AKCE QUEST

A Journal on Educational Research
Quarterly Journal

EDITORIAL BOARD...

The objective of our journal is to improve the quality of research by the existing researchers and to develop new scientific tools, concepts and theories to solve and understood scientific and non scientific problems.

"AKCE QUEST" emphasises to improve the integration of new educational research into classroom instruction.

The ultimate goal of research is to enable teachers, teacher educators and institutions to make sound decisions about the educational activities and experience that will best serve students.

The current issue of the journal contains eight research papers. We thank all the contributors and invite authors for publications.

Dr. A. R. Anandha Krishnaveni
Editor-in-Chief

CONTENTS

STUDY HABITS OF COLLEGE STUDENTS IN TAMILNADU

[1]Mrs. T.Johncy Devanesam & [2]Dr.Mrs.Nithila Devakarunyam

Abstract

The present study had been conducted on a sample of 218 students to find out the study habits of the students studying in various colleges of TamilNadu , India. Study habit inventory constructed by Dr. B.V.Patel (1975) was used to collect the relevant data. The data collected was analyzed and interpreted to draw inference using appropriate statistical methods like mean, standard deviation, and t-test. The findings revealed that there exists significant difference between on different components of study habits and total study habits. There is a significant difference between the male and female students in their home environment and planning of work, planning of subjects, College environment and their total study habits, the rural and urban students in their Reading and note taking and planning of subjects. There is a significant difference between the students whose institutions are in the rural and urban area regarding their Preparation for the exam, College environment and their total study habits. Also there is a significant difference between the students who are under the age group of below 20 and 20-25in their Planning of subjects Preparation for the Exam.

Introduction

Study habits are defined as those techniques, such as summarizing, note taking, outlining or locating material which learners employ to assist themselves in the efficient learning of the material at hand. The term "Study Habit" implies a sort of more or less permanent method of studying. According to Good's dictionary of education, "Study habit is the tendency of pupil to study when the opportunities are given, the pupil's way of studying whether systematic or unsystematic, efficient or inefficient, "Study-habits are the essence of a dynamic personality. A proper study habits enables an individual to reap a good harvest in future. The present society is a competitive society, where the principle of struggle for existence and survival for fittest exists. Pen has become mightier than sword. Study-habit is a process from which an individual gets proper input to feed his hunger and to quench his thrust for knowledge. The study habits thus are of great assistance to actualize the potentialities of the individual.

Studying is a skill. Being successful in school requires a high level of study skills. Students must learn from these skills, practice them and develop effective study habits in order to be successful. Very often the study habits and practices developed and used in high school do not work for students in college.

Good study habits include many different skills: time management, self-discipline, concentration, memorization organization and effort.

10 Study Habits Every Successful Student Should Follow

Ten study habits every successful student should follows: 1. Will to learn, 2. Clarity of purpose/goal, 3. Planning the learning periods, 4. How to read text, 5. Make profit from lectures, 6. Make use of charts, 7. Follow economic methods, 8. Need for proper physical surroundings, 9. Rest, 10. Avoid drugs and alcohol. Success of any student depends upon good study habits adopted by that student.

Though other factors like motivation, intelligence, aptitude, attitude, learning abilities, etc. are important and essential, to make proper use of these abilities, the following study habits are considered to be beneficial.

---

[1] *Ph.D. Research Scholar, Mother Teresa Womens 'University,Kodaikanal- 624 102, Tamilnadu, India.*

[2] *Principal, St. Christopher's College of Education, Chennai – 600 007, Tamilnadu, India.*

Review of Related Literature

Good study habits lead to good academic record and bad study-habits lead to poor academic record as there is direct relationship between study habits and academic achievement. Study habits play an important role in human performance in academic field (Verma, 1996; Verma & Kumar, 1999; Satapathy & Singhal, 2000; Vyas, 2002). Ramamurti (1993) has rightly emphasized that despite possessing good intelligence and personality, the absence of good study habits hampers academic achievement. Hence, study habits of students' plays important role in learning and fundamental to school success.

The students studying in private schools have better study habits than the students studying in government schools (Naggappa & Venkataiah, 1995; Sanjeev, 2003). But Chaudhary & Lily (1191) pointed out that students belonging to government and private school were by and large similar with respect to their study habits.

Objectives of the study
1. To study the difference between the male and female students on the various components of the study habits.
2. To study the difference between the various components of study habits of students who are under the age group of below 20 and between the age group 20-25.
3. To study the difference between the various components of study habits of the students belong to rural and urban area.
4. To study the difference between the various components of study habits of the students studying in the institutions located in rural and urban area.

Hypotheses:
1. There is no significant difference between the male and female students on the various components of the study habits.
2. To study the difference between the various components of study habits of students who are under the age group of below 20 and between the age group 20-25. .
3. There is no significant difference in the various components of study habits of the students belong to rural and urban area.
4. There is no significant difference in the various components of study habits of the students studying in the institutions located in rural and urban area.

Method:

Survey method had been used for this study.

Sampling Technique and Sample size:

The study was conducted on a sample of 218 students from different colleges. Students from each college were selected randomly.

Tool:

Study Habits Inventory (English Version) constructed by Dr.B.V.Patel (1975) was used to measure the study habits of students. The tool consists of 45 items distributed in seven areas namely Home environment and Planning of work, Reading and Note taking, planning of subjects, Concentration, and Preparation of the exam, Habits and Interest and College environment.

Data Analysis:

The collected data were scored as per manual and analyzed by applying Mean, S.D; and t-test .

Analysis and interpretation

Table 1

The mean scores obtained by the male and female students on seven dimensions of study habits and total study habits along with the standard deviation and t-value testing significance of mean difference are given in Table-1.

S.No	Study habit components	Sex	N	Mean	S.D	t	p-value
1	Home Environment and planning of work	Male Female	79 139	20.77 22.18	3.92 4.12	.580	.014 *
2	Reading and note taking	Male Female	79 139	27.63 28.33	5.15 5.78	0.573	0.369
3	Planning of subjects	Male Female	79 139	14.79 16.67	4.15 4.03	.700	.001 *
4	Concentration	Male Female	79 139	12.18 12.37	3.23 2.95	.314	.648
5	Preparation for the Exam	Male Female	79 139	17.65 16.95	4.56 4.46	.977	.273
6	Habits and Interest	Male Female	79 139	23.98 24.35	5.17 4.57	.192	.577
7	College Environment	Male Female	79 139	17.92 19.21	4.78 4.56	.427	.047 *
8	Total study habits	Male Female	79 139	135.19 140.22	17.23 15.78	.784	.030 *

Since p value is less than 0.05 for the first, third and seventh dimensions of study habits and the overall study habits, the null hypothesis is rejected .Hence there is a significant difference between the male and female students in their home environment and planning of work, planning of subjects , College environment and their total study habits.

