs of the learner and the society. Hence, Mathematics education in the 21st century reflects some changes in both student–teacher roles in the learning process. In the emerged situation, students construct ideas like scientists, with a problem to solve, materials to experiment with and a spirit of inquiry. Instead of the teacher, children direct and shape the process with multiple outcomes. In the Mathematics classroom the activities are open-ended. The social and cooperative environment and small group learning result in limitless possibilities of spontaneous flow of ideas.

A corresponding change took place on the views regarding 'what to learn' in Mathematics. As a fundamental discipline Mathematics provides tools and ways of thinking, that impact learning across the curriculum. Therefore, the present Mathematics curriculum is a challenging one that prepares every child to think mathematically- to develop the foundations in mathematical reasoning,

concepts and tools needed for advanced Mathematics education as well as enlightened living in the age of technology.

Misconceptions

In the constructivist view, learning involves the interpretation of new phenomena, situations and events including classroom instruction through the perspectives of the learner's existing knowledge. The student's existing knowledge may not be in accordance to scientific explanations in all times. Such conceptions made by students themselves due to many reasons (e.g. the method of teaching, examples, and text book) are named as Misconceptions. A Misconception happens when a person believes in a concept that is objectively false. Due to subjective nature of being human it can be assumed that everyone has some kind of Misconceptions.

Blosser (1987, as cited in Kaur, 2013) states that Misconceptions are also called as pre-conceptions, naive conceptions, naive theories, alternative conceptions and alternative frame works. Hancock (1940, as cited in Mestre, 1989) defines Misconception as any unfounded belief that does not embody the element of fear, good luck, faith or supernatural intervention.

Fisher (1985) reports that Misconceptions or erroneous idea may come from strong word association, confusion, conflict or lack of knowledge. They have certain characteristics in common as:

- They are at variance with conceptions held by experts in the field.
- A single Misconception or a small number of Misconceptions, tend to be pervasive (shared by many different individuals).
- Many Misconceptions are highly resistant to change or alteration, at least by traditional teaching method.
- Misconceptions sometimes involve alternative belief systems comprised of logically linked sets of propositions that are used by students in systematic ways.
- Some Misconceptions have historical precedence; that is some erroneous ideas put forth by students' today mirror ideas espoused by early leaders in the field.

Misconceptions interfere with students' learning when students use them to interpret new experiences. The learners are emotionally and intellectually attached to their Misconceptions because they have actively constructed them. Hence students bestow their Misconceptions with great reluctance (Mestre, 1999, as cited in Kaur, 2013).

Strike and Posner (1985, as cited in Kembitzky, 2009) who focus on Misconceptions within the worldview of constructivism, comment that students' prior knowledge consists largely of non-structured conceptions and theories. Misconceptions once formed are highly resistant to change (Clement, 1982; Shanghnessy, 1981). The reason for this is that, concept construction

requires considerable effort and consequently, there exists a great disinclination to abandon concepts in the face of contradictory evidence (Brown & Clement, 1987). The best practice in the constructivist environment to limit Misconception is to anticipate the probable Misconceptions and provide instructions accordingly. The constructivist view of Posner, Strike, and Gertzog (1982) led to develop Conceptual Change Models and Learning Cycles to confront this situation and thereby enhance learning.

The 7E Learning Cycle Model (Eisenkraft, 2003)

The Learning Cycle is the inquiry learning process pattern based on constructivist theory for learners to investigate scientific knowledge through science process skills. It is intended to help students progress from concrete to abstract thinking about content.

Robert Karplus a theoretical physicist at the University of California-Berkeley, became interested in science education in the late 1950s. His interest led to an exploration of children's thinking and their explanations of natural phenomena. In 1961 Karplus connected the developmental psychology of Jean Piaget to the design of instructional materials for science teaching. He continuously refined his ideas and tested the different instructional materials and observed the responses of children.

Karplus and Their (1967) described three phases of their model of science learning. The three phases were preliminary exploration, invention and discovery. Exploration refers to relatively instructional experiences in which students gather new information. Invention denotes a formal statement, often the definition and terms for a new concept. The discovery phase involves the application of the new concept to another, novel situation. This model gradually came to be known as Learning Cycle of Science Curriculum Improvement Study (SCIS). Lawson (1988) modified the terms used for the Learning Cycle. The modified terms are exploration, term introduction and concept application. But the conceptual foundation of the Learning Cycle remained essentially the same. Then many versions of the Learning Cycle appeared in science curricula with phases ranging in number from three to five (5Es) to seven (7Es). The goal of the 7E Learning Cycle Model is to emphasise the increasing importance of eliciting prior understanding and the extending or transfer of concepts.

The 7E Learning Cycle (Eisenkraft, 2003) is an instructional design model, which was developed from the 5E Learning Cycle (Bybee et al., 2006). The seven phases of the 7E Learning Cycle Model are explained below.

Elicit: In this phase the main aim is to emerge past experiences about learning and create a strong background for other phases. Beginning by only engaging the new issues with the old ones can be thought deficient in supporting the thinking abilities. For that, we should renew old information and learning experiences.

Engage: First, by drawing attention to the lesson, students are engaged to think about the

topic and ask their own questions. Typical activities related to this phase are asking a question, defining a problem and mind storming in adverse cases.

Explore: In this phase students have the reasoning opportunity about the key concepts required for exploring schemas and knowledge. Students should be encouraged to diverge from the main problem and reasoning for creating their own schemas.

Explain: Managing scientific concepts related to the topic is important in this phase. Students should have a mind structure in order to give alternative answers to the questions about topic and by the time they develop new thoughts within their observations in the explore phase, new concepts can be presented.

Elaborate: In elaborate phase, students think more in-depth on things they learn and apply them on different cases. They test ideas with details and explore even additive connections. Providing understanding for lessons and diversifying student understandings are critical behaviours for a teacher in this phase.

Evaluate: TheLearning cycle model creates specific opportunities for teachers in determining the evolution in the thinking levels of the students and also evaluating their learning rates. For instance, evaluation elements like concept maps, projects and summary reports about the topics can be used along traditional assessments like quiz forms.

Extend: The aim of adding a new phase to elaborate and evaluate phases is to show the teachers that applying some traditional and modern assessment ways is not the last process and underline the importance of the different applications for transferring information (Bransford, Brown, & Cocking, 2000).

NEED AND SIGNIFICANCE OF THE STUDY

The learning of Mathematics is a constructive process. Dewey (1945, as cited in Muzangwa, & Chifamba, 2012) points out that new objects and events should be related intellectually to those of earlier experiences. Mathematical knowledge therefore, should be constructed from related knowledge which the learner already has. It is therefore the role of the Mathematics educator to provide links between existing knowledge and the new knowledge, which means the new concept must build upon something that the student already knows. The clarity in the preliminary knowledge helps the student to link the new knowledge easily with the old one and thus learning happens very fast. Then teachers can cover the topics with speed and both teachers and students enjoy Mathematics.

Better understanding brings out accurate knowledge and mastery in concept formation. This

shows that the preliminary/prior/existing knowledge decides the depth of learning. The existing knowledge of learner may not be correct always. It may include partially correct information, incorrect information or Misconceptions. Therefore, the role of Misconception in the construction of students' mathematical idea is a contemporary issue in the scenario of Mathematics education. If a student has a Misconception prior to teaching a topic this may prevent him/her from learning the new topic properly, thereby leading to new Misconceptions. Hence, the constructivist frame work encourages teachers and experts in the field to develop and utilise new strategies and models to identify and rectify the Misconceptions created by student work.

The Misconceptions once rooted in the students' memory are hard to erase. Therefore, repeating a lesson or making it clearer will not help students who base their reasoning on strongly held Misconceptions (Champagne Klopfer & Gunstone, 1982; Mc Dermott, 1984; Resnick, 1983). The students are emotionally and intellectually attached to their Misconceptions, partly because they have actively constructed them and partly because they give ready methodologies for solving various problems. This tells that it is very important to recognize students' Misconceptions and to re-educate students to acquire correct mathematical thinking.

The present approach of learning- the constructivist approach-provides various models strategies and techniques to enrich classroom instruction. Among the different strategies of instruction, the 7E Learning Cycle Model gives momentous attention to the prior knowledge of the learner and thereby to the remediation of Misconceptions. Therefore, the investigator found that the 7E Learning Cycle Model is an appropriate strategy for making conceptual change in students as it sets background for revealing and confronting Misconceptions and modify them.

OBJECTIVE

1. To design an instructional material based on 7E Learning Cycle Model to rectify students Misconceptions in Geometry

Instructional material based on 7E Learning Cycle Model

To prepare the instructional material the investigator selected a topic from Geometry

Name of the Teacher	:	Beenamma Mathew	Subject	:	Mathematics
Name of the School	:		Unit	:	Geometry
Standard	:	VIII	Topic	:	Types of Quadrilaterals
Time	:	45 Minutes			

Instructional Objectives

At the end of the lesson the students will

- acquire knowledge about circle
- develop the understanding of circle and its features
- develop skill in drawing and identifying circles
- apply the above concepts and process in real life situations

Learning Outcomes

At the end of the lesson the students will be able to

- recall the concept circular shape
- give examples of objects having a circular shape
- observe the features of a circular shape
- suggest a method to draw circular shape with pencil and scale
- name these shapes as circles
- define a circle
- identify the centre of a circle
- define the radius and diameter of a circle
- mark points on a circle
- give more examples from real life

Prior Knowledge

The students have understanding of geometrical shapes.

The Misconceptions that need to be explored and overcome

- a closed oval shape is a circle
- a point on a circle means a point inside the circle or at centre of the circle
- circle means the interior region of the circle

Materials Required

- Ordinary classroom equipment
- Mathematical Instrument Box
- Work sheets
- Circular shaped objects

Activity/Process	Student activity /Response
Phase 1: Elicit The teacher shows some objects like coins,pappadam, eraser etc. and asks the students to name the shape they observe in these objects.	The students give response like oval shape or circular shape.
Phase 2: Engage The teacher divides the whole class into six groups and gives the following task to each group. With a pencil and scale draw the shape you observed in these objects in your note book.	The students discuss in their groups seriously and suggest their findings.
Phase 3:Explore The teacher demonstrates the procedure to draw circular shapes with a pencil and a scale. Asks the students to draw figures of the same shape but differing in size.	
Phase 4: Explain The teacher then asks each group to discuss and suggest a name for this geometrical shape. Next teacher encourages the students to define the concept circle and list the features identified. The teacher asks the students to suggest suitable names for that point and its distance after group discussion.The teacher redefines the concept Circe as the locus of all points equidistant from the centre. The teacher asks the students to mark different points on the circle and asks them to write their features as observed. The teacher defines the lines passes through the centre of the circle and joins any two points on the circle as the diameter of the circle.	The students call it a circle. Theysuggest that it has a common point and that the distance from the centre to any point on the circle is equal. The students name the common point as centre of the circle and the distance between the points and centre of the circle as 'radius' .The students identify that there are some lines which pass through the centre of the circle. These lines are twice the radius.
Phase 5: Elaborate The teacher asks the students to draw circles with different points as centre with different radii using compass	The students draw circles.

Phase 6: Evaluate

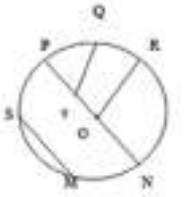
The teacher provides work sheets to each group and asks them to complete it.

Phase 7: Extend

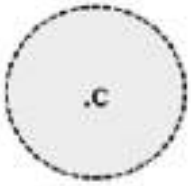
1. Draw different pattern using the concept circle
2. Collect patterns and other diagrams based on circles.

Work Sheet

1. Draw a circle of radius 6cm. and mark different points on it.
2. Draw a circle and mark as many diameters as possible
3. Observe the figure and list the radii and diameters



4. Observe the figure and answer the question. Which among these denotes the concept circle? Give reasons.



A. The point C
B. The dotted portion
C. The shaded region
D. The shaded region and doted part

CONCLUSION

Children learn to enjoy Mathematics rather than fear it (NCF,2005). The fear can be removed by involving students in mathematical knowledge construction in a free environment where they can rise up their questions, share their views and experiment their ideas- a constructivist environment. Based on the constructivist theory different models and learning cycles are developed. The 7E Learning Cycle Model not only provide a learner friendly environment but also is a platform to anticipate, identify and rectify the Misconceptions of learners. Therefore it is a worthy instructional design for mathematics teachers to address students' misconceptions and there by create interest towards Mathematics.

REFERENCES

- Bransford, J.D., Brown, A.L. & Cocking, R.R. (2000).How people learn. Washington, D.C.: National Academy Press.
- Brown, D., & Clement, J. (1987). Misconceptions concerning Newton's law of action and reaction: The underestimated importance of the third law. In J.D. Novak (Ed.), Misconceptions and educational strategies in science and mathematics. Proceedings of the international seminar, 3, 39-53
- Bybee, R. W., Taylor, J. A., Gardner, A., Van Scotter, P., Powell, J. C., Westbrook, A., &Landes N. (2006). The BSCS 5E Instructional Model: Origins, Effectiveness, and Applications. Colorado Springs: BSCS
- Champagne, A., Klopfer, L., &Gunstone, R. (1982). Cognitive research and the design change as Radical Reconstruction of Contexts. Science Education, 640-664.doi: 10.1002/sce.20377
- Clement, J. (1982). Algebra word-problems solutions: Thought processes underlying a common misconception. Journal for Research in Mathematics Education, 13 (1), 16-30
- Eisenkraft, A., (2003). Expanding the 5E model, a proposed 7E model emphasizes 'transfer of learning' and the importance of eliciting prior understanding. Science Education, 5(6), 57-59.
- Karplus, R., & Their, H. D. (1967).A new look at elementary school science. Chicago, IL: Rand McNally.
- Kaur, G. (2013). A review of selected literature on causative agents and identification strategies of students' misconceptions. Educationia Confab. 2(11), 79-94. Retrieved from http://www.confabjournals.com/ confabjournals /images/ 412201361840 complete %20 issue.pdf
- Kembitzky, K. A. (2009).Addressing Misconceptions in Geometry through Written Error Analyses.(Doctoral dissertation, the Ohio State University). Retrieved from ERIC database. (ED513658)
- Lawson, A. E. (1988). A Better Way to Teach Biology.American Biology Teacher, 50(5), 569-618.
- McDermott, L. (1984). Research on conceptual understanding of physics. Physics Today, 37, 24-32.
- Mestre, J. (1989). Why should mathematics and science teachers be interested in cognitive research findings? Academic Connections, 3-5, 8-11, The College Board, New York
- Muzangwa, J., & Chifamba, P. (2012).Analysis of errors and misconceptions in the learning of calculus by undergraduate students. Acta Didactica Napocensia, 5(2), 1-10.Retrieved from ERIC database. (EJ1054301)
- Resnick, L. (1983). Mathematics and science learning: A new conception. Science, 220, 477-478.

MODELS AND THEORIES ON INFORMATION NEEDS AND INFORMATION SEEKING BEHAVIOUR

Sr. Rosy Leema P.W.
UGC Librarian
Mount Carmel College of Teacher Education for Women, Kottayam

ABSTRACT

To thrive in this era, one needs varieties of information, no matter how versed one is in a field or profession. Information is new knowledge, which leads to a change in actions of people exposed to it. The concept of information needs and seeking behaviour of undergraduate has been of great concern to stakeholders especially in developing countries where access to information is seen as a mirage. Researchers have made it known that, the way students organize their learning and search for academic information could be considered very crucial to their overall performance at the end of the day. Thus, information needs and seeking behaviour is pertinent for undergraduate academic performance.

KEY WORDS: Information Needs, Information Seeking behaviour

INTRODUCTION

Information has become an essential tool for competitive advantage both at the individual, organisation, societal and national level. There are as many definitions of information as there are many disciplines and scholars. List (1998) defines information as "all ideas, facts, and imaginative works of the mind which have been communicated, recorded, published and/or distributed formally or informally in any format". Reitz (2004) quoted by Ojedokun (2007) describes the concept of information concretely as "all facts, conclusion, ideas, and creative works of the human intellect and imagination that have been communicated formally and informally, in any form."

Uttor (1999) also defines information as data valuable in the planning, decision making, and evaluation of any program. He goes on to say that it is data that have been subjected to some processing functions capable of answering a user's query, whether recorded, summarized, or simply collected, that assists decision making. The researcher concluded that information is required in man's daily activities in school, play, or work. More concretely, all the facts, conclusions, ideas, and creative works of the human intellect and imagination which have been communicated, formally or informally, in any form - print and electronic - is what information comprises.

Information is the key factor that necessitates Information need which is often understood in the science as evolving from vague awareness of something missing and as culminating in locating information that contributes to understanding and meaning information need as an anomalous state of knowledge (ASK) or gap in the individual's knowledge in sense making situations. There must be an attendant motive when a person experiences information needs. This attendant motive is what prompt the individual involve to take necessary steps to locate and identify resources required to meet his/her need when it arises which prompted the concept of information seeking.

Information Seeking Concept

Information seeking defies efforts to bend it to a model or scheme for the purposes of explication. However, one basic, if clumsy, means of describing the phenomenon exists in noting changes in an individual's thoughts, feelings, and actions during a single problem solving experience. After several studies into the research experiences of students, Carol Kuhlthau developed a model of information seeking she subbed the information search process (1993). Kuhlthau describes the information search process as moving through initiation, selection, exploration, formulation, collection, and presentation. While it was developed primarily to explain the formal research performed to complete class assignments, this model does organize information seeking into a set of experiential stages that offer a rough framework for discussing what occurs in the search for information and the transformation of that information into knowledge. Initiation begins with the recognition of an information need and involves the first attempts to resolve uncertainty. In behavioral psychology theories, uncertainty, novelty, and variety provide the initial motivation for information seeking (Wentworth & Witryol, 1990). A psychological desire to predict outcomes, to know the unknown, or to widen the range of experience serves as the primary impetus for information seeking from a behaviorist perspective. Gorge Kelly departed from both behaviorism and traditional cognitive psychology to suggest that knowledge, and the information seeing that builds knowledge, emerge from personal construction rather than purely objective retrieval and application (1955). The process and product of this construction is a unique experience influenced by the cognitive, affective, and material situation of the individual. The need to modify personal constructs as new situations and experiences emerge fires information seeking.

Drawing on theories of communication and on qualitative methodologies, the sense-making approach to understanding information seeking and use elaborates upon some of Kelly's ideas, regarding information seeking as a dynamic, constructive and negotiated phenomenon (Dervin, 1999). Individuals constantly make and unmake their understanding and perspectives through the exploration of the wide and deep nexus of information that is life. This exploration occurs as a communicative process, an intersecting dialogue that extends beyond data to include emotions, ideas, values, opinions, superstitions, and beliefs on the personal and social level. From the sense making perspective of complexity and change, the initiation of a specific act or situation of information seeking lies within this larger context. Once one recognizes the need to know, the

question of what one needs to know must be answered. In selection, the individual ascertains his information need in relation to a general topic or field of knowledge. Formal information seeking situations may require an individual to relate a highly organized taxonomy of subject areas to their particular question or problem. For example school term the papers, assignments, often ask students to investigate their research question using prescribed method, to utilize certain sources of information, and to present their findings in a uniform format. To complete the assignment, students must translate their information needs into the organizational systems that libraries and other information agencies have developed. However, all of this order and regulation belies the inherent messiness of actually placing an unanswered question inside the vast scheme of human knowledge.

Information is regarded as a collection of raw data, consisting of symbols, signs, signals and surrogates that can be compiled into messages (text, audio, images, or digital) for communication. Seeking is an expression of want demand, need or requirement that entails looking for or fetching an item or information. Behaviour is normally associated with the psychological and emotional status, dynamics and paradigm of an individual or organization in relation or reaction to internal and external stimuli. Information Seeking Behaviour The phrase 'Information Seeking Behaviour' has been defined variously by different authors. The following definitions of information seeking behaviour will, however, make the concept clearer. Information seeking behaviour is a means towards reducing uncertainty and solving, in this case, the information needs of an information consumer.

According to Krikels, Information seeking behaviour refers to "any activity of an individual that is undertaken to identify a message that satisfies a perceived need." King defined information seeking behaviour as "a manner in which a user conducts himself in relation to a given information environment. It is, therefore, regarded as essentially, a process of interaction between the user and the rest of the information system." Mick observed that the information producing and information seeking behaviours are closely linked and are the reasons why most information systems are not better accepted as they fail to provide linkage between the two activities. Thus, it stems from the above definitions that the act of searching or finding information can be ascribed to information seeking. Such an activity beings when the user perceived that the existing knowledge is less than that needed to deal with some problem(s). With the end of that perception, the process of seeking ends. Developing an instinct for information is a sort of behaviour and the process of searching the same is considered as information seeking behaviour.

Purpose for Seeking Information

Understanding the process of information seeking can help to answer questions such as: what should the library and information skills curriculum encompass; what specific skills and processes should be taught; what are the appropriate teaching methods; and what is the relationship of the library and information skills curriculum to the academic curriculum. Examining

the strategies, processes, successes and failures that students use and experience when searching for information, can evolve into a library and information skills curriculum which guides the students towards information literacy.

Information-seeking behaviour

Wilson, 1995 and as such its history may be considered to date back to the first studies of scientific communication and information use (Royal Society, 1948). Its use has also changed in line with developments in that field. Early references to information seeking behaviour would be referring to scientists' use of formal and informal communication channels and with a predominantly quantitative flavour unpacked, the expression 'information-seeking behaviour of scientists' would, typically be referring to the different proportion of scientists consulting with colleagues, using journals or books, employing abstracting services, receiving preprints or reprints, attending conferences, and their associated preferences in terms of channel. Now a day towards more theoretically grounded studies and to the application of qualitative, hybrid or methodologically pluralist techniques. The denotation and limited connotation of the expression has evolved in line with these developments. In this respect the nature and quality of what lies behind the expression is totally dependent on the quality of the studies themselves. The expression has as shallow or deep a conceptualization as the studies in which it is rooted or the sections to which it refers. In this respect, too, it is impossible clearly to separate any historical analysis of the use of the expression from consideration of the associated terms 'information needs and information uses'.

The 'Information-seeking' component of the expression might be thought to promise more than it delivers in implying a level of positive activity which might not be borne out by studies of the individual or group, where passive 'information gathering' might be a more accurate description than 'information-seeking patterns' distance the notion from that of 'behaviourism'. In this respect expression such as 'information seeking activities' or 'information-seeking patterns' distance the notion from that of 'behaviourism' and also link the notion philosophically closer to its true family of concepts connected with reasons and actions and further from concepts of the stimulus and response group. But, again, like the notion of information needs the notion of 'information-seeking behaviour' is such a useful catch all that these philosophical caveats are unlikely to see it going out of fashion.

Models and Theories on Information Seeking Behaviour

It is important to examine information seeking models as what students actually do when searching for information may be very different from what librarians think the students do. Theoretical models of information seeking, including both those based on empirical research and reflection on experience, can assist librarians in creating a library and information skills curriculum which responds directly to the students' needs. Attempting to fit a curriculum to the students' processes is a better approach than to change the students' processes and strategies to fit the curriculum. This strategy, for example, has been used in the field of literacy. Researchers and

teachers examined, both empirically and qualitatively, the processes and strategies that young children use when learning to read. These strategies and processes were used to create an early literacy curriculum (such as whole language combined with a phonics component) which responds directly to the needs of the learners.

Several models have been used to understand how library users seek for information and this includes both not limited to the following;

1. Anomalous State of knowledge

According to Belkin (1980), the proponent of the Anomalous State of knowledge (ASK) an information need arises when a human individual encounters an ASK. ASK is a situation where the user realizes that there is an anomaly in their state of knowledge with respect to the problem faced. The person may address the anomaly by seeking for information. After obtaining information the person will evaluate again whether the anomaly still exists. If it does, and the person is still motivated to resolve it and more information may be sought. Belkin's model can be summarized in three basic steps:

- A person recognizes a need for information (ASK)
- That person presents a query (request) to an IR system, which returns information in the form of text(s)
- The person then evaluates the information obtained from the system and determines if his/her need is completely satisfied, only partially satisfied or not satisfied at all.

2. Big Six Skills Model

Eissenberg (1992) quoted by Kakai (2004) also proposed the big six skills model of information seeking behaviour. The first skill of the model is Task Definition where a user defines a problem from an information point of view. However, users may plunge into information seeking before defining their topic or problem. The second skill is Information Seeking Strategy, which involves making decisions. The third skill is Location and Access which involves use of access tools, arrangement of materials within a library or parts of an information source. The fourth skill is Use of Information; which involves interacting, dialoguing, reading, viewing, questioning and reflecting on the information. The fifth skill is Synthesis, which is the application of all the information to the defined task. The sixth skill is Evaluation which involves the examination and assessment of the information problem solving process. Evaluation determines whether the information found met the defined task.

3. Cognitive Dimension of Behaviour

Dervin (1992) is prominent among proponents of models that focus on the cognitive dimensions of information behaviour. Dervin (1992)'s sense making metaphor describes humans as moving along through time and space until they reach a cognitive gap, where an information need is

perceived. Such gaps must be bridged through the acquisition of new information before they can move forward again. For him the aim of the person's information seeking endeavours is to make use of the current situation. It is also known as sense making model. He opined that the theory can be implemented by

I. a situation in time and space, which defines the context in which information problems arise;

II. a gap, which identifies the difference between the contextual situation and the desired situation (e.g.uncertainty);

III. an outcome, that is, the consequences of the sense-making process, and

IV. a bridge, that is, some means of closing the gap between situation and outcome.

4. Monitoring and Blunting Theory

Monitoring and Blunting theory posits that "when faced with an aversive event, people differ in their preference for information" (Fisher et al., 2006). The "monitors" are those who seek information in order to keep abreast of a situation; they are proactive in their searching, and they want to know current information. For these individuals, being informed about possible "threat-related" situations helps to alleviate their stress level and uncertainty about the situation (Fisher et al., 2006). The other reaction, blunting, is when people chose to avoid information about the situation which is causing them stress. Avoidance is their cure for anxiety. The Monitoring and Blunting theory is closely related to the Sense Making model of information seeking behaviour developed by Brenda Dervin (Fisher et al., 2006,). Sense Making can be divided into two components correlating to Monitoring and Blunting: Immediate Information Seeking, seen as Monitoring, and Deferred Information Needs, which can be viewed as Blunting. There is also a connection between these two theories in their acknowledgement that all individuals "seek information, albeit in different time frames" (Fisher et al., 2006). We all make sense of information. The important distinction being, we "sense make" at different speeds.

5. Information Intents Theory

The theory of Information Intents posits an "active-creative" (Fisher et al 2006) role for the information seeker. Todd's goal in developing this theory was to "provide a richer understanding of what happens in people's minds when they consume information" (Fisher et al., 2006). A building block example for this theory was Brooke's Fundamental Equation. This equation views information seeking as a three-fold process: what do people know, how does knowledge change as a result of information seeking and what effect do these changes have on the information seeker (Fisher et al., 2006). The theory identifies five information intents as the following:

I. Getting a complete picture– the seeker initiates a search with the desire to add new information to an already constructed idea; to link together thoughts or ideas; to remember; to build a more expansive vocabulary in a specific knowledge area.

II. Getting a changed picture– the information seeker makes changes to their ideas based upon the information found.

III. Getting a clearer picture– the seeker identifies correlations between ideas and views these ideas with greater definition and understanding.

IV. Getting a verified picture– the individual seeks to relieve existing doubt about an idea.

V. Getting a position in a picture– the seeker is able to formulate a viewpoint or opinion.

CONCLUSION

Once one recognizes the need to know, the question of what one needs to know must be answered. In selection, the individual ascertains his information need in relation to a general topic or field of knowledge. Formal information seeking situations may require an individual to relate a highly organized taxonomy of subject areas to their particular question or problem. For example school term the papers, assignments, often ask students to investigate their research question using prescribed method, to utilize certain sources of information, and to present their findings in a uniform format. To complete the assignment, students must translate their information needs into the organizational systems that libraries and other information agencies have developed. However, all of this order and regulation belies the inherent messiness of actually placing an unanswered question inside the vast scheme of human knowledge. In addition, many theories from other disciplines have been applied in investigating an aspect or whole process of information seeking behaviour. Information seeking has been found to be linked to a variety of interpersonal communication behaviours beyond question-asking, to include strategies such as candidate answers.

REFERENCES

- Reddy, H. K. S., and Karisiddappa, C. R. (1997). Information Seeking Behaviour of the Professionals in the field of Disabilities with special reference to Mental Handicap in India. *Annals of Library Science and Documentation, 44*(1), 54-64.
- Babu Ramesh, B., and Goplakrishna, S. (2005). The Emergencies of Information Explosion, Information, Communication. *Library and Community Development, 1*: 30-31.
- Prasad, H. N., and Tripathi, M. (1998). Information seeking Behaviour of Physical Scientists and Social Scientists: A Report. *Annals of library Science and Documentation, 45* (2), 41-48.
- Kuhlthau, C. C. (1993). A Principle of Uncertainty for Information Seeking. *Journal of Documentations, 49* (4), 339-355.
- Mahapatra, R. C. (2001). Information Seeking Behaviour: A Conjectural Approach. *SREELS Journal of Information Management, 38* (2), 121-138.

OCCUPATIONAL STRESS AMONG SECONDARY SCHOOL TEACHERS OF KOTTAYAM

Dr. Jaya. P. J.
Assistant Professor in Education
Mount Carmel College of Teacher Education for Women, Kottayam

ABSTRACT

Work is the most valuable source of satisfaction as well as stress. Occupational stress arises from interactions between people and their job and is characterized by changes within people that force them to deviate from their normal functioning. The present study is using survey method to identify the Occupational Stress among Secondary School Teachers. The result of the present study reveals that there is no significant difference in the Occupational Stress of Secondary School Teachers with respect to Locale and Type of Management. But there is significant difference in Occupational Stress of Secondary School Teachers based on Medium of Instruction.

KEY WORD: Occupational Stress

INTRODUCTION

Stress originating in a particular sphere of life can influence other spheres. Stress is an essential accompaniment to executive performance. In fact, excellence in any sphere of life is essentially accompanied by stress. Stress, when controlled properly, it can add to the quality of performance, if it overtakes, it can cause problems with performance, interpersonal relationships and even physical well-being of the individual. Dunham (1977) identified that educational, social change, role conflict, poor physical, social working conditions, poor communication and problem teachers were the categories of stressors. Occupational stress can even generate psychological symptoms like anxiety, boredom, depression, fatigue and lowered self-esteem.

OBJECTIVE

1. To find out whether there exist any significant difference in Occupational Stress of Secondary School Teachers with respect to Locale, Type of Management and Medium of Instruction

HYPOTHESIS

1. There is no significant difference in Occupational Stress of Secondary School Teachers with respect to Locale, Type of Management and Medium of Instruction

METHODOLOGY

The present study is a descriptive study using Survey method. This study is an attempt to explore the difference exists in Occupational Stress among Secondary School Teachers of Kottayam District with respect to Locale, Medium of Instruction and Type of Management. The sample of the study consists of 1000 Secondary School Teachers of Kottayam District. Occupational Stress Inventory standardized by Dr. A.K. Srivastava and Dr P. A. Singh (Department of Psychology, Banaras Hindu University, Varanasi) was used to measure the Occupational Stress among Secondary School Teachers.

ANALYSIS AND INTERPRETATION OF DATA

1. To study whether there exists any significant difference in the Occupational Stress of Secondary School Teachers based on Locale, Type of Management and Medium of Instruction

The objective was to compare the mean scores of Occupational Stress of Secondary School Teachers with respect to Locale, Type of Management and Medium of Instruction

a. Testing the significance of difference in Occupational Stress of Secondary School Teachers with respect to Locale

The data were analyzed with the help of t-test and the summary of the result of difference in Occupational Stress of Secondary School Teachers with respect to Locale is given in Table 1.

Table 1

Data and result showing the comparison of the mean scores of Occupational Stress of Secondary School Teachers with respect to Locale

Variables	Group	N	Mean	S.D	t-value	Table Value		Level of Significance
						0.05 level	0.01 level	
Locale	Urban	520	166.55	21.15	0.85	1.96	2.58	p>0.05
	Rural	480	165.50	17.76				

Table 1 show that there is no significant difference in the Occupational Stress of Secondary School Teachers with respect to Locale.

b. Testing the significance of difference in Occupational Stress of Secondary School Teachers with respect to Type of Management

The data were analyzed with the help of ANOVA and the summary of the result of difference in Occupational Stress of Secondary School Teachers with respect to Type of Management is given in Table 2.

Table 2

Data and result showing the comparison of the mean scores of Occupational Stress of Secondary School Teachers with respect to Type of Management

Source of Variance	Sum of Squares	df	Mean Square (Variance)	F Value	Level of Significance
Between Groups	880.82	2	440.41		
WithinGroups	386717.76	1000	382.89	1.15	p>0.05
Total	387598.58	1002			

Table 2 indicates that the computed F value 1.15 is smaller than the table value (4.60) at 0.05 level of significance. Hence the calculated F value is significant at 0.05 level. Thus there is no significant difference exists among the three groups based on Occupational Stress. There is no significant difference in the Occupational Stress among Government, Aided and Unaided Secondary School Teachers.

c. Testing the significance of difference in Occupational Stress of Secondary School Teachers with respect to Medium of Instruction

The data were analyzed with the help of t-test and the result the summary of difference in Occupational Stress of Secondary School Teachers with respect to Medium of Instruction is given in Table 3.

Table 3

Data and result showing the comparison of the mean scores of Occupational Stress of Secondary School Teachers with respect to Medium of Instruction

Variables	Group	N	Mean	S.D	t-value	Table Value		Level of
						0.05 level	0.01 level	Significance
Medium of Instruction	Mal	367	160.73	19.99	6.64	1.96	2.58	p<0.01
	English	646	163.0	18.68				

Table 3 shows that there is significant difference between Occupational Stress of Secondary School Teachers of Malayalam and English medium. By comparing the means it is evident that English medium teachers have more Occupational Stress than Malayalam medium Secondary School Teachers.

CONCLUSION

People from all walks of life face stress, in one way or the other. In a broad sense stress and modern life go hand in hand. The efficiency of worker is affected by environmental conditions, in which they work. The work environment refers to the conditions which surround the work place where the worker performs the work. So stress builds up as you crawl to work in all that traffic, stare at that unexpected bill or worry that you just can't cope any longer at work or at home. To enjoy life you need challenges that you can cope with.

REFERENCES

- Aggarwal, Shashi. (1998). A Study on the Development of Emotional Intelligence among Teachers, *The Progress of Education*, 72 (1), 22 –26
- Ahuja, M. (2007). A study of Teachers' Social Values according to their Experience and Subject Area, *University News*, 45 (17), 8-21
- Davies, D and Johnson, V. R. (1996). Crossing Boundaries: An Introduction, *International Journal of Educational Research*, 25 (1), 3–7.
- Sivarajan, K. (2005). *Education in the Emerging Indian Society*, Calicut: Calicut University Central Co-operative stores.

CHANGE IN SLEEP PATTERN OF ADOLESCENTS AND DELAYED SCHOOL TIME

K. Anas

Research Scholar, Department of Education and Management
Tamil University, Thanjavur

ABSTRACT

Adolescence is accompanied by striking changes in sleep behaviour and in the phenomenology of sleep. Maturational changes in the central nervous system underlie changes in adolescent sleep structure. Sleep behaviours change during adolescence in response to maturational changes in sleep regulatory processes and competing behaviours. This pattern leads to insufficient sleep for many teens on school nights. Associations of reduced sleep with poorer school performance plead the question of how pre-learning and post-learning sleep affect the learning process. Insufficient sleep can impair acquisition and retrieval while sleep reduction results in sleepiness, irritability, distractibility, inattention and lack of motivation. Strong evidence indicates that adequate sleep enhances memory consolidation and resistance to interference. This article provides an insight on the impact of delayed school start time on 13 to 17-year-old students .

KEY WORDS: Sleep Pattern, Delayed School Time

INTRODUCTION

Recently some state Governments are seriously thinking about the change of timing in Schools and Colleges. There are lot of studies conducted in western counties, while many studies have shown the benefits of later school starts, including better student attendance, higher test scores, and improved sleep duration, few have used starting times later than 9:00 a.m. A 4-year observational study conducted in United Kingdom by Dr. Paul Kelly (2017) using a before-after-before (A-B-A) design was carried out in a state-funded high school. The school start times were changed from 7:50 a.m. to 10 a.m. in years 1–2, and then back to 7:50 a.m. in the year 3. Measures of student health (absence due to illness) and academic performance (national examination results) were used for all students. Implementing a 10 a.m. start saw a decrease in student illness after 2 years of over 50% and reverting to an 7:50 a.m. start reversed this improvement, leading to an increase of 30% in student illness. The 10:00 a.m. start was associated with a 12% increase in the value-added number of students making good academic progress (in standard national examinations) that was significant (<0.0005) and equivalent to 20% of the national benchmark. These results show

that changing to a 10:00 a.m. high school start time can greatly reduce illness and improve academic performance.

Need for Delayed School Time

Recreational activities and impact of social media, that occur in adolescence need more time to wake up. Currently school starting times are adjusted for the shift to later wake and sleep times that happen naturally in adolescence. When if it is mismatch between adolescent biology and the practice of starting school early leads to a systematic reduction in the amount of time available for sleep to teenagers and consequently chronic sleep deficiency may occur. The Centres for Disease Control and Prevention and the American Academy of Paediatrics (2014) have stated that early school starts are associated with increased health risks of obesity, depression, and drug use as well as poorer academic performance (Owens et al., 2014; Wheaton et al., 2015).

The guidelines published in 2015 by the American National Sleep Foundation recommending that pre-schoolers should get 10-13 hours, elementary age students (6-13 years) should get 9-11 hours, and middle to high school students (14-17 years) should get 8-10 hours. Parents noted that while 5th Standard schools would start at 8:00 am, bus routes would begin at 7:00 am. To be ready for a 7:00 am pickup might mean waking up by 6:00 am to have time to get ready. For those children to get the recommended amount of sleep, bedtimes would have to be between 5:00 pm – the earliest bedtime for the youngest child at the upper end of the sleep time range (13 hrs) - and 9:00 pm - latest bedtime for oldest class-5 student (5th grader 10 years) at the lower end of the sleep time range 9 hours.