Table 2

The mean scores obtained by the rural and urban students on the seven dimensions of study habits and total study habits along with the standard deviation and t-value testing significance of mean difference are given in Table-2.

S.No	Study habits components	Locality of home	N	Mean	S.D	t	p-value
1	Home Environment and planning of work	Rural Urban	156 62	21.49 22.11	4.24 3.69	.280	.315
2	Reading and note taking	Rural Urban	156 62	28.60 26.80	5.26 6.11	.540	.030*
3	Planning of subjects	Rural Urban	156 62	16..40 14.94	4.36 3.43	.068	.019 *
4	Concentration	Rural Urban	156 62	12.33 12.24	3.18 2.69	.256	.853
5	Preparation for the Exam	Rural Urban	156 62	16.97 17.80	4.28 4.99	.962	.224
6	Habits and Interest	Rural Urban	156 62	24.40 23.78	4.93 4.42	.218	.376
7	College Environment	Rural Urban	156 62	18.78 18.67	4.85 4.19	.218	.871
8	Total study habits	Rural Urban	156 62	138.55 138.03	16.93 15.33	.399	.836

Since p value is less than 0.05 for the second and third dimensions of study habits,the null hypothesis is rejected .Hence there is a significant difference between the rural and urban students in their reading and note taking and planning of subjects .

Table 3

The mean scores obtained by the students whose locality of institution in rural and urban area on seven dimensions of study habits and total study habits along with the standard deviation and t-value testing significance of mean difference are given in Table-3.

S.No	Study habits components	Locality of institution	N	Mean	S.D	t	p-value
1	Home Environment and planning of work	Rural Urban	178 40	21.65 21.78	4.24 3.69	.140	.858
2	Reading and note taking	Rural Urban	178 40	27.84 29.17	5.26 6.11	.701	.170
3	Planning of subjects	Rural Urban	178 40	15.97 16.05	4.36 3.43	.173	.909
4	Concentration	Rural Urban	178 40	12.23 12.32	3.18 2.69	.541	.959
5	Preparation for the Exam	Rural Urban	178 40	16.74 19.25	4.28 4.99	.975	.001*
6	Habits and Interest	Rural Urban	178 40	24.02 25.05	4.93 4.42	.972	.224
7	College Environment	Rural Urban	178 40	18.32 20.63	4.85 4.19	.197	.005*
8	Total study habits	Rural Urban	178 40	137.19 143.78	16.93 15.33	.446	.022*

Since p value is less than 0.05 for the fifth and seventh dimensions and the overall study habits, the null hypothesis is rejected .Hence there is a significant difference between the students whose institutions are in the rural and urban area regarding their preparation for the exam, College environment and their overall study habits.

Table 4

The mean scores obtained by the students who are under the age group of below 20 and 20-25 on seven dimensions of study habits and total study habits along with the standard deviation and t-value testing significance of mean difference are given in   Table-4.

S.No	Study habits components	Age	N	Mean	S.D	t	p-value
1	Home Environment and planning of work	Below 20 20-25	130 88	21.64 21.71	4.41 3.60	.021	.891
2	Reading and note taking	Below 20 20-25	130 88	28.63 27.26	5.87 5.00	.210	.073
3	Planning of subjects	Below 20 20-25	130 88	16.53 15.17	4.03 4.23	.784	.018*
4	Concentration	Below 20 20-25	130 88	12.34 12.23	2.92 3.24	.967	.799
5	Preparation for the Exam	Below 20 20-25	130 88	16.69 17.95	4.32 4.67	.665	.042*
6	Habits and Interest	Below 20 20-25	130 88	24.52 23.76	4.93 4.56	.540	.251
7	College Environment	Below 20 20-25	130 88	19.17 18.10	4.82 4.38	.362	.095
8	Total study habits	Below 20 20-25	130 88	139.12 137.32	16.74 16.05	.537	.431

Since p value is less than 0.05 for the second, fifth and dimensions of study habits of students who are under the age group of below 20 and 20-25, the null hypothesis is rejected .Hence there is a significant difference between the students who are under the age group of below 20 and 20-25 in their Planning of subjects, Preparation for the Exam .

Findings

1. There is a significant difference between the male and female students in their home environment and planning of work, planning of subjects , College environment and their total study habits
2. There is a significant difference between the rural and urban students in their Reading and note taking and planning of subjects.
3. There is a significant difference between the students whose institutions are in the rural and urban area regarding their Preparation for the exam, College environment and their total study habits..
4. There is a significant difference between the students who are under the age group of below 20 and 20-25 in their Planning of subjects Preparation for the Exam.

Discussion and Conclusion

The results of this study reveal that there is a significant difference between the male and female students in their home environment and planning of work, planning of subjects, College environment and study habits. Mean scores of male and female students differ in all aspects.

Male and female students differ in their study habits the reason for this may be girls show proper care about their studies as they do not engage themselves in outdoor games and recreation when compared to boys. Hence they spent more time to study.

There is a significant difference between the rural and urban students in their reading and note taking and planning of subjects. The mean scores reveal that rural students are very conscious in reading and note taking and planning of subjects when compared to the students in the urban area because they do not have more opportunity and much exposure about their subject matters from internet and other learning resources.

There is a significant difference between the students whose institutions are in the rural and urban area regarding their preparation for the exam, College environment and their total study habits. The mean scores reveal that the students studying in the institutions located in urban area are having better environment and opportunities to study when compared to the students studying in the institutions located in rural area.

There is a significant difference between the students who are under the age group of below 20 and 20-25 in their Planning of subjects, Preparation for the Exam .Students who are under the age group of below 20 are much involved in reading and note taking and they are very conscious in preparing for their exams when compared to the above 20 age group students. To conclude the study habits thus are of great assistance to actualize the potentialities of the individual.