The recommendation that middle and high schools should open not earlier than 8:30 a.m. is now supported by the American Medical Association (2016). Almost all studies to date, while scheduling school starting times later than before, have retained a starting time at or earlier than 9:00 a.m. (Kirkby et al., 2011). Evidence for increased health risks associated with early school starting times is both substantial and demonstrated through a variety of research methodologies (Hansen et al., 2005; Millman, 2005; Basch et al., 2014; de Souza and Hidalgo, 2014). The underlying biological drivers are also well established. Adolescents need anywhere from 8 to 10 hours of sleep per night for full health and academic performance depending on age and inter-individual differences, yet most get far less (Iglowstein et al., 2003; Foster et al., 2013; Hirshkowitz et al., 2015). Biological changes in the timing of the 24-hour circadian clock during adolescence delay the onset of wake and sleep times, and this shift does not reverse until early adulthood (Roenneberg et al., 2004). Additionally, homeostatic regulation of pressure to sleep builds more slowly, taking a longer time to reach the critical threshold required to initiate sleep (Carskadon, 2011). Adolescent sleep restriction is clearly linked to early school starts as on non-school days' adolescents have wake times two or more hours later (Roenneberg et al., 2007), a finding seemingly not substantially affected by cultural factors (Gradisar et al., 2011; Foster et al., 2013).

Later school starting times provide benefits to adolescent sleep, health and learning (Curcio et al., 2006; Carskadon, 2011; Lufi et al., 2011). There is substantial evidence that later starting times benefit academic outcomes even in the early stages of puberty and this positive impact continues into late adolescence (Carrell et al., 2011; Edwards, 2012; Meltzer et al., 2014). Later starting times are associated with improved sleep that continues into the years following implementation (Borlase et al., 2013; Wahlstrom et al., 2014). Later starting times also reduce the rate of student driving accidents (Danner and Phillips, 2008), and lower reports of depression (Kirkby et al., 2011).

The principle that school start times for adolescents should be later than currently the norm in American schools (about 8:00 a.m.) is now widely accepted. Research is now needed into synchronizing school starting times more closely with adolescent biology, taking into account the increasing impact of circadian rhythm changes in adolescence (Shekleton et al., 2013; Kelley et al., 2015). Following a change to a 10:00 a.m. school start time, rates of absence due to illness in students aged 13–17 reduced, and academic performance of students aged 13–17 significantly improved. When the school start time was returned to 8:50 a.m., these benefits were abolished.

The absence due to illness rate data are consistent with a direct benefit of later school starting times on student health. The differentiation in recording absence and absence due to sickness in England offers a more precise measure of illness and a large national data set. Following initiation of the 10:00 a.m. start, illnesses decreased in the second year by over 50%. With the return of an 8:50 a.m. these benefits were reversed, with illness increasing by of 30%. Academic performance of students aged 14–16 also improved with a 10:00 a.m. start. Having 2 years of later start times was particularly beneficial; showing a 12-percentage point significant gain in the value added amounts to 20% of the national standard. There is no reason to believe that these outcomes reflected motivation changes. The pupils were studying for their final national exams, which determine their eligibility for continued study and ultimately college or university, or their competitiveness in the jobs market. These were not study-related tests but the real, once-in-lifetime exams that have a major influence on the children's futures and thus would be equally motivated. While there are several possible explanations for the poor performance of students in similar low socioeconomic status areas, the possible impact of sleep restriction linked to early school starts has rarely been considered.

One of the objections raised to changing school start times is that the change is impractical and cannot overcome other barriers, such as bus timetables or sports program scheduling. While the English legal framework makes changing to much later start times a formal process any school can undertake (and therefore more practical than in some other countries), moving all of this school's schedules later produced no practical difficulties. By choosing a 10 a.m. start time, the school aimed to provide benefits for the largest proportion of children possible, given the inter-individual range in phase delays that children experience means some substantially delayed children would still be waking too early in their circadian cycle (Iglowstein et al., 2003; Kelley et

al., 2015). Even later start times might address this issue, but 10 a.m. was considered a reasonable compromise between maximizing biological assistances for most children while remaining practical.

The national US recommendation that middle and high schools should start after 8:30 a.m. is a clearly justified positive step, although the evidence in this study suggests a much later start of 10 a.m.—even when replacing a school start later than the 8:30 a.m. brings additional benefits. The broader impact of later school starts on specific aspects of adolescent health, such as sleep duration and quality, mental health, and social development were not assessed, although other studies have shown potential impacts (de Souza and Hidalgo, 2014; Meltzer et al., 2014; Minges and Redeker, 2016).

Additional research into much later starts should measure both actual sleep patterns and optimal performance times for individual students. The most important area for further research may be the impact of later starts on areas of social behavior development and mental health. For example, the daily sleep loss of two or more hours per day imposed by early school starts (which cannot be recovered with 10 or more extra hours of sleep at weekends), may put those with a genetic predisposition to a mental illness at greater risk given that direct links between sleep of <6 hours and gene expression have been established (Moller-Levet et al., 2013). Sleep deprivation is also associated with adolescents being less perceptive readers of human emotions (van der Helm et al., 2010; Guadagni et al., 2014), during a period of greater sensitivity to sociocultural signals (Blakemore and Mills, 2014) and related brain developments in adolescence. These interrelated factors of significant sleep deprivation, genetic predisposition, the high prevalence of the onset of mental illness during adolescence for a range of disorders (Schmitt et al., 2014) and less a perceptive reading of sociocultural signals, may impact on levels of mental illness and emotional disorders in adolescence (Wulff et al., 2010, 2012).

CONCLUSION

Application of sleep research clearly demonstrates its powerful impact on the psychological and physiological well being of the future generation. A research-based approach to shift the school starting time to 10 a.m. for 13 to 17-year-old had a substantial benefit in terms of rates of illness and academic performance. This research-based approach to school starting times is replicable in different contexts, cultures, and countries.

REFERENCES

- American Medical Association. (2016). *News Release*. Available online at:https://www.ama-assn.org/ama-supports-delayed-school-start-times-improve-adolescent-wellness
- American Academy of Pediatrics. (2014). Adolescent Sleep Working Group: school start times for adolescents. *Pediatrics 134,* 642–649. doi: 10.1542/peds.2014-1697
- Basch, C. E., Basch, C. H., Ruggles, K. V., and Rajan, S. (2014). Prevalence of sleep durationon an average school night among 4 nationally representative successive samples of

American high school students, 2007–2013.

- Borlase, B. J., Gander, P. H., and Gibson, R. H. (2013). Effects of school start times and technology use on teenagers' sleep: 1999–2008. *Sleep Biol. Rhythms* 11, 46–54.
- Foster, R. G., Peirson, S. N., Wulff, K., Winnebeck, E., Vetter, C., and Roenneberg, T. (2013). Sleep and circadian rhythm disruption in social jetlag and mental illness. *Prog. Mol. Biol. Transl. Sci*. 119, 325–346.
- Guadagni, V., Burles, F., Ferrara, M., and Iaria, G. (2014). The effects of sleep deprivation on emotional empathy. *J. Sleep Res.* 23, 657–663.
- Hansen, M., Janssen, I., Schiff, A., Zee, P. C., and Dubocovich, M. L. (2005). The impact of school daily schedule on adolescent sleep. *Pediatrics* 115, 1555–1561.
- Iglowstein, I., Jenni, O. G., Molinari, L., and Largo, R. H. (2003). Sleep duration from infancy to adolescence: reference values and generational trends. *Pediatrics* 111, 302–307.
- Kelley, P., Lockley, S. W., Foster, R. G., and Kelley, J. (2015). Synchronizing education to adolescent biology: 'let teens sleep, start school later'. *Learn. Media Technol*. 40, 210–226.
- Kirkby, M., Maggi, S., and D'Angiulli, A. (2011). School start times and the sleep–wake cycle of adolescents: a review and critical evaluation of available evidence. *Educ. Res.* 40, 56–61.
- Meltzer, L. J., Shaheed, K., and Ambler, D. (2014). Start later, sleep later: school start timesand adolescent sleep in home school versus public/private school students. *Behav. Sleep Med.*
- Millman, R. P. (2005). Excessive sleepiness in adolescents and young adults: causes, consequences, and treatment strategies. *Pediatrics* 115, 1774–1786.
- Minges, K. E., and Redeker, N. S. (2016). Delayed school start times and adolescent sleep: a systematic review of the experimental evidence. *Sleep Med. Rev.* 28, 82–91.
- Owens, J., Drobnich, D., Baylor, A., and Lewin, D. (2014). School start time change: an in-depth examination of school districts in the United States. *Mind Brain Educ.* 8, 182–213.
- Schmitt, J. E., Neale, M. C., Fassassi, B., Perez, J., Lenroot, R. K., Wells, E. M., et al. (2014). Dynamic role of genetics on cortical patterning during childhood and adolescence. *Proc. Natl. Acad. Sci. U.S.A.* 111, 6774–6779.
- Wahlstrom, K., Dretzke, B., Gordon, M., Peterson, K., Edwards, K., and Gdula, J. (2014). *Examining the Impact of Later School Start Times on the Health and Academic Performance of High School Students: A Multi-Site Study*. Carei; St. Paul, MN: University of Minnesota.
- Wheaton, A. G., Ferro, G.A., and Croft, J.B.(2015). School time for middle school and high school students-United States, 2011-12 School year MMWR Morb, Mortal. Wkly. Rep.64, 809-813.

MENTAL HYGIENE: A SURVIVAL FACTOR IN EDUCATION

Sr. Bindhumol T.
Assistant Professor
Mount Carmel College of Teacher Education for Women, Kottayam

ABSTRACT

Mental health in today's society is discussed as an important factor in one's life. It is indeed a basic factor that contributes to the well being of physical health as well as social effectiveness of an individual. Mental hygiene helps an individual to know his own limitations and to accept others' limitations. Mental hygiene focuses at the harmonious development of the physical, mental and spiritual capabilities of an individual in adjusting himself with the environment. Mental health means the condition of an individual where he is able to maintain a well balanced state of mind with himself, others and his surroundings. Mental hygiene means a healthy mind in a sound body. This paper discuss the significance of mental hygiene in day today life on an individual and the attitude and values one should have towards mental hygiene.

KEYWORDS: Mental Hygiene, Mental Health

INTRODUCTION

Mental health is not merely the absence of mental illness, but it is a state of an individual's ability to fulfil all his personal affairs like the ability to manage emotions, ability to maintain good relationship and the ability to manage the changing situations in life. In the words of Johns, Sutton and Webster, "is a positive bat relative quality of life. It is a condition which is characteristics of the average person who meets the demands of life on the basis of his own capacities and limitations". Here the word relative means the degree of mental health which a person enjoys at onetime is continuously changing. According to Hadfield 'mental health is the full and harmonious' functioning of the whole personality. With the advancement of the science and technology we have a clear cut idea of the mental problems or illness as it arises in different forms of its symptoms, causes and treatment. As a result we have the sort of knowledge which in turn saves us from developing mental illness. In other words this knowledge will prevent us from suffering mental illness.

Meaning and Nature of Mental Hygiene

Mental health and hygiene is the two sides of a coin. The term 'Mental hygiene' had been suggested to Beers by Adolf Meyer in 1909 of the National Commission of Mental Hygiene. It is a science which deals with the process of mental health and prevents mental illness. It aims to

develop and apply the principles and techniques for the preservation and promotion of mental health. It is mainly concerned with behavioural and emotional balance of an individual. Therefore the term mental hygiene means keeping oneself safe and sound in areas of his living and working. It is all about how we behave, think, feel and act. It also refers as the absence of mental disorder. Mental health affects our daily life, relationships moreover our physical health. It is the ability of an individual to enjoy his life, to gain or attain a well

Significance of Mental Hygiene

Every man and women born in this world has various needs and aspirations or goals. But due to some environmental factors he or she is not able to reach or to attain these goals in life. In such a situation the life of an individual is accustomed to frustration and maladjustment. The person may adapt to various defence mechanisms. Either the person may punish himself physically or he may find ways to overcome his frustrations. It is at this juncture one may think of keeping oneself steady and balanced in day today life. Moreover we live in a sophisticated world where the hurdles of life disturb us and where the values are deteriorating. The life of man is not safe and he has to strive hard to live in this world to maintain a well balanced personality. So in this modern era it is not only a necessity but it is the need of the hour and as educators it is our prime responsibility too to take care of the needs of our students especially in the areas of physical, mental, social and intellectual development.

Mental Hygiene in Education

It is being realised by all progressive educators that the goal of mental health and education are similar. Education aims at the all-round development of an individual. It is to help every individual to be a well-adjusted being in his society. Mental health is also concerned with the harmonious development of personality. This is clear from Hadfield's definition of mental health.He says, "Mental health is the full and harmonious functioning of the whole personality."

That education can contribute to the attainment of mental health of an individual. There are forces, movements and trends in modern educational practice which are indicative of this belief. These are the increased importance being given to feelings and emotions as a factor in growth and development including learning, recognition that all behaviour is complex and its causes be deep within the emotions, recognition that all behaviour has a cause and effect The significance of inter-personal relationship in day-to-day teaching, sensitiveness to modern teachers to individual differences of students in interest and ability.

Mental Health of the Teacher

A healthy and well-adjusted teacher plays a vital role in promoting the mental health of school children and in attaining the mental health objective of education. If the mental health of the teacher is insufficient, it will surely affect the mental health of school children. In order to be mentally healthy, a teacher has to cultivate certain personal professional qualities.

The desirable personal qualities that a teacher can cultivate are, alertness, enthusiasm and interest in pupils and classroom activities, the ability to maintain natural and pleasant person to person relationships, cordiality and friendship, recognition of one's own mistakes ; patience, sympathy, sincerity, fairness in dealing with pupils, democracy and courtesy in relation with pupils good disposition and consistent behaviour; flexibility in opinions, beliefs and attitudes, a good sense of humour, and width of interests.

The undesirable qualities or traits are bad temper, intolerance, unreasonableness in demands, tendency to be gloomy and unfriendly, sarcasm and the tendency to use ridicule, tendency to talk excessively and to talk down to pupils, apathy, rigidity of procedure and perfectionist attitudes.

The professional qualities which are conducive to the mental health goals in education are the mastery in subject where one has specialised capacity and willingness to teach effectively and the ability and desire to improve professional skills, achieve competence through the study of professional books and magazines, ability to work together and to share experience with others, acceptance and understanding of children, realistic perception of the social expectations and an understanding of his social role as well as respect for oneself and one's profession.It must be noted that the mental health of the teacher, reflects in these personal and professional qualities depends on various factors including his personal striving, other factors being his upbringing, educational, and culture. This means the mental health of the teacher is closely associated with the mental health of his family community and socio-economic and cultural conditions.

Regarding the importance of the mental health status of the teacher as a basic factor in mental health of school children, Townsend wants greater attention to be paid to the selection of students to teacher training college. According to him mere "credit gatherers" or those who are merely scholastically high won't be suitable candidates. Similarly, persons who are lonely, who are in need to friendship, who are victims of worries, emotional up-sets and defects of immaturity or uncongenial home surroundings who have no strong motivation are most clearly unstinted to the work of modern teaching.

Mental Health of Students

Mental health of students, to a great extent results from the day-to-day functioning of mentally healthy teachers. These teachers know that the problem mental health of school-going children is rooted in their needs and their satisfaction. Conditions in the school, which satisfy their fundamental emotional and social needs, have to be provided.

These needs are for security, for manipulation, for expanding cultural and social contacts, for a sense of recognition and achievement, for acceptance and approval. It is to be noted that these needs should be satisfied at first by their parents at home. Children, who are rejected, over-protected or over-indulged or those who are treated indifferently by their parents who are severe and perfectionist are note emotionally equipped to withstand the frustrations which the school life may entail for them.

The child goes to the school from the protective environment of the home. There is exposed to new people, new authority figures, to new ideas, to new experience of being are of the group. Let the child not have the failing that he is being sent to the school just as a punishment for his being naughty in the home.

It is necessary that the child develops a feeling of belongingness to the school. This will be possible if the atmosphere in the school, as in the home, is that of love and understanding, free from favouritism and invidious comparisons.

Mental Health and Curriculum

What will be the form of curriculum from the mental health point of view? This is another significant aspect of education that needs consideration in the context of 'mental health' goals through education.The objectives of mental health in education can be achieved if the following principles are observed in the curriculum construction:

i. The child's needs, interest and experiences,, individual differences in learning capacity should form the central factor.

ii. The curriculum should give importance to the activities that are of real worth and interest and which have a definite relation to the life of the child and community.

iii. It should be flexible and adjustable to the need of pupils at every stage.

iv. It should be dynamic and possible of revision so that it may be in harmony with changing social conditions and should reflects the latest developments in educational philosophy and psychology, ft should befit the student for competent participation in home and in social and vocational activities.

v. It should incorporate the so-called extra-curriculum activities such as dramatics, writing, games, hobbies etc. in the very fabric of the school programme.

vi. An important principle of curriculum-construction should be its 'totality' or 'integration', rather than traditional compartmentalisation of the subject-matter. This will be possible if it is an activity and curriculum and presents the human experience as a whole.

Mental Health and Methods of Teaching and Classroom Practices

The methods of teaching and classroom practices which afford pupils the satisfaction of being successful in their school work and which reduce the emotional shock of failure are instrumental in achieving mental health. The underlying principles of such methods are many. Teachers should regard the failure of pupil as a challenge, not as an offence or as a defeat or humiliation.

They should encourage in students the habit of independence and a spirit of adventure. All learning activities should be properly motivated by the teacher by and through the use of various social urges and acquired interests of students.The principles of learning by doing which is the

corner-stone of such methods of teaching as the Project method and the Dalton Plan are another significant principle. The teacher should try to increase the purposefulness of school work by making goals clear, desirable and attainable.

Fragmentation of learning, the tendency to make learning isolated and remote from the life situations, the tendency towards authoritarianism and restriction of freedom, the over-emphasis on speed in learning and the confusion of ignorance of students with their misconduct are some of the questionable practices in our schools that are inimical to the mental health of school children.

Mental Health and Discipline

The concept of discipline has to change if the objectives of mental health have to be achieved. The order which results from compulsion is not necessarily good discipline. It consists in the hearty performance of duties as well as freely chosen activities. Good discipline has to encourage the development of each individual's unique personality.

It comes through self-direction a personal direction of actions that are purposeful and self-determined. It implies an under-standing of the child's behaviour and how it is influenced by various environmental factors.

The teacher direction has its place in effective discipline but it is not to be authoritarian in anyway. Nor can it be obtained through sarcasm and ridicule. A very important means of good discipline is to keep the pupils busy and useful!' occupied. Other means are the rewards which are inherent in the work on hand, the recognition of the group moves, teacher's confidence in pupils and the ability to exercise a positive authority, enjoyable classroom atmosphere as w I as alteration to the individual child, the time and the total situation.

Role of a Teacher in Promoting Mental Hygiene

Teachers are not only the guides but they are expected to act as parents, disciplinarians, guide tutors and facilitators.. The responsibility is more in dealing with the adults. The teacher must be aware of the recent common mental health disorders among the students. Some of the common mental problems the students face are depression, anxiety, exam fear, shyness, confusion, obsessive compulsive disorder, obesity, conduct disorder and sustenance abuse. It is the prime duty of a teacher to identify those individuals in the classroom. Besides the school can provide a counsellor, school psychologist, organise grievance cell, start mentoring system, peer mentoring, student aid, create student development class room, time out class room, introduce mental health practices like yoga ,karate etc. provide awareness on mental health.

CONCLUSION

Twenty first century is characterised by its hurdles of life such as globalization, atheism child abduction, and economic concerns, declining of moral and human values. Everyone live in a world of information and processing ideas where machines have replaced manpower even in

families. Relationship in the family is deteriorating to the extent that there is no bond between the parents and children. It is a challenge for the teachers to mould this young generation who are highly productive and efficient.

REFERENCES

- Anthikkad, Jacob.(2009).Psychology for graduate nurses. Jaypee Brothers. New Delhi.
- Arjun, N.K. (2016). Psychological Basis of Education. Yuga Publications. Palakkad.
- Crick, R.D. (2006). Learning Power in Practice. Thousand Oaks. New Delhi.
- Sharma, S.R. (2006). Psychological Aspects of Teaching and Learning. Book Enclave. Jaipur
- http://healthylife.com.
- https://www.verywellmind.com.
- https://www.brittanica.com

ATTITUDE OF HIGHER SECONDARY SCHOOL STUDENTS TOWARDS THE EDUCATIONAL USE OF SOCIAL MEDIA

Dr. Anjana B. Nair
Guest Lecturer in Social Science
Mount Carmel College of Teacher Education for Women, Kottayam

ABSTRACT

Social media such as blogs, wikis, WhatsApp, social networking sites etc. have become an integral part of modern life. These interactive tools offering new and varied ways to communicate via the internet have tremendous impact on the theory and practice of education. The present study focuses on the Attitude of Higher Secondary School students towards the Educational Use of Social Media. It also attempts to find out the extent of the present use of social media among them. Normative survey method was used for the study. The sample consisted of 150 Higher Secondary School Students. The relevant data were collected using a questionnaire and a Likert type attitude scale. The study revealed that Higher Secondary School Students have a favourable Attitude towards the Educational Use of Social Media. It was also found that only half of the students are using various social media. The study stressed the need of concenticizing the students about the applications of social media in the present educational scenario.

KEY WORD: Social Media

INTRODUCTION

Social media such as blogs, wikis, WhatsApp, social networking sites etc. have become an integral part of modern life. The current generation of students lives in a digital world characterised by the rapid growth of social media that foster more interactive and social lines of communication and learning. Developing the competencies and confidence to interact with the modern digital tools and technologies is vital for students' success in all aspects of life in the 21st century. These interactive tools offering new and varied ways to communicate via the internet have a tremendous impact on the theory and practice of education. How students use these tools are largely affected by their attitude towards them. Hence, an understanding derived from studying students' attitudes towards the educational use of social media will help in designing and developing proper pedagogical strategies in order to exploit the educational potential of these tools. In this study an attempt has been made to unveil students' attitudes towards the educational use of social media. The aim is to induce educators and students to think about these attitudes as a vital first step in

getting them to accept and realise the educational capability of social media.

Social Media

The term social media refers to a group of new kinds of online or web based tools that allow people to connect and interact with others and also to produce and share content. According to Kaplan and Haenlein (2010) social media are "a group of Internet-based applications that allow the creation and exchange of user-generated content." These media for social interaction are characterized by all or most of the features like; participation, openness, conversation, community and connectedness (Mayfield, 2008) and changed the static nature of web to interactive mode where users create, upload and share information. The rapid growth of cyber world in recent years has led to the development of a number of social media providing interactive platforms for online communication. At this time, there are basically eight kinds of social media.

i. Social networks like Facebook, WhatsApp, MySpace etc that allow people to build personal profiles and to connect with friends to share content and communication.

ii. Blogs or Web-log which are like online diaries published on the web that reflects personal opinions, feelings, hobbies, and experiences, arranged chronologically with the most recent first.

iii. Wikis which is a webpage or set of webpages that can be easily edited by anyone who is allowed access (Ebersbach *et al*., 2016).They allow people to add content to or edit the information on them, acting as a communal document or database. The best-known wiki is Wikipedia, the online encyclopedia which has over 2 million English language articles.

iv. Podcasts are audio or video recordings, usually in MP3 format, of talks, interviews and lectures.

v. RSS and syndication is a family of formats which allow users to find out about updates to the content of RSS-enabled websites, blogs or podcasts without actually having to go and visit the site (Anderson, 2017).

vi. Forums or areas for online discussion, often around specific topics and interests which are powerful and popular means for online communities.

vii. Content communities which organise and share particular kinds of content. The most popular content communities tend to form around photos (Flickr), bookmarked links (del.icio.us) and videos (YouTube).

viii. Microblogging which combines social networking with bite-sized blogging, where small amounts of content are distributed online. Twitter is the leader in this field.

Social media which support knowledge sharing, peer-to-peer networking, and access to a global audience facilitates a socio-constructivist learning experience. The dynamic nature of social

media makes learners active participants and co producers of knowledge rather than passive consumers of content. Thus it makes learning a participatory and social process (McLoughlin & Lee, 2018). As a teaching tool they encourage collaboration, peer interaction and group work, promoting cooperation rather than competition (De Pedro et al., 2006).Use of social media in the learning process help to reap the benefits of using technology for academic purposes (Zhao & Kuh, 2004). Researches have indicated that there is a positive relationship between academic uses of technology and the occurrences of active and collaborative learning, and the frequency of student-faculty interactions (Laird & Kuh, 2015). The effective use of social media resources can result in a constructivist learning environment allowing students to share their knowledge and utilize their individual life experience and multiple intelligences, while working as a part of a collaborative team (Baird & Fisher, 2006). As an educational tool social media allow learners to select and share learning materials that best meet their learning styles and interests.

In the present study an attempt has been made to find the extent of the present use of social media among higher secondary school students. It also focuses on the Attitude of higher secondary school students towards the Educational Use of Social Media.

OBJECTIVES OF THE STUDY

The objectives of the present study are:

1. To find out the extent of use of social media among Higher Secondary School Students
2. To find out the Attitude of Higher Secondary School Students towards the Educational Use of Social Media
3. To compare the Attitude towards the educational use of social media among different subgroups of Higher Secondary School Students based on their

   a) Gender: boys/ girls

   b) Scheme of study: state / CBSE

   c) Subject of study: computer/ commerce/ science

HYPOTHESES

The hypotheses of the study are:

1. There is no significant difference in the Attitude of higher secondary school students towards the educational use of social media with respect to their gender
2. There is no significant difference in the Attitude of higher secondary school students towards the educational use of social media with respect to their scheme of study
3. There is no significant difference in the Attitude of higher secondary school students towards the educational use of social media with respect to their subject of study

METHODOLOGY

Normative survey method was used for the study. The sample consisted of 150 Higher Secondary School Students from Kottayam district of Kerala. Stratified random sampling technique was used for the study. The relevant data were collected using a questionnaire and a Likert type five point attitude scale. The data collected were analysed using appropriate descriptive and inferential statistical techniques.

ANALYSIS AND INTREPETATION OF DATA

The analysis and interpretation of the data collected are given below.

1. Extent of use of Social Media for the total sample and different subgroups of students based on gender, scheme of study and subject of study

The first objective of the study was to find out the extent of use of Social Media. The computed numbers and percentages are given in Table1.

Table 1

The Number and Percentage of Higher Secondary School Students Indicating the Extent of Use of Social Media

Category		N &(P) Users	N &(P) of Non-Users	Total of
Total Sample		76 (51%)	74 (49%)	150
Gender	Boys	50 (70%)	21 (30%)	71
	Girls	26 (33%)	53(67%)	79
Scheme of Study	State	40 (44%)	51 (56%)	91
	CBSE	36 (61%)	23 (39%)	59
Subject of Study	Commerce	12 (23%)	40 (77%)	52
	Computer	28 (72%)	11 (28%)	39
	Science	36 (61%)	23 (39%)	59

From table 1 it is clear that nearly half (49%) of the students are using social media. Social media usage is found to be high among boys with 70% of boys as users where as its use is low among girls (33% users). With regard to the sub group based on scheme of study, CBSE scheme seems to have more social media users (61% users) . Among the different subject groups, computer group has the largest percentage of social media users followed by science and commerce groups.

2. Attitude of Higher Secondary School Students towards the Educational Use of Social Media

The second objective of the study was to find out the Attitude of higher secondary school students towards the Educational use of Social Media for the total sample and different subgroups of students based on their gender, scheme of study and subject of study. The computed values are given in table 2.

Table 2

The Number Mean and Standard Deviation of Scores on Attitude towards the Educational Use of Social Media

Category		Mean	SD	N
Total Sample		147.03	19.02	150
Gender	Boys	147	16.92	71
	Girls	147.06	20.83	79
Scheme of Study	State	144.22	20.44	91
	CBSE	151.37	15.80	59
Subject of Study	Commerce	149.15	21.50	52
	Computer	137.64	17.05	39
	Science	151.37	15.796	59

From table 2 it is clear that higher secondary students are having a favourable Attitude towards the educational use of social media (mean score-147.03). In the subgroup based on gender both boys and girls showed a favourable attitude. With regard to the sub group based on scheme of study, CBSE students have more favourable Attitude towards the educational use of social media. In the sub group based on subject of study students of science group possessed more favourable attitude followed by commerce and computer group students.

3. Comparison of Attitude towards the Educational Use of Social Media among different sub-groups

The third objective of the study was to compare the Attitude towards the educational use of social media among different subgroups of students based on their gender, scheme of study and subject of study. For comparing the mean scores of sub groups based on gender and scheme of study, test of significance of difference between the means was used and for comparing sub groups based on subject ANOVA was used. The computed values are given in table 3 and table4

Table 3

Data and Result of the Test of Significance of Difference between the Means of Scores on Attitude towards the Educational Use of Social Media among Different Sub-groups Based on Gender and Scheme of Study

Groups	Number	Mean	S.D	Critical Ratio	Level of Significance
Boys	71	147.00	16.92	.020	p>0.05
Girls	79	147.06	20.83		
State	91	144.22	20.44	2.282	p<0.05
CBSE	59	151.37	15.80		

The critical ratio of Attitude towards the educational use of social media between boys and girls is .020 which is lower than the value set for significance even at 0.05 level. It indicates that there is no significant difference between the mean attitude scores of boys and girls studying at higher secondary level. The critical ratio of Attitude towards the educational use of social media between CBSE students and state syllabus students is 2.282 which is higher than the value set of significance 1.96 at 0.05 level. It indicates that there is significant difference between the mean attitude scores of higher secondary school students studying in state syllabus and CBSE syllabus schools.

Table 4

Summary of ANOVA for the Significance of Difference in Means of Scores on Attitude towards the Educational Use of Social Media among with Different Sub-groups Based on Subject of Study

Source of Variation	df	Sum of squares	Mean square variance	F value	Level of significance
Between groups	2	4785.293	2392.647	7.163	p<0.01
Within groups	147	49101.540	334.024		

The F value calculated is 7.163.Table value of F for df (2, 147) is 4.75 at 0.01 level. The calculated F is greater than the table value at 0.01 level. Therefore, there is significant difference in the mean attitude scores of higher secondary school students studying in Computer, Commerce and Science groups.

To ascertain the differing groups among the three categories, a post hoc-test was found necessary. For this Tukey's HSD was carried out. The HSD value calculated is 10.79 at 0.01 level and 8.67 at 0.05 level of significance. In order to find out the groups with significant difference it is necessary to calculate the difference between means. The differences for all possible pairs of sample means were computed and are given in table 5.

Table 5

Details of Tukey's HSD Test for Multiple Comparisons between Means of Scores on Attitude towards the Educational Use of Social Media for the Sub-groups Based on Subject of Study

Groups	Computer (Mean-137.64)	Commerce (Mean -149.15)	Science (Mean - 151.37)
Computer	0	11.51	13.73
Commerce		0	2.22
Science			0

From the table it is clear that the difference between the mean attitude scores of computer group and commerce group is 11.51, and that between computer group and science group is 13.73, and that between commerce group and science group is 2.22. All the values except the third (between commerce group and science group) are greater than the HSD value, 10.79 at .01 level of significance. Hence it is inferred that there exists a significant difference between computer and commerce group students and also between computer and science group students in their Attitude towards the Educational Use of Social Media.

Based on the above results hypotheses 1 was sustained and hypothesis 2 and 3 were rejected.

FINDINGS AND CONCLUSION

The findings of the study indicate that only half of the students do use social media eventhough most of them have a favourable attitude towards its educational use. Usage of social media was found to have high among boys as compared to girls. Similarly CBSE schools have more social media users than state syllabus schools. Furthermore social media users were highest in computer group followed by science and commerce group students. Boys and girls do not differ significantly in their Attitude towards the educational Use of Social Media where as students of CBSE schools differ significantly with state syllabus students, in their attitude. It was also seen that CBSE students have a more favourable attitude. Significant difference was found between Computer, Commerce and Science students in their Attitude towards the Educational Use Social Media. Students of Science group were found to have more favourable attitude than Commerce group students and Computer group students have the least.

REFERENCES

- Anderson, P. (2017).What is Web 2.0? Ideas, technologies and implications for education. JISC Technology and Standards Watch. Retrieved on july 5,2011, from http://www.jisc.ac.uk /media /documents/techwatch/tsw0701b.pdf.
- Baird, D. E., & Fisher, M. (2006). Neomillennial user experience design strategies: Utilizing social networking media to support "Always On" learning. *Journal of Educational Technology Systems,* 34(1), 5-32.
- De Pedro, X. et al. (2006, July). *Writing documents* collaboratively in Higher education : Qualitative results from a 2-year project study. International Congress of University Teaching and Innovation, Barcelona. Retrieved July 5, 2011 from http://uniwiki.ourproject.org/ tikidownload_wiki_attachment.php?attId=98&page=Uniwiki-Congressos.
- Ebersbach, A., Glaser, M., &Heigl, R. (2016). Wiki: Web Collaboration. Germany Sringer Verlag.
- Kaplan, A., & Haenlein ,M. (2010). Users of the world, unite! The challenges and opportunities of Social Media". Business Horizons. 53 (1), 59–68.
- Laird, T. F. N., & Kuh, G. D. (2015). Student experiences with information technology and their relationship to other aspects of student engagement. *Research in Higher Education, 46*(2), 211-232.
- Lorenzo, G., & Dziuban, G. (2006). *Ensuring the Net Generation is net savvy.* Educause Learning Initiative Paper 2. Retrieved July 5, 2011 from http://www.educause.edu /ir/library/ pdf/ELI3006.pdf .

- Mayfield,A.,(2008) What is social media?: an e-book by antony mayfield from iCrossing. Retrieved, july 15,2011, from http://www.iCrossing.com/ebooks.
- McLoughlin, C., & Lee,M.J.W(2018).Future learning landscapes: Transforming pedagogy through social software. *Innovate* 4 (5).Retrieved,july 5,2011,from http:// innovateonline.info /pdf/vol4_issue5/Future_Learning_Landscapes-_Transforming_ Pedagogy_through_Social_Software.pdf.
- Victoria Department of Education and Early Childhood Development.(2010). *Teaching and learning with Web 2.0 technologies Findings from 2006 – 2009.* Retrieved July 5, 2011 from www.education. vic. gov.au/researchinnovation.
- Zhao, C.M., & Kuh, G. D. (2004). Adding value: Learning communities and student engagement. *Research in Higher Education, 45*(2), 115-135.

PRESENT STATUS OF ENGLISH LANGUAGE PROFICIENCY AMONG STUDENTS AT SECONDARY LEVEL OF KOTTAYAM DISTRICT

Dr. Miliya Susan Joseph
Assistant Professor
Mount Carmel College of Teacher Education for Women

Ms. Anu Mohan
M.Ed Student, Mount Carmel College of Teacher Education for Women

ABSTRACT

Learning English as a language for understanding and communication is very much needed in the present context of development and mobility. But English language learning remains a difficult task and challenge to many of the students. For the successful implementation of English learning, learner's proficiency in learning English is a great need. The present study is an attempt to find out the present status of English Language Proficiency among students at Secondary level. To satisfy the objective, the investigator employed Normative Survey method. The data was collected using English Language Proficiency Test from a sample of 450 Secondary School Students of Kottayam district selected using Stratified random sampling technique. The collected data was analysed using t-test. The results revealed the level of English Language Proficiency among secondary school students based on gender, locale and type of management of schools and the differences exists among them.

KEY WORDS: English Language Proficiency, Secondary School Students

INTRODUCTION

English is gaining more and more prominence in the modern world consequent upon the fast increase in international trade and co-operation and globalization. It is the language of cross cultural communication in the world. It offers world citizenship. English language is predominantly establishing its supremacy in the field of education. The structure of English language is very much different from that of Indian languages. These cause great difficulties in the smooth learning of the language and consequently affect the furtherance of studies of many students at higher level. Students lack confidence to use English because they are afraid of mistakes and shy feeling. It has been observed that many people face problems in communication either in public or in private. They lose interest in their studies as they fail to comprehend the concepts and the different

complex logical arguments presented in the language. Even though the student has good technical knowledge, he/she fumbles when asked to speak in English. This barrier prompted the researcher to undertake the study. So the study is entitled, "Present Status of English Language Proficiency among Students at Secondary Level".

OBJECTIVES

1. To find out the level of English language proficiency among secondary school students for the total sample and subsamples based on a) Gender b) Locale of Schools and c) Type of Management of Schools.
2. To compare the English language proficiency among secondary school students based on a) Gender b) Locale and c) Type of Management of Schools.

HYPOTHESIS

1. There is significant difference in the English language proficiency among secondary school students based on a) Gender b) Locale and c) Type of Management of Schools.

METHODOLOGY

As the present study intends to find out the present status of English language proficiency among students at secondary level, the investigator employed normative survey method for collecting the data. The population of the present study comprises Secondary School Students of Kottayam district. From the population the investigator selected 450 secondary school students using stratified random sampling technique giving due representation to gender, locale and type of management of schools. The investigator collected data using English language proficiency Test prepared and standardized by the investigator. The collected data was analysed using t-test.

ANALYSIS AND INTERPRETATION OF DATA

1. Level of English Language Proficiency of Secondary School Students

The level of English Language Proficiency was categorized into High, Average and Low using the mean and Standard deviation calculated for the purpose. The percentage of those students who scored M+1/2ó and above were taken as High, M-1/2ó and below were taken as low and the percentage of students in between these values were taken as average. The details are given in the following tables.

Table 1

Level of English Language Proficiency of Secondary School Students for the total sample

N	Mean	SD	Level of English Language Proficiency in %		
			High	Average	Low
450	25.36	10.79	19.11	62.01	18.88

Of the total sample majority possess (62.01%) average level of English language Proficiency.