References

1. Chaudhary and Lily (1991). Study Habits of Ninth Standard Pupil in and around Chidambaram in Government and Private Schools. Journal of Educational Research and Extension, 28(2),34-36.
2. Naggappa P.S. and Venkataiah, N. (1995). Study Habits of Secondary School Students in Mysore City. Experiments in Education, 9, 143-152.
3. Rajendran,S.,Raji,A.,Sumathi, P.,Rosaly, A.and Sahayaraj, W. (2009). Are Study Habits Gender Biased? Edutracks,8(9),41-44.
4. Ramamurti, P.V. (1993). Developing good Study Skills. Keynote address delivered at the DIET orientation course in Experimental Psychology held at Karvetnagar on 17th July 1993.
5. Sanjeev (2003). Study Habits of Tenth Class Students in Relation to their Sex and Type of School in Himachal Pradesh. M.Ed. Dissertation, Shimla: H.P. University.
6. Verma, B.P. (1996). Study Habits, Locus of Control and Academic Performance. Indian Journal of psychometry and Education, 27(1), 1-6.
7. Verma, S. and R. Kumar (1999) A Correlation Study between Study Habits and Achievement in different School Courses. Indian Journal of Psychometry and Education,30 (1), 53-56.

8. Vyas, A. (2002). A Study of Learning Style, Mental Ability, Academic Performance and other Ecological Correlates of Undergraduate Adolescent girls of Rajasthan. Ph.D. Thesis in Education, Meerut: Ch. Charan Singh University.

9. John W Best, Research in Education, prentice Hall of India Private limited, New Delhi, 2008.

STRESS MANAGEMENT THROUGH LIFE SKILLS EDUCATION

Dr. A. Jonas Richard

Introduction

Stress is a condition or feeling experienced when a person perceives that demands exceed the personal and social resources the individual is able to mobilize. According to **Selye (1976),** Stress is the result of an interaction between an individual's emotional, intellectual, social, and physical resources and the demands on him or her. **Cooper & Marshall (1976)** argue that stress is a different from pressure. Stress is something more than mere pressure. It carries strong overtones of the breakdown of normal human performance. The authors concluded that stress is essentially individually defined and must be understood with reference to characteristics of both the individual and his environment, as it is the outcome of the two. **Ganster & Murphy (2000)** described it as a form of strain provoked in response to situational demands labeled as stressors which occur when jobs are simultaneously high in demands and low in control.

Various other concepts which are linked to the word stress are: Anxiety, Depression, Exhaustion, Frustration, Despair, Overwork, Over-focusing and Confusion. The nature of stress is broadly of two types namely Eustress (Positive stress) and Distress (Negative stress). This paper deals with stress management through life coping skills.

Significance of the Study

The rapid growth of IT/ITES industries and the lucrative pay packages attract the youth more compared to yester years. Some of the challenges of working in these industries include, long working hours, working in the timings of the overseas clients and reduced social interaction. All these make the employees more prone to stress related problems and increase their vulnerability to psycho social disorders. This research through the intervention strategy highlights the effect of Life skill Education (LSE). The various training sessions on different life skills enabled the employees to increase their capacities and capabilities to cope with the stress.

Objectives of the Study

1. To find out the dimensions of stress among IT/ITES employees before and after LSE
2. To identify the coping patterns of employees before and after LSE
3. To find out the correlation between stress and coping among the IT/ITES employees

Hypotheses of the Study

1. Life skill Education (LSE) reduces the different dimensions of stress among the employees reducing the stress level of IT/ITES employees.
2. Life Skill Education (LSE) increases the positive dimensions of coping among employees.
3. Life Skill Education (LSE) reduces the negative coping dimensions among the employees.

Methodology

The present study is based on the quasi experimental study

Samples

40 samples through Purposive sampling technique were used

Associate Professor & Head, Kristu Jayanti College (Autonomous), Bengaluru, India

Variables of the Study
1. Independent Variable – Life Skills Education (LSE)
2. Dependent Variable – Stress Management(SM).

Tools for the Study

       The researcher has used a questionnaire to assess the Stress and Coping Patterns of respondents before and after Life Skill Education (LSE). Since all the employees are educated questionnaire was adopted for the collection of data.

Analysis and Interpretation

Table 1
Stress Dimensions Pre , Post ANS t values

Stress Dimensions	Mean value		't' test scores		
	Pre Intervention	Post Intervention	t test score	p value	Significance
1. Poor Relations with Superior	12.38	8.92	5.273	.000	Significant
2. Bureaucratic Constraints	17.60	12.22	5.647	.000	Significant
3. Work Family Conflicts	18.35	11.35	8.167	.000	Significant
4. Poor Relations with Colleagues	17.02	11.08	6.268	.000	Significant
5. Performance Pressure	17.30	12.92	5.124	.000	Significant
6. Poor Job Prospect	9.52	8.92	6.216	.000	Significant
Overall Stress Level	97.50	66.02	7.161	.000	Significant

       The above table shows that the t value of all the six dimensions are above the p value hence are significantly different from that of the pre test . This shows that there is effectiveness in the intervention of Life skills education.

Overall Stress Level

       It is evident from the above table that the overall stress pre intervention mean value is 97.50 and the post intervention stress mean value is 66.02. This shows that the stress level has come down after the Life Skill Education (LSE).

       However the paired sample 't' test score (6.216) shows that there is a significant difference in the mean value is concerned.

Positive Coping Dimension 1: Active Coping

       Active coping strategies are either behavioral or psychological responses designed to change the nature of the stressor itself or how one thinks about it, active coping strategies, whether behavioral or emotional, are thought to be better ways to deal with stressful events, and avoidant coping strategies appear to be a psychological risk factor or marker for adverse responses to stressful life events **(Holahan & Moos, 1987).**

Table 2
Positive Coping Dimension 1: Active Coping (Pre test|)

Active Coping	Never		Rarely		Sometimes		Always		Total	
	Count	%	Count	%	Count	%	Count	%	Count	%
I have been concentrating on my efforts on doing something about the situation in am in	-	-	10	25.0%	18	45.0%	12	30.0%	40	100
I have been taking action to try to make the situation better	1	2.5%	5	12.5%	12	30.0%	22	55.0%	40	100

Table 3
Positive Coping Dimension 1: Active Coping (Post test)

Active Coping	Sometimes		Always		Total	
	Count	%	Count	%	Count	%
I have concentrating my efforts on doing something about the situation in am in	25	62.5%	15	37.5%	40	100
I have been taking action to try to make the situation better	26	65.0%	14	35.0%	40	100.0

The above table clearly indicates that there is a positive change in the active coping of the respondents. The respondents who were concentrating rarely on doing something about the situation before the intervention have started doing something sometimes or always. There is also a noticeable difference in the percentage of the participants who concentrated their efforts on doing something about the situation sometimes and always (45% to 62.5% and 30% to 37.5 % respectively). The participants who never or rarely took any action to make things better have started taking action sometimes or always.