Table 2

Level of English Language Proficiency of Secondary School Students based on Gender, Locale and Type of Management of Schools

Sub-samples		N	Mean	SD	Level of English Language Proficiency in %		
					High	Average	Low
Gender	Boys	205	22.52	9.98	15.22	67.66	17.12
	Girls	245	27.75	10.89	21.19	62.51	16.30
Locale	Urban	398	25.68	22.06	20.1	61.67	18.23
	Rural	52	22.92	8.19	16.8	68.1	15.1
Type of	Govt	112	26.88	10.31	15.4	70.1	14.5
Management	Aided	338	24.86	10.92	18.2	66.3	15.5

From the above table it is clear that among different sub samples selected, majority possess average level of English language Proficiency (Boys -67.66%, Girls- 62.51%, Urban students- 61.67%, Rural Students- 68.1%, Government school students- 70.1% and Aided School Students- 66.3%).

2. Comparison of English Language Proficiency of Secondary School Students

To compare the English Language Proficiency of Secondary School students with respect to gender, locale and type of management of schools, the investigator used the test of significance of the difference between two means (t-test). The data and result of the test of significance are given under the following tables

Table 3

Data and Result of Test of Significance of Difference between the Mean Scores of English Language Proficiency of Secondary School Students with respect to Gender

Gender	N	M	SD	't'-value	Significance
Boys	205	22.52	9.98	5.27	$p<0.01$
Girls	245	27.75	10.89		

The mean scores of English Language proficiency of secondary School Students with respect to Gender were compared and the't' value obtained is 5.27 which is significant at 0.01 level. So there is significant difference in the mean scores of English Language proficiency of secondary School Students with respect to Gender. Also from the mean scores it is clear that the English Language Proficiency of Girls (M=27.75) is higher than that of Boys (M=22.52). The difference is again depicted through a pictorial representation as shown below.

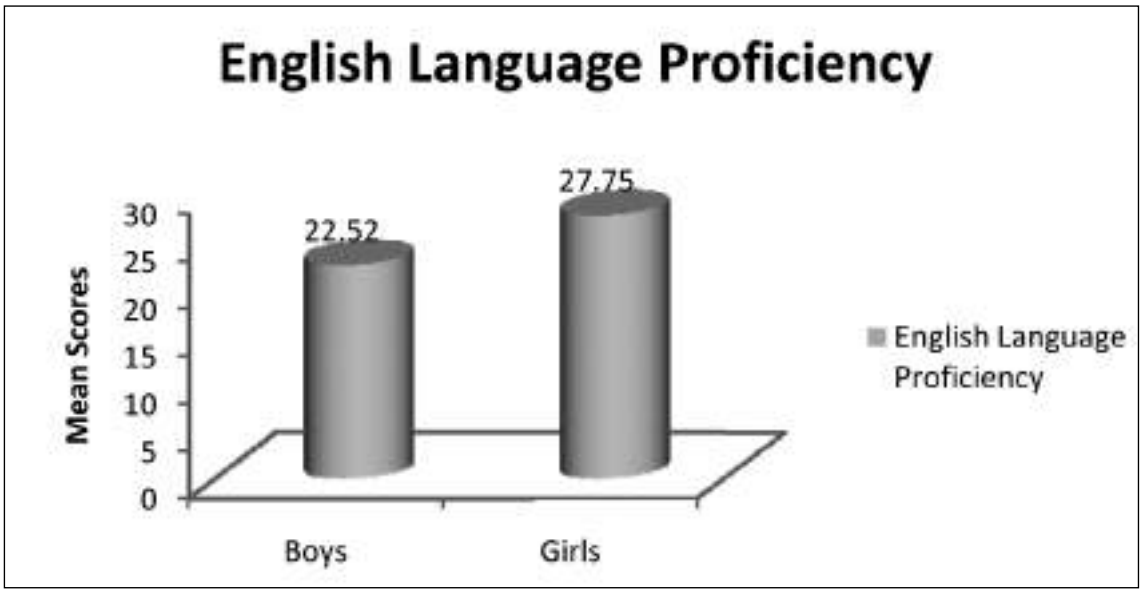


Figure 1. Comparison of English Language Proficiency of Secondary School Students with respect to Gender

Table 4

Data and Result of Test of Significance of Difference between the Mean Scores of English Language Proficiency of Secondary School Students with respect to Locale of School

Locale	N	M	SD	't'-value	Significance
Urban	398	25.68	11.06	2.19	$p<0.05$
Rural	52	22.92	8.19		

The mean scores of English Language proficiency of secondary School Students with respect to Locale of Schools were compared and the't' value obtained is 2.19 which is significant at 0.05 level. So there is significant difference in the mean scores of English Language proficiency of Secondary School Students with respect to Locale of Schools. Also from the mean scores it is

clear that the English Language Proficiency of Urban Secondary School Students (M=25.68) is higher than that of Rural Secondary School Students (M=22.92). The difference is again depicted through a pictorial representation as shown below.

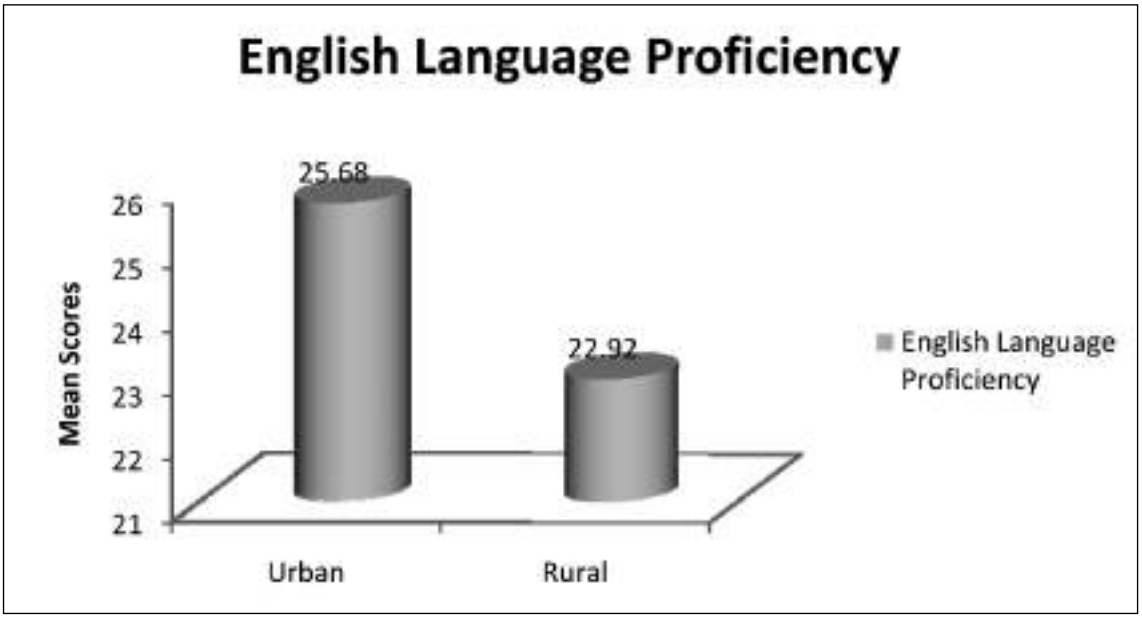


Figure 2. Comparison of English Language Proficiency of Secondary School Students with respect to Locale of schools

Table 5

Data and Result of Test of Significance of Difference between the Mean Scores of English Language Proficiency of Secondary School Students with respect to Type of Management of Schools

Management	N	M	SD	't'-value	Significance
Government	112	26.88	10.31	1.71	p>0.05
Aided	338	24.86	10.92		

The mean scores of English Language proficiency of secondary School Students with respect to Type of management of Schools were compared and the 't' value obtained is 1.71 which is not significant at 0.05 level. So there is no significant difference in the mean scores of English Language proficiency of secondary School Students with respect to Type of management of Schools.

MAJOR FINDINGS AND CONCLUSION

1. Majority of Secondary School Students possess average level of English Language Proficiency for the total sample and sub samples based on Gender, Locale and type of management of Schools.
2. There is significant difference in the mean scores of English Language proficiency of secondary School Students with respect to Gender. The English Language Proficiency of Girls is higher than that of Boys.
3. There is significant difference in the mean scores of English Language proficiency of secondary School Students with respect to Locale of Schools. The English Language Proficiency of Urban Secondary School Students is higher than that of Rural Secondary School Students.
4. There is no significant difference in the mean scores of English Language proficiency of Secondary School Students with respect to Type of management of Schools.

REFERENCES

- Canale, M., & Swain, M. (1980). *Theoretical Bases of Communicative Approaches to Second Language Teaching and Testing.* University of Toronto.
- Kachru, B.B. (1983). *The Indianization of English: The English Language in India*. New Delhi: Oxford University Press.
- Koul, L. (2009). *Methodology of Educational Research.* New Delhi: Vikas Publishing House.
- Krashen, S.D. (1981). *Principles and Practices in Second Language Acquisition: English Language Teaching Series.* London: Prentice Hall International.
- Lado, R. (1961). *Language Teaching – A Scientific Approach.* New Delhi: Tata McGrawHill Publishing Co. Ltd.
- Varghese, P. (1989). *Teaching English as a Second Language*. New Delhi: Sterling Publishers.

EFFECTIVENESS OF VEDIC MATHEMATICS METHOD ON ACHIEVEMENT IN MATHEMATICS OF SECONDARY SCHOOL STUDENTS

Asha Maria Thomas
Guest Lecturer in Mathematics
Mount Carmel College of Teacher Education for Women, Kottayam

ABSTRACT

The present study tries to find out the "Effect of Vedic Mathematics method on Achievement in Mathematics of Secondary School Students.". For this study the investigator used experimental method and selected pre-test, post-test non-equivalent group design. The findings of the study revealed that Vedic Method is more effective than the activity oriented method in enhancing achievement in Mathematics of secondary school students.

KEY WORDS: Vedic Mathematics, Achievement in Mathematics.

INTRODUCTION

Mathematics is called mirror of our civilization. It shapes our culture as a pioneer that is why it is said, "Shut out Mathematics from our daily life and all civilizations come to a standstill." It is a "vehicle to train a child, to think, reason, analyze and to articulate logically" (Ministry of Human Resource Development, 1986). Mathematics is all around us. Mathematics helps children make sense of their world outside of school and helps them to construct a solid foundation for success in school.

Mathematics is an important subject in school curriculum. The practical value of Mathematics is so important that nobody can be truly educated unless he can perform the daily business of life with ease and accuracy. Nobody can escape from the application of Mathematics in one's own life. It has its own disciplinary values. In addition to these, Mathematics also develops those qualities which can be developed by other subjects.Unfortunately the Mathematics that is taught in most schools and colleges lack flexibility and therefore become boring to the students. Fixed methods are also used for all operations there by making the process of education lengthily and tiresome.

Vedic Mathematics is the contribution of our Vedic culture to world progress. Vedic Mathematics is given by Jagadguru Swami Sri Bharati Krsna Tirthaji Maharaja of Govardhana

Matha, Puri (1884 – 1960). It is based on some mathematical formulae (Sutras). It is used for carrying out tedious and cumbersome arithmetical operations, and to a very large extent, executing them mentally.

At present the traditional method in teaching and learning Mathematics and passive role of pupils are still evident in the class rooms. Education continuously builds ideas and emotions. The mathematics teacher can constantly seek new ways of capture the attention of students and create learning environment. Many of our students consider Mathematics a very difficult subject. To quote from Kerala curriculum Framework (2007), "Students find it difficult to imbide the basic tenets of Mathematics. The condensed forms of mathematical theories are not palatable to a large section of the student body.

Lack of understanding of the subject would create backwardness and phobia in the students. The result is that the students are not only scared but would also develop disgust for the subject. Even at the school stage where the objective of Mathematics teaching is to develops in the learners mind reasoning power and certain characteristics such as simplicity, certainty of results and originality. It also helps to develop intellectual powers of imagination, logical thinking and systematic reasoning.

The current methods of calculating which have been adopted by most schools are 'blanket' methods. For example, with division, only one method is taught and actually used by the children. Although it will suffice in all cases it may often be difficult to use.

Vedic Mathematics plays an important role in the achievement of students in Mathematics, because Vedic Mathematics solves problems 10 – 15 times faster than other methods. It reduces burden, improves confidence and increases concentration. So teachers should use Vedic Mathematics methods along with other methods in the classroom. This will definitely help the students to achieve better and solve problems faster.

OBJECTIVES

1. To compare the mean pre-test scores of Achievement in Mathematics of Secondary School Students taught through Vedic Mathematics Methodand Activity oriented method.
2. To compare the mean post-test scores of achievement in Mathematics of Secondary School Students taught through Vedic Mathematics Methodand Activity oriented method.
3. To compare the mean gain scores of achievement in Mathematics of Secondary School Students taught through Vedic Mathematics MethodandActivity oriented method.

HYPOTHESES

1. There is significant difference in the mean pre-test scores of Achievement in Mathematics of Secondary School Students taught through Vedic Mathematics Methodand Activity oriented method.

2. There is significant difference in the mean post-test scores of Achievement in Mathematics of Secondary School Students taught through Vedic Mathematics MethodandActivity oriented method.
3. There is significant difference in the mean gain scores of Achievement in Mathematics of Secondary School Students taught through Vedic Mathematics Methodand Activity oriented method.

METHODOLOGY

The present study is experimental in nature. To conduct the experiment, the investigator adopted Pre-test, Post test non-equivalent group design. The study was conducted on a sample of 60 students of standard IX of Kollam District. Out of 60 students, thirty students were randomly assigned to the experimental group and the other thirty to the control group.

ANALYSIS AND INTERPRETATION OF DATA

1.Comparison of the Mean Pre-test Scores of Experimental and Control Group

Table 1

Data and Result of the Test of Significance of the Difference between the Mean Pre-test Scores of Experimental and Control Group

Category	N	M	SD	Critical ratio	Level of significance
Experimental	30	3.10	1.583	0.463	p>0.05
Control	30	2.93	1.172		

From the table 1, it is observed that the calculated t value 0.463 is less than table value 2.01 at 0.05 level of significance. This shows that there is no significant difference between means of the pre-test scores of students in experimental and control group. Thus it can be interpreted that before subjecting to instructional strategy the two groups were more or less equivalent with respect to their achievement in mathematics.

2. Comparison of the Mean Post-test Scores of Experimental and Control Group

Table 2

Data and Result of the Test of Significance of the Difference between the Mean Post-test Scores of Experimental and Control Group

Category	N	M	SD	Critical ratio	Level of significance
Experimental	30	17.03	4.39	7.214	p<0.01
Control	30	10.10	2.905		

From table 2, it is observed that the calculated t value 7.214 is greater than table value 2.66 at 0.01 level of significance. So the t value is significant at 0.01 level. This indicate that there is significant difference in the mean post-test scores of achievement in mathematics of secondary school students taught through Vedic Mathematics Method and students taught through Activity oriented method. From the means scores it is clear that after the experiment, students in the experimental group performed well than students in the control group.

3. Comparison of the Mean Gain Scores of Experimental and Control Groups

Table 3

Data and Result of the Test of Significance of the Difference between the Mean Gain Scores of Experimental and Control Group

Category	N	M	SD	critical ratio	Level of significance
Experimental	30	13.83	3.85	8.194	p<0.01
Control	30	7.03	2.414		

From table 3, it is observed that the calculated t value 8.19 is greater than table value 2.6 at 0.01 level of significance. So the t value is significant at 0.01 levels. This indicates that there is significant difference in the mean gain scores of achievement in mathematics of secondary school students taught through Vedic Mathematics Methodand students taught through activity oriented method. From the means scores it is clear that students in the experiment group performed better than students in the control group.

FINDINGS AND CONCLUSION

The study has shown that the method based on Vedic Mathematics is superior to the activity oriented method of teaching for enhancing Achievement in Mathematics of secondary school students. The present study opens up many avenue for more studies that may help students to learn Vedic Sutras in Mathematic in a more meaningful way, inspire teachers to adopt Vedic Mathematics method in their teaching process, help curriculum planners to design new curriculumbased on Vedic Mathematics and motivate researchers to improve current and future practices in Mathematics teaching.

REFERENCES

- Aggarwal, J. C. (1972). *Theory and principles of education*. 12th (ed): Vikas publications Pvt. Ltd.
- Aggarwal, J. C. (1996). *Educational research introduction*. New Delhi: Arya book depo
- Agrawala, V. S. (2006). *Vedic Mathematics.*Delhi: Mothilal Banarasidass Publishers Pvt.Ltd.
- Fernandez, J.Nancy. (2003). *Effectiveness of the module based on Vedic Mathematics as complementary material for learning the fundamental operations in Mathematics* . (Unpublished M.Ed. thesis), University of Kerala, TVPM
- Glover, J. T. (1995). *Vedic Mathematics for Schools-Book-1*. Delhi:Mothilal Banarasidass Publishers Pvt.Ltd.
- Gulati, S. (2010).Vedic Mathematics. *Edutracks, 24*(9),8-9
- Haridas, S. (1996). *Vedic Mathematics (Malayalam) Part I*. Thrissur-20: Vidyanikethan Haridas, S. (1996). *Vedic Mathematics (Malayalam) Part II*. Thrissur-8: Bharathi Publications
- Koul, L. (1993). *Methodology of Educational Research.* New Delhi: Vikas Publication House Pvt.Ltd.
- Nair, Archana.B. (2010). Astudy of the relationship between classroom learning environment and Mathematics achievement of secondary school stuents. (Unpublished M.Ed. thesis), University of Kerala, TVPM

EFFECTIVENESS OF DIALOGUE-INITIATED PAIDEIA STRATEGY ON CRITICAL THINKING AMONG SCIENCE STUDENTS AT SECONDARY LEVEL

Jaisa P.J.
Principal, Secondary Delhi Public School, Mustafabad, Gaya, Bihar

Tigi Christy Thomas
HSST Zoology, Bishop Hodges HSS, Mavelikkara

ABSTRACT

Paideia Seminar is a collaborative, intellectual dialogue facilitated by open-ended questions about a text or topic. The Paideia Seminar nurtures intellectual skills by teaching students to ask higher order critical thinking questions of analyzing, evaluating, and creating. Paideia Seminar strategy can be effectively made use of in the secondary school education in the Indian scenario. As science educators, it is our responsibility to assist students to think critically about what science is what it represents and whether its impact is for the greater good. This study explores the Paideia Seminar process and determines if the learning of new topics in Biology, which is transactional, can be modified or solidified through the use of this socio-cultural tool, and thus transforms the initial comprehension. The study used the Pre-test Post-test Non-equivalent group Experimental design. The study revealed that the Critical Thinking Ability of students taught using the active dialogue of the Paideia seminar approach is significantly higher than that of those taught using exiting activity based method.

KEY WORDS: Paideia strategy, Critical thinking

INTRODUCTION

Education serves as a way to bring about the desired and deserving change in society, to develop a new generation of admirable individuals and thus cause the growth of good and efficient people. Education gives us knowledge of the world around us and changes it into something better. It develops in us a perspective of looking at life. It helps us build opinions and have points of view on things in life. Information cannot be converted into knowledge without education. Education makes us capable of interpreting things, among other things. It is not just about lessons in textbooks. It is about the lessons of life.

Secondary-level educators are an essential part of critical thinking development. High schools need to be ¯a place that involves students in rich, authentic, collaborative work; that takes responsibility for building 21st century skills; and that uses a diverse program of assessment to document students' growth in such skills (Coughlin, 2010). Paul and Elder (2008) asserted that critical thinking ¯provides a vehicle for educating the mind. One can't teach students what to think in a classroom setting. However, one can teach them how to think. Paul and Elder (2008), claimed that while educators have taught students to ¯see subjects and disciplines as atomic facts, bits, and pieces of meaning to store in their minds for a test, and then to forget to make room for another test, they have neglected to teach our high school students to see how these bits form a composite, broad view. Instead of teaching students to merely memorize facts easily found on the internet, teachers should instead ¯teach them how to think: clearly, accurately, precisely, relevantly, deeply, broadly, logically, significantly, fairly.

Paideia Seminar is a collaborative, intellectual dialogue facilitated by open-ended questions about a text or topic – increased understanding of ideas and values. As questions drive critical thought, the goal of Paideia Seminar is for students to expand their understanding of ideas, concepts, and values about the curriculum through thoughtful dialogue rather than by memorizing bits of information. The Paideia Seminar nurtures intellectual skills by teaching students to ask higher order critical thinking questions of analyzing, evaluating, and creating.

NEED AND SIGNIFICANCE OF THE STUDY

Paideia is a framework for teachers to think about curriculum, teaching, and assessment in a way that provides a holistic and rigorous experience for all students. In this way, Paideia advocates differentiation through participation in the Paideia Seminar and Project. These strategies work well in a single classroom but are most powerful when practiced school wide.

From the experience of the investigator, students show least interest in thinking out-of-the-box. The purpose of this study is to explore the benefits of dialogue-based Paideia Seminar strategy in developing critical thinking among adolescent learners in a secondary level Biology class. The outdated method of lecturing and memorizing method of teaching causes the students to lose confidence and motivation to understand the basic essence of science. These facts have persuaded the investigator to study more about the way students handle and learn Biology lessons to find implications in real life situations.

OBJECTIVE

1. To compare the level of Critical thinking ability of students taught using the dialogue-based Paideia seminar approach and the existing activity based method

HYPOTHESIS

1. The level of Critical Thinking Ability of students taught using Paideia seminar approach is significantly higher than that of those taught using exiting activity based method.

METHODOLOGY

The present study has the Pre-test – Post-test Non-equivalent group Experimental design as the method of approach. The sample of 90 students from Standard IX, selected for the study was divided into two non-equivalent groups, each consisting of 45 pupils. The experimental group was taught with the Paideia Strategy of instruction and the control group with the existing activity-based method of teaching. The experimental and control group were administered a Critical thinking ability scale. Pre-tests and Post-tests were conducted for both the experimental and control groups. The Pre-test and Post-test scores of the experimental and control groups were collected, quantified suitably and analysed with appropriate statistical techniques.

TOOLS USED FOR THE STUDY

- Lesson transcripts based on the 3-column instruction of Paideia.
- Lesson transcripts using the existing Activity-based method.
- Critical Thinking Ability scale for adolescents (Standardized by C. Mincemoyer, D.F. Perkins and C. Munyua, 2001).

ANALYSIS AND INTERPRETATION

The details of the analysis carried out are presented under the following major section.

1. Comparison of the students in the Experimental and Control groups with respect to the Pre-test and Post-test scores of the Critical thinking ability scale

The analysis carried out for this initial comparison is presented under the following subsections:

1.1. Comparison with respect to Pre-test, Post-test and Gain scores onCritical Thinking Ability.

Effectiveness of Paideia Strategy on Critical Thinking ability was found out by comparing the mean Pre-test, Post-test and gain test scores of experimental and control groups using '*t*' test. The data and the results of the test of significance of difference are given in the Table 1.

Table 1

Data and results of test of significance of difference between the mean Pre-test, Post-test and Gain scores on Critical Thinking Ability of the experimental and control groups

Scores	Groups	N	Mean	SD	*t value*	Level of Significance
Pre-test	Experimental	45	69.36	5.07	2.03	$p > 0.01$
	Control	45	66.56	7.71		
Post-test	Experimental	45	83.71	3.60	11.36	$p < 0.01$
	Control	45	70.09	7.19		
Gain scores	Experimental	45	14.36	6.80	10.02	$p < 0.01$
	Control	45	3.53	2.51		

Critical values of *t (1, 88)* at 0.05 level = 1.99, at 0.01 level = 2.64

The analysis of the Pre-test test scores shows that the obtained *t*- value 2.03 is not significant at 0.01 levels. This implies that there exists no significant difference in the mean Pre-test scores of the Critical Thinking Ability of the students at secondary level.

The analysis of the Post-test scores and the gain scores revealed that the experimental and control groups differ significantly at 0.01 level. This implies that there exists significant difference in the mean Post-test and Gain scores of the Critical Thinking Ability of the students at secondary level.

The values of the mean scores reveal that the students in the experimental groups scored better than the control group. Thus it can be inferred that the active dialogical discussions in the Paideia Strategy helped the experimental group to achieve better than the control group, who were taught through lecture-dominant activity oriented method.

FINDINGS AND CONCLUSION

The Critical Thinking Ability of students taught using the active dialogue of the Paideia seminar approach is significantly higher than that of those taught using exiting activity based method. It can be inferred that the Paideia Seminar based teaching helped students to show more Critical Thinking ability skills.

The need to develop creative and critical thinkers is growing progressively more important. As science educators, it is our responsibility to assist students to think critically about what science is, what it represents and whether its impact is for the greater good.Teaching students how to think is much more important goal than merely teaching them what to think. Paideia Seminar strategy can be effectively made use of in the secondary school education in the Indian scenario.

REFERENCES

- Adler, M. J. (1982). *The Paideia proposal: An educational manifesto*. New York: Collier Books Macmillan Publishing Co.

- Adler, M. J. (1984). *The Paideia program: An educational syllabus.* New York: MacMillan.
- Bronson, R. W. (2008). *Critical thinking as an outcome of distance learning: A study of critical thinking in a distance learning environment. Unpublished doctoral dissetation,* The George Washington University.Retrieved January 15, 2017, from http://www.iiste.org/
- Coughlin, E. (2010). "High schools at a crossroads". *Educational Leadership, 67*(7), 48. Retrieved on January 26, 2017 from http://www.ascd.org/publications/educational-leadership.aspx
- Dewey, J. (1933). *How We Think*. New York: Heath.
- Dökme, I. (2005). "Evaluation of 6th grade science textbook published by the Turkish ministry of education in terms of science process skills". *Elementary Education Online, 4*(1). Retrieved on January 26, 2017 from https://www.researchgate.net/publication/314140396_Examining_the_Learning_Outcomes_Included_in_the_Turkish_Science_Curriculum_in_Terms_of_Science_Process_Skills_A_Document_Analysis_with_Standards-Based_Assessment.
- Ennis, R.H. (1996). *Critical Thinking*. Upper Saddle River NJ: Prentice Hall.
- Gardner, H. (1983). *Frames of Mind: The Theory of Multiple Intelligences*. New York: Basic Books.
- Garrison, D. R., Anderson, T. & Archer, W. (2001). Critical thinking, cognitive presence, and computer conferencing in distance education. American Journal of Distance Education, 15(1), 7-23. Retrieved on March 13, 2017 from http://files.eric.ed.gov/fulltext/EJ1079684.pdf
- Gay, L. R. (1996). *Educational research competencies for analysis and applications, 5th Ed*. Englewood Cliffs, NJ: Prentice-Hall.
- Gomes, J. (2005). *Using a creativity-focused science program to foster general creativity in young children: A teacher action research study. Unpublished Ed. D. Dissertation,* Fielding Graduate University, United States, California.Retrieved January 15, 2017, from http://www.iiste.org/
- Good, C.V. (2006). *How to do research in Education?* New Delhi: Cosmo Publications
- Kim, K. N. (2009). *Explorýng undergraduate students' active learning for enhancing their critical thinking and learning in a large class. Unpublished doctoral dissertation,* The Pennsylvania State University. Retrieved January 15, 2017, fromhttp://www.iiste.org/
- Kothari, C.R. (2004). *Research Methodology: Methods and Techniques*.New Delhi:New Age International (P) Ltd., Publishers

- Koul, L. (1996). *Methodology of educational research,* 3rd Ed. New Delhi: Vikas Publishing House
- Mangal, S.K. (2002). *Statistics in Psychology and Education.* 2nd Ed. New Delhi: PHI Learning private Ltd.
- Mincemoyer, C., Perkins, D.F., &Munyua, C. (2001). "Critical Thinking in Everyday Life Scale". *Source: Youth life skills evaluation project at Penn State.* Retrieved on November 26, 2016 from http://www.humanserviceresearch.com/youthlifeskillsevaluation/
- National Paideia Center's *Essential elements of the Paideia school.* Retrieved on January 26, 2016 from http://www.learnnc.org/lp/editions/paideia/1.0.

MOTHER TERESA OF ST. ROSE OF LIMA AS AN EDUCATIONAL REFORMER

Minnu Ann Mathew
B.Ed Student (English)
Mount Carmel College of Teacher Education for Women, Kottayam

ABSTRACT

Missionaries played an important role in breaking the existing system of the society by implementing various programmes especially in the view to help women and empower them through education. The paper examines the development of women empowerment through education sector in Kerala as well as other parts of the world after the emergence of missionaries especially the Carmelites. It also brings out the life and contributions of Mother Teresa of St. Rose of Lima and how she strived to educate more women in our country and towards social transformation. It underlines the changes in society especially in the status of women through the strenuous efforts of Carmelites.

KEY WORDS: Women Empowerment, Educational Reformer

INTRODUCTION

"If you educate a man, you educate an individual; education contributes to his individual growth; it becomes his 'private property', as it were. But when you educate a woman, you educate the entire family" - Dada J.P. Vaswani

Education is an important tool that can empower women by strengthening her confidence and empower themselves in building a strong nation. If Kerala is ahead of any other state in education it is because of the foreign missionaries especially Carmelite missionaries who showed a special intimation to this sector. It was Bernadine Baccinelli Metropolitan Archbishop who took the initiative to start school close to churches (pallikkoru pallikoodam) he ordered that, it should be taken to start one or more primary schools close to all churches under his dominion. He also ordered that everyone should be admitted irrespective of caste or creed.

Even when Kerala saw a gradual progress in literacy, education for women was neglected in the society. And it was at this venture, Mother Teresa emerged as a messenger of education for women and their upliftment in the society.

Early Life and Work

Mother Teresa of St. Rose of Lima was born on January 29, 1858 in Madras. She did her

schooling from a school run by the Presentation sisters in George Town, Madras. She passed matriculation and Teachers Higher Grade exam and joined the Teaching service. In 1882, she joined the Carmelite sisters and became Sr. Teresa of St. Rose of Lima. Her Religious formation at St. Joseph's Convent, Alleppey, was based on the "Regulations for the Third order Carmelite" which proposed as the second end of their vocation, "to work for the salvation of the souls by prayer and education".

As 1879 saw a growth of English medium education under the British rule and the then Malabar Vicar Apostle Fr. Leonard Milano Dr. Leonard who understood the need for the education to girl children and that only girls' education and women empowerment can attract the masses, decided to start a new school for the girls in Alleppey. He found this as great opportunity to begin a Catholic educational Institute for girls and thus entrusted this duty to Mother Teresa of St. Rose of Lima who was working in Alleppey during that time.

At the age of 29, just two years after her sisterhood life, she was given the duty not only to start a new English medium school but also to start a Convent there. Grace Lima was invited and was appointed as the head in this school and started the new congregation. On 24th April 1887, Mother Teresa of St. Rose of Lima started the St. Teresa's Convent. With just two sisters in the year 1888, she strived hard to expand the new order with her own sister and Sr. Mary Agnus, who had both passed the higher-grade examination started the first institution, St. Teresa' s School at Ernakulum which was acclaimed as the best school in Kerala.

Because of her strong will and perseverance, she attracted the masses and gained a prominent position in the society and thus it led to the growth of the school. As she continued to work in the institution run by the Carmelite sisters, she soon recognised the call to become a nun and engage in more missionary activities for the upliftment of the society, especially women.

Contributions

Mother Teresa of St. Rose of Lima was a pioneer in the education, especially for the upliftment of the women. As we have seen, Mother Teresa of St. Rose of Lima was invited and called to open up an English school for the girls and thus St. Teresa's school was started in May, 1887 and it emerged as the first school for the girls in Cochin.

Mother Teresa of St. Rose of Lima was entrusted with the mission of education girls who were denied education and social interactions during the time. Even though her sole aim was in establishing institutions for the upbringing of the girls in the society through education, she was able to open up other institutions so as to look into the problems of each and every one in state and help the weak and poor.

Literacy became a desirable goal from about 1860s as a result of government policy appointed full-time director of vernacular education. Thus, Mother Teresa of St. Rose of Lima took this as the right time to start an institution her active zeal in starting a vernacular school is a clear proof of

this. The hindrance in starting a vernacular school was that not all sisters knew Malayalam and for that she sent sisters out to learn Malayalam and trained them to become experts in that and catered the needs of the existing society. Later the school became an Anglo-Vernacular school.

A little over a decade after the foundation of the first school for girls in the state, Mother Teresa's vision already penetrated the distant future and she had the daring to envisage a women's college and thus we can see that to her it was not a mere idle dream and took measures to send the sisters abroad to study so as to improve the standard of teachers and usher the quality of education. Hence, through her vision and mission, she was able to educate masses and help in the overall development of women, so as to become independent in the society.

Through her strong will and aim of improving the lives of the girls in the society, the school grew steadily. However, she was not satisfied with just producing scholars, but through education she aimed at penetrating the soul of the child which leads to the well-being of the total person. She believed that the education should bring an overall development of the student and should not confine only to the lessons of prescribed textbooks. Thus, she aimed at the personality development of each and every student so as to shape a better generation in the society to help them from evils and trap holes of the materialistic society.

Mother Teresa of St. Rose of Lima broke down barriers so that people could live as children of God's family. Everyone, irrespective of caste or religion had a place in her life and ministries. Within a span of 15 years, the contributions she made are immense and have led to the upgradation of the society as a whole. Even when she had to face criticism from the missionaries who used to provide them grants and other supplies stating that the higher educational qualifications were unnecessary, through her strong will, she sent the sisters for training and gave best training to assure the quality of teachers and ensured to give a quality education to the society.

By 1946, the total number of girls in all the educational institutions intended for girls reached 1,00,409 in Cochin. Carmelite missionaries took advantage of the interest shown by the rulers of Cochin for educational reforms prior to 1949 and took it as the right time to spread their growth and establish their educational institutions across India and abroad so as to up bring the girls and women in the society. Though Mother Teresa was called to start an English school she was in no way bound to start a vernacular school. The English school gained much popularity and support from the people and government authorities over the years and she believed that the most essential thing and the need of the time was not only the English education to all but train the society in their own language. Mother's concern was for the people and their needs.

On September 12th 1902, Mother Teresa of St. Rose of Lima at the age of forty-four died in a train accident near Mangappatnam. In the life of Mother Teresa, we see her thrust towards freedom, liberation, justice and a transformed world.

"The death of Mother Teresa was a triple loss- an irreparable loss to her infant institute, a

great loss to the town of Ernakulam and above all, it was a loss to the Archdiocese of Verapoly whose prosperity she always considered as linked with that of her own institute. The Work she started in the little house on the 24th of April, 1887, has today developed into what may be described a vast river, whence have flowed large streams, into different and distant parts of our vast sub-continent , in the form of daughter institutions of the Congregation she founded –convents, schools, colleges, orphanages and charitable institutions- which flourish and are increasing in numbers".

CONCLUSION

The Carmelite missionaries have made immense contributions to women's education by demonstrating both in theory and in practice by services of measures. The women empowerment and the betterment of girls in the field of education was their primary motive and can be seen by the growth of educational institutions and the number of students who have passed out from those institutions which is spread across the world. Thus, it has led to the spiritual, social, economic and intellectual empowerment and that was the direction taken under Mother Teresa – a fuller life of all.

The congregation not only imparted educational services and uplift the lives of the women but also served the society in other fields like Health, remedial classes, value education, children's home, learning disability centre, tailoring units, hospitals and palliative care units, Centre for Aids and Community patients, Community College, flour mills, home for the aged, School for Dropouts, Dispensary, Jail Ministry, etc. They also help the society to recover from the psychological problems and gives counselling for the alcoholics and broken families which are the most common problems of today's world. Thus the congregation follows the path of mother in shaping the society into a better world of peace, unity and love.

EFFECTIVENESS OF INTEGRATING PUZZLES AND RIDDLES IN THE TEACHING-LEARNING PROCESS

Akhila Ramachandran Nair
B.Ed Student (Physical Science)
Mount Carmel College of Teacher Education for Women, Kottayam

ABSTRACT

The need of current and emerging tools in education is becoming a prime topic among educators and educational institutions.In order to enable the learners to participate in the learning process there is an imperative need to adopt some kind of learner-centred new approaches in the classroom . The teacher should always strive to keep the interest of child in mind while integrating such tools in the instructional process. It has been found that puzzles, riddles, stories, poems provides them with an opportunity to think, learn and develop themselves for today and tomorrow. This paper examines the role of puzzles and riddles in the instruction process. It describes at length the need of incorporating such approaches and the effectiveness of integrating puzzles and riddles in teaching.

KEY WORDS: Puzzles, Riddles, Brain teasers

INTRODUCTION

Children are the buds in which we can instil our hopes for a great future. They are the ones that will make the world a better place to live in. Young minds need to be fostered with something that gives them an opportunity to think over. It is very important that their thinking ability develops as they grow. Early years of proper training and teaching are essential for their future. It has been found that puzzles, riddles, stories, poems provides them with an opportunity to think, learn and develop themselves for today and tomorrow.

The modern world is too complex and that is where the children needs to grow and learn things. In order for children to grasp these complexities of modern life they have to be prepared at a younger age. Children usually gain an understanding of the world around them and form opinions on different concepts shortly after beginning school. Engaging young minds with exciting and innovative tools and approaches motivates them to learn and understand the world around them.

The need of current and emerging tools in education is becoming a prime topic among educators and educational institutions. The nature of many subjects makes it necessary to introduce such tools. Many teachers, educators find it as a challenge to teach their subjects effectively by developing appropriate pedagogical approaches or by using adequate teaching learning materials and also by introducing some innovations in their teaching. Also children may get bored easily during lectures and after continuous sessions. Hence it is necessary to grab attention and ensure their active participation in the learning process. All these aspects prove the need of innovative learner-centred approaches in educational process to achieve good educational results. In such situation, what can be the best way in which children can learn from and enjoy at the same time? Use of puzzles and riddles is an effective way of introducing active learning in the classroom.

The excitement that a child experiences when he discovers a book of puzzles or riddles has always astonished educators. The possible reason may be that these puzzles and riddles offer them an opportunity to experiment their thought process in an unusual way. When they are presented with such material, they carefully search clues that would help to solve the mystery and once the answer is found out the sense of accomplishment they feel is inexpressible. Even at times when they are unable to answer them and have a look at the solution, their enthusiasm is not at all diminished. For them it is a thought provoking opportunity and a fun way of learning.

Although commonly viewed as a leisure time activity, puzzles and riddles have great potential in the classroom for developing the pupils mental abilities, attention, creative imagination, observation, improve their thinking and thereby help in better assimilation and consolidation of acquired knowledge. It also enables students to easily comprehend the subject matter, sharpen problem solving skills, develop new concepts and reinforce their skills in different subjects such as language, arts, mathematics, science and social studies. It also helps in developing the skill of divergent thinking and inculcate a skill of intuition.Telling and teaching riddles and puzzles is a great way to form relationships with the child making it easier for them to form social relationships in the future.