This is because of the training on LSE with specific reference to the training on coping with stress. The training on coping with emotions and coping with stress have taught the participants the importance of active instead of negative coping or turning in to drug abuse.

Table 4
Correlation between Stress and Coping Due to Life Skill Education (LSE)

Factors of Correlation	R	Significance value level	Correlation	Level of Correlation	Significance
Stress: Pre and Post	-0.292	0.067	Negative	Low	Not Significant
Positive Coping: Pre and Post	-0.022	0.895	Negative	Very Low	Not Significant

From the above table it can be stated that:

1. There exists low negative correlation between pre and post test scores of stress which is significant as the level of significance is more than 0.05.
2. There exists a very low negative correlation between pre and post test scores of positive coping which is not significant as the level of significance is more than 0.05.

Findings

1. The stress dimension of bureaucratic constraints has obtained 17.60 as pre intervention mean value and 12.22 as post intervention mean value. This shows that the stress level has come down after the Life Skill Education (LSE).
2. The coping dimensions known as Active Coping has obtained 6.42 as pre intervention mean value and 6.72 as post intervention mean value. Therefore their active coping level has increased after the LSE.

Correlation between Stress and Coping Dimensions

Logically there exists correlation between the pre test and post test scores of the stress and post test scores of the stress and coping due to intervention of Life Skill Education (LSE). Statistically, Since the level of significance is more than 0.05, it can only be stated that there is no correlation between the pre test and post test scores with regard to the stress, coping and between stress and coping.

References

1. Abadzi, H. (2003) Improving adult literacy outcomes: lessons from cognitive research from developing countries, The World Bank
2. Ganster, D.C. & Schraubroeck, J., (1991), Work stress and employee health, Journal of Management, 17, 2, pp. 235-271.
3. World Health Organization. (1998). The World Health Report, 1998. Executive summary. Geneva.
4. Yalom ID, Leszcz M. The theory and practice of group psychotherapy, 5th ed. New York: Basic Books; 2005.

INFLUENCE OF GENDER ON EMOTIONAL MATURITY OF HIGHER SECONDARY + 1 BIOLOGY STUDENTS IN TIRUNELVELI DISTRICT

Dr. V.Kasirajan

Abstract

This study was carried out to find out the influence of gender on emotional maturity of higher secondary + 1 biology students. A descriptive survey method was adopted by the investigator to conduct this study. The investigator used the simple random sampling technique for selecting the sample. The representative sample consists of randomly selected 1,104 Biology students, studying +1 course, in the higher secondary schools in Tirunelveli District. The tool used in the study was Emotional maturity. The Emotional Maturity Scale (EMS) developed by Dr. Yashvir Singh and Mahesh Bharagava (1999). The investigator found that i) Most of higher secondary +1 biology students are average. i) There is no significant difference between male and female higher secondary +1 biology students in their emotional stability, emotional progression, social adjustment, and emotional maturity in total. iii) There is significant difference between male and female higher secondary +1 biology students in their personality integration, and independence.

Key words: Emotional stability, Emotional progression, Social adjustment, Personality integration, independence and Emotional maturity

Introduction

The main purpose of education is the progress of physical, social activity, emotion, and wisdom of student sustainability. The adequate education makes good quality human resources for a rapidly developing country. According to this reason, many countries have been trying to develop the educational quality in the national policy and strategy to enhance effective implementation. The student's academic achievement problem is not only occurring in India but it also in many countries around the world. Some countries have been trying to solve this problem by educational staff development, teaching processes, and parent and community cooperation and some country have been looking backward to student inner character by depicting causal relationship influencing to academic achievement. Emotional Maturity is a process in which the personality is continuously striving for greater sense of emotional health both intra psychically and intra personally. "An Emotional mature person is one who is able to keep a lid on feelings]. He can suffer in silence. He can bide his time in spite of present discomfort. He is not subject to swing in mood, he is not volatile. When he does express emotion, he does so with moderation, decently and in good order". Emotional maturity is the ability to bear tension and it is the ability to develop high tolerance for disagree circumstance.

Significance of the Study

As has been described by Edward E. Morler, "Children and adolescents are driven by genes and hormones. However, beyond adolescence, an individual has to choose maturity. While emotional intelligence can be learned, emotional maturity is a choice. If it is not consciously made, the individual will not move beyond the emotional immaturity of an adolescent despite any and all trappings of material success". Emotional maturity is not something that necessarily grows with chronological age; we don't get more emotionally mature when we get older. Some adults are very emotionally immature and some have never matured. Hence they all find it difficult to adjust themselves with the changing environment of this scientific age. Therefore it is the dire need of the hour that our adolescents and adults should have proper emotional development to rightly channelize their emotions.

Associate professor, S.Veerasamy Chettiar college of Education, Puliangudi

Emotional maturity becomes very important in the behaviour of the individuals, as students are the pillars of the nation and future generations, so their level of emotional maturity becomes very vital. This study is of significant value for students, families, teachers and administrators, as they can be made aware about the level of emotional maturity of their grown up youths. It will be quite helpful for higher secondary students, who are at the highest seats of learning in universities to pay a good time of attention to their emotional maturity and make successful adjustments, whatever the situations are. Study will also try to make adolescents and adults to realize that becoming emotionally mature means becoming aware of their choices and their impacts. Being higher secondary students doesn't necessarily make a person capable of handling the situations. Therefore need was felt to study the influence of emotional maturity of higher secondary +1 biology students across gender.

Objectives of the Study
1. To find out the level of Emotional maturity and its dimensions of higher secondary + 1 biology students with regard to gender.
2. To find out whether there is any significant difference between male and female higher secondary +1 biology students in their Emotional stability, Emotional progression, Social adjustment, Personality integration, independence and Emotional maturity (total)

Null Hypotheses
1. The level of Emotional maturity and its dimensions of higher secondary+1 biology students with respect to is average.
2. There is no significant difference between male and female higher secondary +1 biology students in their Emotional stability, Emotional progression, Social adjustment, Personality integration, independence and Emotional maturity(total)

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

Sample
The investigator used the simple random sampling technique for selecting the sample. The investigator selected 1104 higher secondary + biology students from Tirunelveli district.