Puzzles and Riddles - Brain Teasers

There is no end for curiosity of man. Whether it is solving Sudoku or solving a bunch of puzzles and riddles, at the end it is your logic that gets sharpened and your brain that gets refreshed. As per experts,if certain areas of the brain such as logic reasoning is not used, the brains neural connections in those areas becomes less severely triggered to stimulate the logic reasoning part of our brain. Working upon tangible, measurable, achievable problems can shift our brains towards a better logical approach. Hence puzzles and riddles have such a long lasting and immense effect

on our brains. Solving puzzles and riddles on a daily basis can actually turn out to be a great brain exercise-enabling clear thinking, sorted solutions and reconstructed vision.

Puzzles and Riddles in Curriculum and Textbooks

Curriculum is reflected through the textbooks to the students and the teachers. Developing a learner friendly textbook has always been a challenge for the education system. A good curriculum however demands to be activity based, learner centred and enjoyable to the children. It should be able to arouse and nurture the student's interest in learning. The role of puzzles and riddles in curriculum will immensely help children to understand different concepts in an enjoyable way. Nothing can be as exciting as incorporating puzzle and riddle sessions in textbooks so that they can demonstrate their knowledge and skills with an element of fun. This type of learning can also help them in retaining the material learned for a longer time.

Puzzles and Riddles to support Teaching and Learning

Though puzzles and riddles are non-traditional teaching aids, they can be used to complement traditional teaching methods to enhance the learning experience of the learners and also to teach skills such as problem solving, creativity, critical thinking, teamwork.

Learning is not just rote memorization where students learn content through repetition. They should be made to think, to construct knowledge and gain insight into learning. Using puzzles and riddles will enable them to see the subjects in a different way ensuring their active participation in the teaching-learning process.

Teachers always face the issue of finding effective ways to present their material in such a way that it can be optimally learnable for different students for achieving good educational results. This problem is especially urgent in this rapidly changing and fast paced world where the tools which could be used to arouse interest and develop the abilities of students yesterday, seems to be quickly obsolete the next day. Therefore it is important to search for new means to foster the development of students. It is the responsibility of teachers to explore the teaching possibilities of new teaching tools.

Students are curious about puzzles and riddles. Teachers can take advantage of this natural interest. Puzzles and riddles can be used as icebreakers, as part of specific topics, to introduce new vocabulary in a fun and engaging way. After presenting the lecture, teachers can provide puzzles and riddles related to the lecture to the students. Students can be encouraged to read through the clues, recall and review the material and engage in discussion with their peers to promote cohesive learning and identify the misconceptions about the material. This leads to a better comprehension and retention of the learning material leading to a positive learning experience. This can also help them to identify gaps in their knowledge and provides a feedback regarding understanding of the material presented in the lecture.

However there are complexities involved in identifying appropriate puzzles and riddles. It should be noted that the selection of puzzles and riddles for the appropriate stage should be done very carefully. It should not fall out if the general context of lesson and must be used to facilitate the learning process. Though it is a time consuming tool it improves student outcomes at all levels.

CONCLUSION

Human beings are at a continuous learning process with different motivations during their whole lifetime. Introducing puzzles and riddles in classroom learning can enhance this level of motivation and encourage students to explore something new. Teacher educators have one of the key responsibility in discovering such new, innovative better ways to educate children and promote their capabilities to develop the next generation of innovators and creative thinkers.

REFERENCES

- John M. R., & Michael L. F. (1971). Riddles: Expressive Models of Interrogation,*Vol 10*,509-533. Retrieved from https://www.jstor.org/stable/3773178
- Awad S. K., Fikry K. A.(2013). The Effectiveness of Using Puzzles in Developing Palastinian Tenth Grader's Vocabulary Achievement and Retention. *Humanities and Social Sciences.Vol 1*,No.1.PP.46-57. doi:10.11648/j.hss.20130101.16
- Shah S.,Lynch L.M., Macias M.LZ.(2010). Crossword Puzzles as a Tool to Enhance Learning About Anti-Ulcer Agents. *Am J Pharm Educ.:74(7)*:117.doi:10.5688/aj7407117
- Gorev,P.M.,Telegina, N.V., Karavanova,L.Z.,& Feshina,S.S. (2018). Puzzles as a Didactic Too for Development of Mathematical Abilities of Junior Schoolchildren in Basic and Additional Mathematical Education. *Eurasia Journal of Mathematics, Science and Technology Education,14(10),*em1602.https://doi.org/10.29333/ejmste/93675
- K. Thiyage. (2012). Effectiveness of integrating Riddles in Teaching Mathematics Among VIII Standard Students . *I-manager's Journal on Educational Psychology, 6(2)*,8-12.https://doi.org/10.26634/jpsy.6.2.2001
- Strategy of the week:Teaching with Puzzles. Retrieved from https://www.education world.com/a_curr/strategy/strategy064.shtml
- https://www.brainbaxa.com/amphtml/blog/how-riddles-make-our-brain-function-differently.

NURTURING CULTURAL MORALITY: THE SCOPE AND AIM OF INCLUSIVE CLASSROOMS

Jerrin Aleymma John
B.Ed Student (English)
Mount Carmel College of Teacher Education for Women, Kottayam

ABSTRACT

Teaching in the 21st Century has become herculean task with the widening diversity of needs and demands of the learners. The teachers have become facilitators and guides who enlighten and guide the learners in the various paths that they have chosen for themselves. However, midst these diversities and pressing times, the educational institutions do have the responsibility of moulding and building morally responsible and responsive citizens. This is best realised through the classroom practices and interactions that students have on regular basis which helps them to be prepared for the wider world outside. One of the key elements which help in realising this objective is undoubtedly the curriculum or the syllabi. The nature of the course and the variety of texts that student learns must exert an influence on understanding the nature of society rich with its cultural diversity. This Paper attempts to analyse the role of a course syllabus in nurturing a cultural morality among learners.

KEY WORDS: Inclusive classroom, Cultural Inclusivity

INTRODUCTION

Teaching learning process has gone tremendous changes over the years and specifically over the past few decades. The growth in the technological and scientific field had contributed in developing the critical and retinol faculty of the learners and also by bring in dynamic and innovative changes in the field of education. The process of acquiring knowledge has shifted from the classrooms to digitalized media by transforming the learners to virtual learners. The community aspect of learning has taken as backseat in the 21st century. This has had its positive and negative impacts s far s the educational system s well s the social realm of the learner is concerned. The learners have begun to limit themselves within the knowledge that they acquire in way causing social and moral distance from the outside world and society. The distances from nature and from human beings have risen with the growth of technological developments. In this present situation, the role of teachers and the educational system and the teaching process need to be restructured.

The course syllabus and curriculums ought to act as nourishing and polishing grounds in effectively moulding and nurturing students to have cultural morality as they move out into the outside space. Even midst the changing paradigms in the education process and the tremendous growths in the field of technology there needs to be holistic and diversified approach towards building culturally and morally inclusive classrooms and such an attitude amongst the learners.

The scenario and context of India, is one in which with each changing district and state there is huge variety of cultural practices, beliefs and traditions. The strong bond of India lies in its diversity. However, the young Indians of the country little make themselves aware of the diversity of their nation. There is a growing feeling of insecurity and intolerance growing midst the citizens regarding religious, cultural, traditional and ethical differences. It is in this situation that there should be as regard towards building culturally moral citizens in the nation. This is best employed through educational institutions and through the process of learning.

To elaborate on the matter, the education process or the learning activity that happens must ensure in building and nurturing culturally and morally were attitude most the learners. Very often the curriculum and syllabus of particular course re often designed by keeping in mind the various aspects of the subject and the learning and understanding capacity of the learners. It is in this light that various objectives of the course re being laid out. But very often within these courses, there could be possibility of exposing the learners with wide variety of topics which would rouse their social concern and make them morally were citizens and learners.

Though there are certain practical difficulties in extending this generalisation towards scientific subjects, as it is more practical in the Humanities res nonetheless every field has its own way nurturing moral awareness amongst the learners. This paper exclusively deals with course paper of the MS Literature course provided at Stella Maris College, Chennai. The focus is on the diversity of the topics being offered in the single course and of the varieties of writings and literatures taken from different cultural backgrounds of the country helping the learners become more were bout their cultural diversity and helping the learners in becoming morally responsible citizens.

Culturally Inclusive Classrooms

The concept of culturally inclusive classrooms became part of the pedagogical skills as well as objectives by the beginnings of the 20th century. It was widely accepted as one of the major concerns of the educational process and that developing culturally inclusive classrooms help the learners to become more morally responsible and responsive in nature. In an educational article it states on the pressing demands on the teachers of the 21st century in dealing with highly diversified class. The various reasons for the existence of such variety and difference in the class are owed to the geographical mobility of the people leading to cultural mixing. It is here that the teachers are in a way forced to bring about structural changes in their performance, presentation and pedagogical skills and approaches.

The culturally responsive teaching helps the learners to unleash their complete potential within the classroom as well as present their varying opinions regarding certain common topics which would necessarily have diverse effects. There is general opinion of extending this concept of classroom inclusivity as incorporating the participation of the differently able students within the general learning community. But apart from that there is also need to acknowledge and create common space for all the diverse learners in the community by creating an inclusive and open space where their differences are accepted and not questioned.

"Culturally responsive classrooms specifically acknowledge the presence of culturally diverse students and the need for these students to find relevant connections among themselves and with the subject matter and the task teachers ask them to perform" (Montgomery, 2001). This definition probably best defines the aims and scope of a culturally inclusive classroom. It helps in creating feeling belongingness as well as broader outlook towards the society and being able to help the learners to understand the diverse start of the society in a new light.

This aspect was well achieved through the course Literature and Subalternity taught at Stella Maris College as part of the MA Literature degree programme. The course helps in achieving as morally and culturally responsible and responsive learners in the community. The course as its objective lays out, helps in understanding the marginalised sections of the society various cross sections.

Literature and Subalternity Course- Nurturing culturally and morally responsive learning

In an educational article, it speaks bout culturally responsive pedagogies as, " those that surface issues of equity, power and privilege that are rooted in our constructs of race, gender, gender identity, sexual orientation, ability status and other social identities (Brown, 2004; Torres, Howard Hamilton & Cooper, 2003). The literature and Subalternity paper provided the Stella Maris College is pone which deals with these aspects as prevalent in the society not just limiting to the Indian context but extending to the world space as possible.

The foremost objective of the course is to extent view on the marginalised sections of the society and to analyse the prevalent forces of hegemony and authority as working among these communities. The role of power which is exerted on the people both through direct and indirect means are brought to the lime light. However, the speciality of the course is that it draws literatures from all over the world and especially from the various communities and states of India.

The educational institution is itself located in a metropolis city and hence the classrooms are rich with students from diverse backgrounds often hailing from various states. The student community is itself diverse and the students do belong to various ethnic groups of which some re generally treated s the subaltern communities of the country. In such a light as students of literature, they need to equip themselves to build critical outlook towards the whole notion of subalternity and marginalisation without growing any sort of biased notions towards any of the existing communities.

The various fields which are brought in to the purview are the marginalisation due to gender, by

focusing on transgender literatures dealing with gender identity as well as bringing in literatures by women writes for instance, the ply, On a Muggy Night in Mumbai by Mahesh Dattani and the poem, "Power" by Audre Lorde. Similarly the emotions and sympathies of the Dalit communities re brought through the poem "Untouchables" by K V Thirumalesh. While providing look on the caste insecurities and oppressions being faced by the Dalits in India parallel image of the racial discriminations faced by the people are shown through the African American poem "Their Eyes" by Nellie Wong. The course also highlights ethnic communities which are often marginalised in the society for instance the North East community of India in the story "Curfew Man" by Temsul Ao and the ply Beautiful Senoritas by Dolores Prida which deals with the plight of Latin American women.

The course highlights certain theoretical stands for understanding the existing subaltern communities and how the power fluctuates with changing contexts and conditions. The hierarchy is not constant all the time and with changing conditions the power play also differs leading to the rise of different subaltern communities.

CONCLUSION

The course by providing cross sectional view of the Indian society and by providing examples from the various communities of the world, helps in engendering a culturally and morally responsive attitude amongst the learners, the learners are able to identify them with the subtler groups and are able to identify the power structures of the society at work which leads to such situations of the communities and individuals. Such a course then is capable of rousing broader perspective towards the functioning of the society and would be able to critically analyse the plight of the subaltern communities.

Here the inclusive nature of the classroom was established or achieved through the structure of the syllabus. Even if the students are not engaged in community learning atmosphere, but rich diversity of subjects and perspectives that the learners receive through these literatures would help the learners to have broader outlook. Hence culturally inclusive classrooms are possible by focusing on the culturally varied and different communities of the society through the curriculum and by helping the learners to have an acceptance of the diversity of the society and be able to develop the skills of co habitation peacefully and in harmony.

REFERENCES

- Delia Baskerville. (2010). Developing Cohesion and building Positive relationships through storytelling in a culturally diverse New Zealand Classroom. *Teaching and Teacher Education,* Volume 27, March, 20,2020.
- Joyce Rain Anderson, Barbara Bond et al. (2014). *Transforming Classrooms and the World.* March, 20, 2020, http://vc.bridgew.edu./fac_article/3.
- Winfred Montogomery. (2001). Creating Culturally Responsive, Inclusive Classrooms. *Teaching Exceptional Children,* Vol.33,March, 20, 2020.

FACTORS AFFECTING CREDIBLE PARTICIPATION OF STUDENTS IN CO-CURRICULAR ACTIVITIES

Manisha M.
B.Ed Student (Physical Science)
Mount Carmel College of Teacher Education for Women, Kottayam

ABSTRACT

Education is the process through which a student understand his innate potentials, talents and acquaint with various tactics to live a peaceful and successful life in the society. Various Co-curricular activities that are designed to mould student's. However, most students face some problem to participate in various activities either due to environmental issues or some psychological aspects. This non-passivity will ultimately affect their overall development and is a hindrance for developing further skills. This paper discusses some aspects that are the reasons for non – accountability in the participation of activities.

KEY WORDS: Co-curricular activities

INTRODUCTION

Education ought to be a process or system that either naturally or deliberately tries to bring out the innate talents of students and thus to act as a stepping stone for self-actualization process throughout their life. Though it offers many opportunities to mould one's potential, it seems that only few studentsare using it in the right sense. Most students interpret these opportunities as a duty rather than a chance to mould their talents in a dynamic, coherent way that will be suitable for a large number of audience. What makes them to think in a "common road" pattern are discussed here.

1. Fear to Face Criticism

Students, even adults, fear to hear criticism from others. Every human have a desire to hear good feedback about one's work. People, especially students , who always received good remarks in their childhood thinks themselves as better than others and can do everything without any mistakes . Most of them were surrounded by people who always encouraged them .When they grow up, they will interact with many peoples in family,society,school and other institutions. As a result, their cognitive pattern changes in a peculiar way.In this process,they either find a common pattern of behaviour that is appraised by almost everyone or that is not suited for majority of people. Since,there is always a desire to love ,to be loved and appreciated by everyone

, one choose to follow what is called as "reality" by common people and avoids those thoughts ,ideas and actions that are vulnerable to judge. This is basically, an act to limit one's potential in favour of others. What a person must be learned at first, is self – acceptance and the goal to polish one's inherent talents by passing through various phases of challenges and criticism. Once the exposure to criticism begin in a constructive way,the person can build motivation and self-esteem to work even hard and bring a uniqueness in his field of interest.

2. Perception About Perfection

Humans are socially intelligent with respect to the context of thinking,communicating, evaluating. Sub -Consciously or Consciously, they spend most of the time in sensing, perceiving, interpreting events that occurred either in past or present, dependingupon the situation . This in turn formulates a frame work of things and deeds that are good and valuing with regard to social, emotional or intellectual level .Those deeds and things that were highly accepted and valued in their society and culture with literally "no mistakes" will be carved as "perfection" in human minds. Though, there may be exceptional cases ,majority of them prefer to do almost all tasks in perfection ,failed to do things in such a way may leads to guilt thoughts and sadness and a continuous "imperfection" perception within oneself may leads to anxiety, hopelessness and other psychological disorders. As a precaution against these dilemmas, pupil themselves take a decision not to participate in various events; especially competitive that strictly evaluates one`s competence with others.

3. Low Self – Esteem

Another major factor that acts as a hindrance against the participation of students in various co-curricular activities is their low – self-esteem. Self –esteem encompasses one's idea about self. A person with, high self-esteem value himself as a better person to do various tasks, courageous to cope with unexpected situations and willing to take responsibility along with that, he will support others in need.Low – self esteemed children suffer difficulty to cope with unexpected situation and have a fear to label as inferior on behalf of thoughts, actions, competency of performance though they may have multiple intelligence. The roots of low – self-esteem may figure out from the social, economic, family backgrounds or may be due to some unhappy, past experiences from their environment, unable to cross cultural barriers, intellectual and emotional issues. Low self – esteem among children should not be interpreted as introversion .However an introvert child,unless given proper recognition and a space, to explore and show his innate talents will be more prone to the negative effects of low –esteem without timely recognition.

4. Lack of Support From Surroundings

Lack of support from family, peers or teachers either in the areas of financial, moral, academic, making relationship will lead to the act of withdrawal from all activities. Children may sometimes face the responsibility to take care their parents or siblings due to various issues like health or financial problems. They may lack extrinsic motivation to participate in various events, though

there may be enough intrinsic motivation to excel,it may mask due to the thought of responsibility of doing various tasks in punctual. Support from any source is essential for students who are in the developmental stage, so as to meet and guide their necessary needs. Experiences of discrimination on the grounds of ; language,competency in academic skills like listening ,reading, comprehension , writing, speaking ; caste, religion, proficiency in soft skills like leadership, communication, form peer groups , negotiation,other inter- personal and intra - personal skills , inability to use social medias may affect the intrinsic motivation of students to come forward and join the main stream. The "gang" formation within classroom or school seems to be a big threat to those students who are outside the particular type of group.

5. Shyness

Students differ in personalities. According to Myers-Briggs Type Instrument (MBTI), developed by Isabel Briggs Myers and Katherine Briggs, there are students who are extrovert/introvert, thinking/feeling and sensing/intuition in a class. Extrovert students will be comfortable to communicate with everyone while introvert students feels better to communicate with self. Though both of them may have many ideas, students who are introvert, feel comfortable and satisfaction in their own world and will not express it. As a result, they show some hesitation and timid, when a situation ask them to perform something before audience.

6. Lack of Time Management

Lack of time management is another problem associated with the credible participation of students. There are students who may do many activities at a time either due to pressure at home, society or due to some other unknown personal or psychological reasons. Each students have a pace to do work and they are incomparable with others. Those who can strictly manage time schedule can overcome this problem, however the extent to which they enjoy the performance is very less. Moreover,a training should be provided for the purposeful use of time from the childhood itself.