Tools used for the Present Study
Emotional Maturity Scale (EMS) developed by Dr. Yashvir Singh and Mahesh Bharagava (1999).

Statistical Techniques used
Percentage analysis, t-test

Analysis
Null Hypothesis: 1
The level of Emotional maturity and its dimensions of higher secondary+1 biology students with respect gender is average.

Table 1
Level of Emotional maturity and its dimensions of higher secondary +1 biology students with respect to gender

Dimensions	Gender	Low		Average		High	
		Count	%	Count	%	Count	%
Emotional stability	Male	62	13.2	318	67.7	90	19.1
	Female	84	13.2	438	69.1	112	17.7

Emotional progression	Male	102	21.7	287	61.1	81	17.2
	Female	128	20.2	398	62.8	108	17.0
Social adjustment	Male	84	17.9	328	69.8	58	12.3
	Female	122	19.2	410	64.7	102	16.1
Personality integration	Male	47	10.0	345	73.4	78	16.6
	Female	65	10.3	457	72.1	112	17.7
independence	Male	74	15.7	301	64.0	95	20.2
	Female	104	16.4	412	65.0	118	18.6
Emotional maturity (total)	Male	67	14.3	324	68.9	79	16.8
	Female	88	13.9	423	66.7	123	19.4

Finding

Most of higher secondary +1 biology students are average.

Null Hypothesis: 2

There is no significant difference between male and female higher secondary +1 biology students in their Emotional stability, Emotional progression, Social adjustment, Personality integration, independence and Emotional maturity (total)

Table 2
Difference in the Emotional maturity and its dimensions of higher secondary+1 biology students with regard to gender

Dimensions	Gender	N	Mean	SD	Calculated 't' value	Remarks
Emotional stability	Male	470	25.174	7.637	1.486	NS
	Female	634	24.501	7.16302		
Emotional progression	Male	470	22.012	7.945	0.483	NS
	Female	634	21.785	7.430		
Social adjustment	Male	470	24.942	8.405	1.742	NS
	Female	634	24.078	7.781		
Personality integration	Male	470	21.278	7.572	2.096	S
	Female	634	20.369	6.488		
independence	Male	470	17.787	6.137	2.123	S
	Female	634	17.026	5.525		
Emotional maturity (total)	Male	470	111.19	31.024	1.897	NS
	Female	634	107.76	27.901		

It is inferred from the above table that the calculated values are (1.486, 0.483, 1.742 and1.897) lesser than the table value (1.96) for df (1103) at 5% level of significance. Hence the null hypothesis accepted. It shows that there is no significant difference between male and female higher secondary +1 biology students in their emotional stability, emotional progression, social adjustment, and emotional maturity in total. But there is significant difference between male and female higher secondary +1 biology students in their personality integration, and independence.

Findings
1. The level of Emotional stability of higher secondary +1 biology students with respect to background variables such as Gender- male (67.7%); female (69.1%).
2. The level of Emotional progression of higher secondary+1 biology students with respect to background variables such as Gender- male (61.1%); female (62.8%).

3. The level of Social adjustment of higher secondary +1   biology students with respect to background variables such as Gender- male (69.8%); female (64.7%).
4. The level of Personality integration of higher secondary +1 biology students with respect to background variables such as Gender- male (73.4%); female (72.1%).
5. The level of independence of higher secondary +1 biology students with respect to background variables such as Gender- male (64.0%); female (65.0%).
6. The level of Emotional maturity total) of higher secondary +1 biology students with respect to background variables such as Gender- male (68.9%); female (66.7%).
7. There is no significant difference between male and female higher secondary +1 biology students in their emotional stability, emotional progression, social adjustment, and emotional maturity in total. But there is significant difference between male and female higher secondary +1 biology students in their personality integration, and independence.

Interpretation

The 't' test result shows that male students are better than female higher secondary school +1 biology students in their personality integration and independence. This may be due to the fact that the male students are to assess the emotional state of others and to influence their opinions and behavior. Female students are less emotionally stable, sober, reserved and shy compared to male students   Male Students make new friends and develop new peer groups in school. The male students adjust with the environment. So the male students have high level of emotional maturity.

Educational Implications

The present study may help the parents, teachers and administrators to have knowledge of the emotional development of their children and students and help them in building a well balanced personality. Emotional Development is one of the major aspects of human growth and development. Emotions like anger, fear, love etc. play a great role in the development of child's personality. Not only his physical growth and development is linked with his emotional makeup, but his intellectual, social, moral and aesthetic development are also controlled by his emotional behavior and experiences. The overall importance of emotional experiences in the life of a human being makes it quite essential to know about the emotions. Emotional development reaches its maximum in adulthood. During this stage, generally all individuals attain emotional maturity. The study will benefit the post graduates and research scholars to have a kind attention towards their emotional development and will make them aware about the importance of emotional maturity in the present fast changing global world.

References

1. *Aggarwal, J.C (2007) Psychology of Learning and development, Delhi: Shipra publishers pp. 67-68*
2. Aggarwal, J.C (2010). *Teacher and Education in a developing society*. New Delhi: Vikas Publishing House pvt.Ltd
3. Aggarwal, J.C(2011). *Development and planning of Modern Education(9th ed.)*. Dlhi: Vikas Publishing house pvt td. P.154
4. Aruna Mohan G., *Educational Psychology*, Hyderabad: Neelkamal Publication Pvt. Ltd., 2006:180.
5. Beena, C. et.al., (2006) *An Invitation to Psychology,* Hyderabad: Neelkamal Publications Pvt. Ltd., 206:525.
6. Best. John .W and Khan,James.V (2006) *Research in Education*, New Delhi, Prentice hall of India.
7. Mangal, S.K (2007). *Advanced Educational Psychology* (2nd ed.). New Delhi: Prentice Hall of India private limited, Pp.66-67.
8. Mangal, S.K . (2009). *Advanced Educational Psychology*. New Delhi : Prentice Hall of India Pvt. Ltd., p. 320.

ROLE OF NATIONAL AND INTERNATIONAL AGENCIES AND POLICY MAKING

A.Maria Jeyachandra Rani

Abstract

Policies are conditioned by the local and global environment. It is impossible to separate the external environmental factors, as they invariably influence being brought to bear on socio-economic problems of a country by agencies such as the United Nation and its allied agencies World Bank, International Monetary Fund, European Policy Forum, The Organization for Economic Cooperation and Development and European Central Bank, etc. are of critical importance in shaping its policies. With a view to carrying out the economic and social mandate, United Nations funds and program have been established which operate under the authority of General Assembly and Economic and Social Council.

Introduction

The role of the United Nations and its agencies in policy making for the international community is of critical importance in the context of aim and principles of the United Nations. Article 55 of United Nations Charter proclaims: "With a view to the creation of conditions of stability and well-being which are necessary for peaceful and friendly relations among nations based on respect for the principle of equal rights and self-determination of peoples, the United Nations shall promote:

1. Higher standard of living, full employment and conditions of economic and social progress and development;
2. Solutions of international economic, social health and related problem, and international cultural and educational cooperation
3. Universal respect for and observance of, human rights and fundamental freedoms for all without distinction as to race, sex, language or religion".

Lass well argued that policy science should take into account of world trends and forces when considering the context of policy problems. He maintained: "Indeed, one of the major tasks of the policy sciences today is to follow in detail the processes of social invention, diffusion and restriction throughout the globe, for the sake of estimating the significance of specific events".

Lass well also maintained: "As the globe shrinks into interdependence, relying more fully on science and technology, the policy sciences gain significance…interdependence implies that every participant and every item in the social process is affected by the context in which it occurs."

Political system of a country functions within the world system and not immune to outside pressure and influence. Globalization has gained wide attention and recognition. The implications of the notion of globalization are that policy makers must consider agenda formation and problem definition within a global context. The "policy makers in each country share a policy context formed by the International economic cycle of prosperity, recession, depression and recovery" In a global context more and more issues will be structured by larger forces outside the nation's constitutional framework of public policy making. Now international organizations and Multinational Corporation exercise a great degree of influence and reduce the capacity of national policy.

National policy agenda of developing countries open to developed countries global politics has an added role to play in the determination of national policies, particularly developing nations.

Selection Grade Physical Directress, St.Justin's College of Education, Madurai.

Elementary Education and International Agencies

Education is important not only for the full development of one's personality, but also for the sustained growth of the nation. Elementary education in India, therefore, is the foundation on which the development of every citizen and the nation as a whole hinges. Elementary education in India means eight years of schooling from the age of six. The Government has made elementary education compulsory and free. But, the goal of universal elementary education in India has been very difficult to achieve till now.   Government of India's flagship program for achievement of Universalization of Elementary Education in a time bound manner, as mandated by 86th amendment to the Constitution of India making free and compulsory Education to the children of 6-14 years age group, a Fundamental Right is being implemented in partnership with State Governments to cover the entire country and address the needs of children million habitations. SSA seeks to provide quality elementary education including life skills. SSA has a special focus on girl's education and children with special needs also seeks to provide computer education to bridge the digital divide.

Developing context-specific strategies to reach out to girls, especially from socially disadvantaged groups - urban poor, tribal, scheduled caste, and working children - in order to eliminate gender and social disparity in access as well as achievement. Enhancing the research base to ensure effective analysis, action and advocacy at all levels.

Policies for quality improvement

Improving quality on the other hand is equally critical - a long-term strategy to significantly reduce the number of out-of-school children as well as to improve overall levels of retention and achievement, success is contingent on strong linkages between families/communities and school. Educational research and analysis is the cementing factor and provides critical inputs for effective planning.

1. Policies are developed to ensure greater access to both elementary and secondary education and quality standards, including learning outcomes; and reduction of illiteracy amongst girls, scheduled castes and scheduled tribes.
2. Policies and programs are strengthened, with budgets increased and fully utilized to improve access and retention as well as improve quality of education in terms of child friendly school environment and learning outcomes.

Higher enrolment rates, and especially those of retention and completion, bear evidence of quality and sustained commitment from Governments and the international community to ensure children's learning, promoting their cognitive, creative and emotional development. Inclusiveness and respect for cultural values and heritage will be attained through quality schooling, encouraging social commitment, responsibility and open-mindedness.

- Is a child-seeking school and actively identifies all excluded children to enrol, retain them in schools and supports their effective learning.
- It is a child-entered school and supports realization of the child's full potential, takes care of the whole child - health, nutritional status, wellbeing, safety, before they enter school and after they leave school. All this is achieved with the involvement of the children, families, and communities.

The concept ensures equality of opportunity for all children, provides education that is free and compulsory, affordable and accessible, does not exclude, discriminate, or stereotype children and responds to diversity -- meets the differing circumstances and needs of children. These key elements are further broken down into actionable points for implementation on the field.

According to the context, this support can come in the form of technical assistance in education policy analysis, the design of education sector development plans and donor mobilization in support of national educational priorities. In other cases, the support can relate to national institutional capacity building in policy formulation, sector analysis, educational planning, policy stimulation and

dialogue, resource projections, sector management, program monitoring and evaluation, development cooperation and donor coordination.

Elementary education, the World Bank has come forward with an offer to provide additional funding . The World Bank has proposed the Government to provide the money as soft loans, to be paid over a period of 35 to 40 years with lesser sensitization and support to local systems .

3. Advocacy and social mobilization against child labor addressing existing attitudes towards child labour and facilitate people's behavioural change towards a more protective environment for children are core components of the present. This is addressed in the field through community-centred social mobilization initiatives, implemented in collaboration with local authorities, Non-Government Organizations Community-Based Organizations and by a number of local motivators operating at village level. Building on field level experiences communication strategy against child labour. Pressure on national policy makers to change or modify their policy positions. Looking at the gravity of environmental problem, the World Commission on Environment and Development observed: "The traditional form of national sovereignty are increasingly challenged by the realities of ecological and economic interdependence. Now here is this truer than in the shared ecosystem and in the global commons –those parts of the planet that fall outside national jurisdiction."

Industrial growth places pressure on policy makers to prevent and control pollution. International agreements on ways to control pollution and close ties between environmentalists have provided an exchange of information that shapes policy agenda.