7. Health Problems

Most students, especially adolescents, face various health problems .It can range from vitamindeficiencies,migraine and some chromosomal defects. Students may feel inferiority complex due to their physical unhealthy. Though, they may have enough ideas about various programmes or activities, this unhealthy body condition prevents them from credible participation in various activities. Set up a medical sick room, provision for good service of a medical practitioner in every institution can offer adequate help for those students. Counsellors in school can play great role to direct students in right path, at right time.

Difficulties in Future

Students who do not use their chance to participate in various activities, may have some difficulties in future like:

i. Difficulties to face interviews

ii. Lack of communication,leadership and other soft skills essential for quality life

iii. Perpetuating problems in Family and job relationships and its maintenance

iv. Reduced Critical and Analytical Thinking Skills

v. Lack of proficiency in Negotiation

vi. Withdrawal from social and career issues

Role of Institutionsto Enhance Student Participation

Institutions must provide good ambience for the over-all development of students. Curriculum should be designed that challenges as well as engage students in various activities. Special training for various co-curricular activities should be given to each students according to their aptitude .In the case of inclusive education, special trainers should be appointed to enrich the talents of differently abled students.Special programmes like workshops, seminars, talk with scholars, quiz competitions etc should be conducted with the help of a scholar or trainer in a particular field for gifted and creative students .Orientation classes that boosts the Self –esteem, Moral values and multiple intelligence of students should be conducted in an academic year

Role of Teacher

A good teacher touches the heart of needy students at right time. Besides, being an academician he/she should be an inspiring, sympathetic teacher who is always approachable forevery students. Never use provoking words or actions that may hurt his/her "destined students", it can create temporary as well as permanent psychological disorders. Observe and talk to students and find their strengths, challenges, struggles, dreams, aptitudes and attitude. Give them proper guidance at right time and create a self-regulatory environment in class rooms. Respect each student and give them amble opportunities to work in groups so that they can understand, motivate themselves and each other to achieve a common goal, feels a sense of accomplishment of one`s task for a group , share ideas with each other with less stress this in turn creates a platform to develop various soft skills like leadership quality, communication skill, accountability, awareness about multiculturalism, tactics to maintain group dynamics and thus can create a confidence to face people and various unexpected realities in life with optimism . Celebrate the success of students and appreciate their part in front of everyone also provide good fortune wishes who may failed in competitions. Teacher should conduct research on various socioeconomic and academic backgrounds to which their students belong

Teachers should try to bring various innovative methods during teaching- learning process like learning mathematics through craft worksand poetry recitation, learning science through indoor and outdoor games, puzzles, riddles, mono act, role play, learning literature through memes,drama, case studies, short story writing, word games etc. This will drive the enthusiasm and curiosity to

know more about various subjects and thus foster a self-learning and an innovative attitudeamong students that further makes them responsible to participate in events throughout their life.A teacher should communicatewith students and parents regarding the various evaluation thatthey will take make in an academic year and its feedback, at right time.

CONCLUSION

Credible participation is essential for the overall development of students. Teachers, students and institutions should take responsibility to conduct maximum events and to ensure maximum participation. Instead of showing partial attitude towards students, a teacher should be a good listener to their students. Co-curricular activities should be conducted according to the cultural, geographical and ethical diversity of the place and it should convey the realities and current trends of world according to the psychological age of students.

REFERENCE

- https://www.myersbriggs.org/my-mbti-personality-type/mbti-basics/

RELEVANCE OF POSCO ACT

Sreeja Raju
B.Ed Student(Social Science)
Mount Carmel College of Teacher Education for Women, Kottayam

ABSTRACT

The Protection of Children from Sexual Offences Act, 2020 has been enacted to protect children from offences of sexual assault, sexual harassment, and pornography and provide for establishment of such offences and for matters connected therewith or incidental there to. This study focused on the relevance of POCSO Act in the present world scenario.

KEY WORDS: Sexual offences, Sexual assault

INTRODCTION

Government introduced POCSO Act on 14 November 2020 for ensuring the protection of Children from sexual offences. The dream behind the introduction of this Act is to reduce the atrocities against children especially issues like sexual assault and sexual harassment to an extent. As we all know that the number of children become the victims of sexual harassment is increasing day by day. Many of them are feared to reveal the sexual harassment they faced. This may be because of fear or because of lack of confidence in the authority.

In order to avoid the atrocities against children (both boy and girl) and for ensuring their safe living, government of India Introduced POCSO Act, 2020. It extends to the whole India. The Act clearly mentioned about the punishment for sexual offences against children. Every child has his or her privacy and it should be protect and respect by every person. Anything which curtails child right must be punishable.

One of the important features of this Act is that it considered all children irrespective of their gender. It protects children below eighteen years of age. This law provides adequate and immediate protection to the affected child. And also provide for rehabilitation of the child, as soon as the complaint is made to the Special Juvenile Police Unit (SJPU) or to the local police.

Punishments for offences covered in the Act

- "Penetrative Sexual Assault (section 3) – not less than seven years which may extend to imprisonment for life, and fine (section 4)

- Aggravated penetrative Sexual Assault (section5) – not less than ten years which may extends to imprisonment for life, and fine (section 6)
- Sexual Assault (section 7) – not less than three years which may extends to five years, and fine (section 8)
- Aggravated Sexual Assault (section 9) – not less than five years which may extend to seven years, and fine (section)
- Sexual Harassment of the Child (section 11) – three years and fine (section 12)
- Use of Child for Phonographic Purposes (section 13) – five years and fine and in the event of subsequent conviction, seven years and fine and in the event of subsequent conviction, seven years and fine (section 14(1))."

Recognition of child as an independent individual

The traditional Indian society considered children as a minor and as a part of parents. Their opinion regarding any issue or problem considered just only as an opinion of a child. But after the introduction of POCSO act children are recognized as an independent identity. Now it ensures the protection of child by considering their opinion as an independent individual. In this act the final decision regarding an issue is taken only on the basis of the children's words. Children were given the freedom to express their problems and the act takes decision based on their opinion.

POCSO Act as an effective tool to Address the Sexual Violence against Children

Indian constitution includes child rights for ensuring the safety of the children. It is mentioned in the Fundamental Rights and Directive Principles of State Policy. Some of the important Articles which include child rights are Article 14, 15(3), 21A, 23, 24, 39(f), and 45. All these Articles focused on the care, protection and rehabilitation of children. But there is no any specific legislation for sexual offences against children. Here comes the relevance of POCSO Act. POCSO Act is drafted for strengthening the legal provision for the protection of children from sexual offences. POCSO Act addresses mainly the sexual violence against the children. In India it is for the first time a special law is enacted for such kind of issues. "It is an effective tool for taking actions against child's sexual violence. This law clearly defined the sexual offences like sexual assault, sexual harassment and pornography"2. POCSO Act ensures the safety of children by banning media from disclosing the information regarding the affected child especially his/ her identity. It creates a special court for dealing the cases. As I mentioned earlier cases can be reported to the Special Juvenile Police Unit (SJPU) or the local police. Language of reporting the case must be simple so that the child can understand it clearly. In these ways it becomes as an effective tool for protecting the children.

Procedural Mechanism of POCSO Act

POCSO Act clearly defines the crime and it also explains how to approach the court and how

to get justice. The procedures of this Act are simple and it is different from that of Juvenile Justice Act. It increases faith in the authority among the children and parents by conducting safe medical examination of the child. This medical examination is conducted with the presence of his or her parents or any other person in whom the child has confidence. If the child is a girl the medical examination is conducted by a lady doctor. If a case is reported authorities take immediate actions and it also ensures the care and protection of the child. All these procedures are taken only on the basis of child's condition. This Act includes provision for ensuring the safety of the child in all matters. By following simple and effective procedures this Act protects children from violence.

CONCLUSION

Children are the growing gems and expectations of our nation. They can change the face of our nation into a great success. Enough care and protection of children is a necessary factor. If they know that they are protected by the authority it increases their confidence. As an individual they have their own rights. We have to protect their rights and respect it. POCSO Act ensures the protection their right and it also ensures their safe growth. Awareness about POCSO Act among children is an important thing. Proper measures should be taken to provide awareness among children regarding this Act.

REFERENCES

- The Protection of Children from Sexual Offences Act.(2019).India. http://wcd.nic.in
- Rostrum's Law Review. (2018). Significance and applicability of the POCSOAct.*(*2012). , *Rostrum Legal*,*5* (1), April 30. http:// www.journal.rostrumlegal.com
- Ministry of law and justice.(2019). The Protection Of Children from Sexual Offences (amendment) Act,August 6, 2019
- Seth, Rajeev and Srivastav, R.N. (2017) Child Sexual Abuse: Management and prevention and Protection of Children from Sexual Offences (POCSO) Act. *Indian pediatrics 5* (15) November 949 - 953.

RIGHTS THROUGH REPRESENTATION:CHANGING MEDIA PORTRAYALS OF THE TRANSGENDER COMMUNITY

Krishnendu S.
B.Ed Student (English)
Mount Carmel College of Teacher Education for Women, Kottayam

ABSTRACT

Until recently the images and idea of transgenders among Indians were a stereotyped one. Thanks to the Indian film industry who played a vital role in stereotyping these beings and sculpting those notions deeply into the minds of people. The stereotyped idea of Hijras being a very comical one and as mere 'objects' to be mocked at. But with the social media intervention, there is a considerable change in the scenario. Trangenders have come upto the forefronts of the society without their gender identity being a hindrance. The 'third gender' option while filling forms, seatbelt campaign, reservations for the third gender implemented in Kerala, Panmai theatre are some of the revolutionary changes that have taken place.This paper look into the changes brought about by the transgender community over the period of time and how these changes have materialized.

KEY WORD: Trangender

INTRODUCTION

"Hijras are invisible and hyper- visible in India. From childhood, all of us in the Indian subcontinent directly and indirectly grow up with ideas,stories and beliefs about hijras and hijra communities, though few of us if pressed, could trace these stories to actual interactions with hijras themselves."—Gayathri Reddy*(*With Respect to Sex, 2006)

Transgender people are people who have a gender identity or gender expression that differs from their assigned sex.Transgender people are sometimes called *transsexual* if they desire medical assistance to transition from one sex to another. *Transgender* is also an umbrella term: in addition to including people whose gender identity is the *opposite* of their assigned sex (trans men and trans women), it may include people who are not exclusively masculine or feminine (people who are genderqueer, e.g. bigender, pangender, genderfluid, or agender).Other definitions of *transgender* also include people who belong to a third gender, or conceptualize transgender people as a third gender. Infrequently, the term *transgender* is defined very broadly to include cross-dressers, regardless of their gender identity.

Gender identity refers to a person's internal sense of being male, female or something else; gender expression refers to the way a person communicates gender identity to others through behavior, clothing, hairstyles, voice or body characteristics. "Trans" is sometimes used as shorthand for "transgender." While transgender is generally a good term to use, not everyone whose appearance or behavior is gender-nonconforming will identify as a transgender person. The ways that transgender people are talked about in popular culture, academia and science are constantly changing, particularly as individuals' awareness, knowledge and openness about transgender people and their experiences grow.

Four of 10 transgender people face sexual abuse before completing 18 years, according to a survey by Swasti Health Resource Centre–a Bengaluru-based non-profit organisation–among 2,169 respondents across three states: Maharashtra, Tamil Nadu and Karnataka.The abuse begins as early as age five, but most vulnerable are those aged 11 to 15, the data show.

Violence (physical, emotional and sexual) continues beyond childhood: 971 (44.7%) respondents reported facing 2,811 incidents of violence–an average of three incidents per person–between April and October 2015.Emotional violence topped the list (1,228), followed by physical violence (802) and sexual violence (781).Many gender non-conforming children drop out of school due to harassment and discrimination.As many as 616 respondents (28.4%) without education were more vulnerable to violence than those with an education, the data reveal.Trans-women are often used by men for sex, only to be abandoned later.

A lot has changed, but there is along way to go

A path-breaking achievement in the struggle for transgender rights was a 2014 Supreme Court (SC) judgment that recognized them as the third gender.The judgment also attributed to them socially and economically backward status, thus entitling them to reservations under the other backward classes (OBC) quota.However, in July 2016, the SC reprimanded the Centre for failing to implement its order two years after it was passed, especially with reference to reservations in jobs and education. Hence even when attempts are made to bring about a change in the lives of transgenders it somehow loses its purpose in between and the plans remain unfulfilled. Here are some of the changes that happened in the conservative Indian society as an attempt to 'normalize' transgenders. A lot has changed, but there is a long way to go.

MTV Showcases a Transgender Love Story

MTV has been experimenting a lot with its shows and from showcasing a same-sex kiss to airing some powerful stories as a continuation to this venture, the Big F season two that aired on April 2nd at 8pm in MTV showcased a transgender love story. The story revolves around Madhu, a transgender woman disowned by her father played by Annie Gill. As a kid, Madhu, born as male and named Madhav, used to fantasize about hot male model Sameer (Siddhant Karnick). Sameer too develops a soft corner for Madhu and expresses his love for her.The story of the

episode then revolves around whether Madhu will be able to reveal her true identity to Sameer or will she succumb to the fear of rejection and keep her truth under wraps.

Trans Sexual Women to Play Lead in Feature Film

Anjali Amir is one of the few transsexual women in India to star in a feature film — in a lead role. She is playing Megastar Malayalam actor Mammootty's heroine in Tamil film *Peranbu*, which is in the post-production stage. For Anjali, acting in films has been a dream from a very young age. But to make that dream come true, she first needed to make another dream come true: to become a woman.

Kalki Subramaniam Speaks at Harvard

Transgender activist Kalki Subramaniam was invited by Harvard University to speak at the India Conference 2017. The conference was held from February 11 to 12, the theme of this year's conference is 'India - The Global Growth Engine,' reflecting the opportunities presented by India's growth in the last decades and the challenges it must overcome in various areas to truly capitalise on the country's tremendous potential. She spoke about transgender (TG) rights, issues and possible solutions. Kalki, founder of Sahodari Foundation, focused on the social, political and economic problems of the TG community, and also discussed the solutions to these problems globally. She also talked about how we can move forward to establish human rights and equality for trans people.

First Transgender Tea Stall at Trivandrum

Trivandrum became host to the first transgender tea stall. The tea stall was set up as a part of '*Manaveeyam* ', a book festival in the city. The implementation of such projects was intented to get other people of the state to help the trans community lead a normal and decent life and also to bring them together.

The Seat Belt Crew

A public service initiative by VithU and Ogilvy and Mather, Mumbai is all together a unique message. India's streets are pretty dangerous. Inspite of the repeated warnings on the importance of wearing seat belts, people tend to ignore these warnings or advertisings. So in order to create an impact on the viewers, the ad campaign, created by India Ogilvy delivers the message in a way they simply could not ignore. The message is delivered by a community we just cannot overlook. The agency created the video in collaboration with music network Channel V. The goal, of the production was to promote road safety and help foster a more positive public image of Hijras or transgenders. In the unique initiative by the Seat Belt Crew, a group of transgenders

In a country were the transgenders are out looked by the public, such an initiative has helped to change the perspective through which the world sees them. They are considered as carriers of a socially valid message. The campaign ends with the note that "wear seat belt, get blessing!"

This statement proved that the transgenders are no longer here for money but to promote a serious issue. In simple terms, the campaign reminds reckless motor drivers the simplest and the basic rule while driving, to wear seat belt in an innovative way, so that it stays in their minds forever.

CONCLUSION

In Hindu mythology, one of the most popular forms of Shiva is *Ardhanarisvara*, or half-man/ half-woman, which represents Shiva united with his Shakti (female creative power). The hijras identify with this form of Shiva and hence their blessings are considered auspicious. Therefore they are commonly seen during weddings and at houses with new born, offering their blessings. In return for their blessings the hijras receive *bacha*, traditional gifts in cash and goods, including some sweets, cloth, grains etc.

Inspite of this traditional side associated to them, they are usually out casted by the society. They are generally deprived of leading a normal life as any other individual because they are different. But today it has changed to an extent. We see them working in fields where one never imagined such as NGO's and they are also seen taking part in events representing India. The government too has accepted them as a third gender and has passed laws on their behalf.

They never wanted to be different, but the society always sidelined the transgender community. After living in the brink, they realised that it can't go on forever and decided to fight for their rightful place in the society. Thus, after years of struggles, finally, India's conservative society is showing signs of accepting them.

Numerous transgender individuals live in a general public that discloses to them that their profoundly held character isn't right. Some transgender individuals have lost their families, their occupations, their homes, and their support, and some experience provocation and even brutality. Transgender youngsters may encounter harassment or even or physical torture at home, at school, or in their groups. These sorts of encounters can challenge for anybody, and for a few people, it can prompt nervousness issue, gloom, and other emotional wellness conditions. In any case, these conditions are not created by having a transgender personality: they're a consequence of the numerous transgender individuals need to deal.

The ultimate aim of dissertation was an attempt to show that transgenders should be given a chance to lead a normal life just like their desire. The entire dissertation is filled with arguments that substantiate the same. I have put forward instances where the there is a drastic change in the treatment of transgenders by the society as compared to the dark years of the past. To conclude I would like to urge each and every one to treat transgenders like fellow human beings and help them fight the discrimination and stigma attached with them.

REFERENCES

- Chaturvedi, Sumit.(2017).*Abuse Of Transgender Indians Begins In Early Childhood*. 6 January 2017.
- Decan Chronicle. (2016). *To end the stigma*. 2 August 2016.
- Ghose, Amita.(2017). *First Transgender woman to get married legally in WB*. 18 February 2017.
- Jeshi, K. (2017) .*The Hindu*. 7 March 2017.
- Jha, Manoj K. (2017).*Transgender Rights In India*. 12 January 2017.
- John, Haritha. (2016). *Even as they battle the police, Kerala's transgenders are divided on " locals V/s migrants"*. 15 July 2016.
- Mathrubhumi.(2017). *First transgender tea shop at trivandrum*. 11 February 2017.
- National Center for Transgender Equality.(2017). *Frequently Asked Questions about Transgender People*. 12 April 2017.
- The Quint. (2017). *Transgender Rights Activist Akkai Marries Best Friend of 8 Years*. 1 February 2017.
- Times of India.(2016). *India's first transgender college principal resigns*. 29 December 2016.
- Youtube.(2017). *Seat belt campaign*. 5 May 2014.

RNI NO. KERENG/2013/48938 CARMEL GRAPHICS (Annual) PRICE RS. 1000.00

MOUNT CARMEL COLLEGE OF TEACHER EDUCATION FOR WOMEN

(Re-Accredited by NAAC with 'A' Grade, Affiliated to M.G. University)
Muttambalam P.O., Kottayam - 4
Tel: 0481-2573120, 2575820, Fax: 0481-2573120
Website: www.mountcarmelcollege.com
Email: mountcarmel_college@yahoo.com; mountcarmeltrainingcollege@gmail.com

Printed and Published by Dr. Pushpa Marian, Principal, Mount Carmel College of Teacher Education for Women, Muttambalam Post, Kanjikuzhy, Kottayam Dist., Kerala 686004. Published at Principal, Mount Carmel College of Teacher Education for Women, Muttambalam Post, Kanjikuzhy, Kottayam Dist., Kerala 686004. Printed for Surya Printers, Paramputhra P.O., Eranjal, Kottayam Dist., Kerala 686 004, at Goodshepherd Press, Goodshepherd Building, Goodshepherd Street, Kottayam 686001, Editor: Dr. Pushpa Marian