- International arrangements to enhance environmental protection and policy advice to Governments, multilateral organizations and others to strengthen environmental protection and incorporate the environment into the sustainable development process.
- Periodic assessments and scientifically sound forecasts to support decision making and International consensus on the main environmental threats and responses to them.
- More effective coordination of environmental matters within the United Nations System.
- Greater public awareness and capacity for environmental management and effective national and international responses to environmental threats. . The work is guided by and contributes to the Nairobi Work Program on Impacts, Vulnerability and Adaptation . . The program lays emphasis on actions to mitigate and adapt to climate change impacts and on enhancing awareness among marginalized communities for them to manage and reduce disaster and environment related risks. The biodiversity conservation initiatives support communities so they are able to administer their resources in a sustainable manner. This happens through value-addition and marketing of products based on natural resources and through the documentation as well as the sharing of benefits that arise from traditional knowledge. The program furthermore supports efforts towards strategic management of chemicals, which contribute to pollution and the depletion of ozone layer.

Various agencies

Various international agencies support the policies and programs of individual countries. These supports could be in the form of financial aid or technical expertise to address the issues of the particular country or the problems of international concerns. . Voluntary efforts were started in the fields of education and health etc. Voluntary

Organizations engaged in the social welfare activities have a credible record of achievement in India since British times. This was partly because of the limited success of past development policies pursued by the Government lack of the people participation restricted the success of rural development programs. The need for micro level institution to involve the people in formulation, implementation and monitoring of the program is, therefore, stressed in several quarters. Voluntary bodies have a role in creating the welfare State. Their continued action is vitally necessary for its survival

and growth. The more the State plans and directs, the more important it is for larger number of people to take an active part in shaping its policy and running its affairs. This they can do through voluntary organization. The more wide spread voluntary activity is, the better it is for society as a whole, not only because there are more people taking an active part in making democracy work and fending satisfaction in group activity but also because progress in one branch of national life affects and is affected by others.

A voluntary agency may be defined as "an organizational entity set up by a group of persons on their own initiative or partly by an outside motivation to help the people of locality to undertake activities in a self-reliance manner to satisfy needs and also bring them and the public sector extension services closer to one another for more equitable and effective development of the various sections of the rural poor".

Conclusion

Voluntary action has been a long tradition in India and plays a significant role in welfare activities. The role of voluntary agencies is well recognized and the policy makers and administrators also recognize its contribution. According to the First Plan Document, "A major responsibility for organizing activities in different fields of social welfare like the welfare of women and children, social education, community organization, etc., falls naturally on private voluntary agencies. These private agencies have long been working in their own humble way and without adequate aid for the achievement of their objectives with their own leadership, organization and resources. Any plan for social and economic regeneration should take into account the services rendered by these agencies and the State should give them maximum cooperation in strengthening their effort. Public cooperation through voluntary social service organization is capable of yielding valuable results in channelising private efforts for the promotion of social welfare".

References

1. D. Paul Chowdhary, Profile of Social Welfare and Development in India, New Delhi: M.N.
2. J.B. Singh, "Testing Voluntary agencies – Let's First Understand Them", Yojana,
3. http://www.undp.org.in/whatwedo/environment and energy assess on 15 January, 2011
4. http://www.unep.org/climatechange/adptation/Introduction/tabid/6704/Default.aspx assess
5. http://www.undo.org/climatechange/pillar ccpov.shtml assess on 14 January, 2011

INNOVATIVE PRACTICE OF RESEARCH IN EDUCATION

¹X.Martinadevi & ²P.Palpandian

Abstract

*   **Educational research** refers to a variety of methods, in which individuals evaluate different aspects of education including: "student learning, <u>teaching method</u>s, teacher training, and classroom dynamics. Research involves gathering new data from primary or first-hand sources or using existing data for a new purpose. Research is based upon observable experience or empirical evidence. Research demands accurate observation and description. Research generally employs carefully designed procedures and rigorous analysis.*

*   Tarde (1903) defined the innovation-decision process as a series of steps that includes, First knowledge, Forming an attitude, A decision to adopt or reject, Implementation and use, Confirmation of the decision, tools, iCyte, Memonic, Wet Mount, Zoho ,Notebook, Reframe. The key question is what to do when. To better understand when to use which method, it is helpful to realize that they differ along 3 dimensions: Attitudinal vs. Behavioral, Qualitative vs. Quantitative, Context of Website or Product Use.*

*   Computer Assisted/Aided Qualitative Data Analysis Software (CAQDAS) offers tools that assist with <u>qualitative   research</u> such as <u>transcription</u> analysis, coding and text interpretation, recursive abstraction, <u>content analysis</u>, <u>discourse analysis</u>, <u>grounded theory methodology</u>, etc. Educational Research issues are of many different kinds and logical types, it is to be expected that quite different types of research should be brought into play on different occasions.*

Introduction

        Educational research refers to a variety of methods, in which individuals evaluate different aspects of education including: "student learning, <u>teaching method</u>s, teacher training, and classroom dynamics. Educational researchers have come to the consensus that, educational research must be conducted in a rigorous and systematic way, although what this implies is often debated. There are a variety of disciplines which are each present to some degree in educational research. These include <u>psychology</u>, <u>sociology</u>, <u>anthropology</u>, and <u>philosophy</u>. The overlap in disciplines creates a broad range from which <u>methodology</u> can be drawn. The findings of educational research also need to be interpreted within the context in which they were discovered as they may not be applicable in every time or place.

Characteristics
- Educational research attempts to solve a problem.
- Research involves gathering new data from primary or first-hand sources or using existing data for a new purpose.
- Research is based upon observable experience or empirical evidence.
- Research demands accurate observation and description.
- Research generally employs carefully designed procedures and rigorous analysis.
- Research emphasizes the development of generalizations, principles or theories that will help in understanding, prediction and/or control.
- Research requires expertise - familiarity with the field; competence in methodology; technical skill in collecting and analyzing the data.

¹ *Assistant Professor in Biological Science, St.John's College of Education, Veeravanallur*

² *M.Ed scholar Mahatma Gandhi College of Education Solaiseri.*

- Research attempts to find an objective, unbiased solution to the problem and takes great pains to validate the procedures employed.
- Research is a deliberate and unhurried activity which is directional but often refines the problem or questions as the research progresses.
- Research is carefully recorded and reported to other persons interested in the problem.

Research Innovative Practices/ Innovation-Decision Process

Tarde (1903) defined the innovation-decision process as a series of steps that includes

1. First knowledge
2. Forming an attitude
3. A decision to adopt or reject
4. Implementation and use
5. Confirmation of the decision

Once innovation occurs, innovations may be spread from the innovator to other individuals and groups. This process has been proposed that the life cycle of innovations can be described using the 's-curve' or diffusion curve. The s-curve maps growth of revenue or productivity against time. In the early stage of a particular innovation, growth is relatively slow as the new product establishes itself. At some point customers begin to demand and the product growth increases more rapidly. New incremental innovations or changes to the product allow growth to continue. Towards the end of its lifecycle, growth slows and may even begin to decline. In the later stages, no amount of new investment in that product will yield a normal rate of return

The s-curve derives from an assumption that new products are likely to have "product life"—i.e., a start-up phase, a rapid increase in revenue and eventual decline. In fact the great majority of innovations never get off the bottom of the curve, and never produce normal returns.

Innovative companies will typically be working on new innovations that will eventually replace older ones. Successive s-curves will come along to replace older ones and continue to drive growth upwards. In the figure above the first curve shows a current technology.

The second shows an emerging technology that currently yields lower growth but will eventually overtake current technology and lead to even greater levels of growth. The length of life will depend on many factors.

Web as a Research Tool

Seven Tools for Organizing Web Research A webinar about the online research process. Jim will be sharing some tools that are specific to the Mac laptops issued to teachers by the Maine DOE. I'll be focusing on tools that are more universally accessible. I'll be sharing some of the tools from the following list during that webinar

Update

The recording of the webinar should be available at some point next week on Maine121.org

iCyte

iCyte is a fantastic browser extension available for Firefox 3 and Internet Explorer 7 and 8. iCyte gives you the ability to highlight and save sections of websites for later reference. When you save an item iniCyte an archive of the website is saved in your iCyte account. To organize your findings, you can create folders within your iCyte account

Memonic

Memonic is a relatively new tool for curating collections of information from the web. Memonic's key function is to give users the power to clip sections of websites and build them into a personal collection. Along with the clipping of information, users can add commentary to each item they place into their personal

accounts. For example, if I clipped a paragraph from iLearn Technology I could also add some notes for myself about that paragraph.

There are a couple of ways to add content to the folders within a Memonic account. The easiest way add content to a Memonic account is to use the Memonic book marklet for Firefox. After the book marklet is installed, users can click it at anytime while they're browsing the web to add content to their Memonic folders. Alternatively, users can add content by typing the url of a desired page

Lumifi

Lumifi is a collaborative research tool. With Lumifi students and teachers can collaboratively share, evaluate, and organize information found online and off-line. What makesLumifi different from other online collaboration tools is the ability to upload documents then extract only the relevant information to share with others. Often while researching a topic students only need part of a document or web page, Lumifi gives users the option to weed through peripherals and get right to the information they need

Wet Mount

Wet Mount is a website designed to organize findings from the Internet. The organization process is based on a simple number-line concept. When users find information (text, image, or video) that information is placed in a chart. As more information is found the chart can be reorganized to accommodate more information and place it based on relevance to the original search terms. Watch a screencast here

Zoho

Zoho offers a suite of collaborative tools that in many ways are similar to the Google Docs suite. Zoho Notebook is an excellent tool to introduce to your students at the beginning of the school year. Students can use Zoho Notebook to keep track of the web resources that they find while researching a topic. One of the selling points of Zoho Notebook over similar services is that your students can log-in using a Zoho ID, Google ID, or Yahoo ID

Reframe

Reframe It is a handy browser extension for Firefox and Internet Explorer. Reframe It is best described as social bookmarking (like Delicious) meets team white boarding (think Twiddla). The social bookmarking aspect of Reframe It is bookmarking and sharing links. The white boarding aspect of Reframe It is the ability to frame or crop a section of page and comment on it. The comments appear in a side margin so that you can continue to look at the web page

Webnotes

Webnotes is a service that makes it easy to highlight, annotate, and organize your web research. WebNotes has free and paid versions of its service. The free version allows you to highlight, annotate, and organize the information that you find on websites. The paid version allows you to highlight, annotate, and organize information from PDFs as well as websites. There are two options for installing WebNotes.

Online tools for researchers
I   -   Using"thecrowd"forresearch (crowdsourcing,surveys…)
II   –   Scientific SocialNetworking
III   -   SharingScience(data,figures,code,samples…)
IV   -   LabandResearchManagementTools
V   -   Producing research (data analysis, writing, publishing)
VI   -   Find expertise
VII   -   Find, organize and discuss papers
Online Used Review Web Site

Research Related Reviews should be collected from these Web Site

Research Methods

You can't use the full set of methods on every project, but most design teams benefit from combining insights from multiple research methods. The key question is what to do when. To better understand when to use which method, it is helpful to realize that they differ along **3 dimensions**:

- Attitudinal vs. Behavioral
- Qualitative vs. Quantitative
- Context of Website or Product Use

Analysis the Data

1. **Dedoose is a cross-platform** apply for analyzing text, video, and spreadsheet data (analyzing qualitative, quantitative, and mixed methods research). Our intuitive software interface allows users or teams to effectively analyze qualitative and mixed methods research data from various research approaches when conducting surveys and interviews in market research, psychology research, social science research, ethnographic research, anthropology research and much more from anywhere in the world, simultaneously, always protected by our industry leading security for about $10 per month (only for months you login). You can even import from a MAXQDA, NVivo, Survey Monkey, Atlas. ti, or any other software! Free for one month with nothing to install and setup is instantaneous! ***Dedoose Sign Up & Pricing : Get Started on Your Qualitative and Mixed Methods Research Project***

2. **Computer Assisted/Aided Qualitative Data Analysis Software (CAQDAS)** offers tools that assist with <u>qualitative research</u> such as <u>transcription</u> analysis, coding and text interpretation, recursive abstraction, <u>content analysis</u>, <u>discourse analysis</u>, <u>grounded theory methodology</u>, etc.
   - Instruction Methods and Tools:
   - Internet (Required for online courses)
   - Graduate Student Forum for instruction, discussions, participation, etc
   - ESET for submitting assignments
   - Nova Southeastern University Online Library

Conclusion

Educational Research issues are of many different kinds and logical types, it is to be expected that quite different types of research should be brought into play on different occasions. The question therefore is not whether research into teaching should be conducted by means of quantitative measures (on some such grounds as that they are more 'objective') or qualitative measures (on some such grounds as that they are more 'insightful'), but what kind of research can sensibly be utilized to look into this particular aspect of teaching as opposed to that.

Reference

1. Anderson, Garry; Arsenault, Nancy (1998). <u>*Fundamentals of Educational Research*</u>. <u>Routledge</u>. <u>ISBN</u> <u>978-0-203-97822-1</u>.
2. Gorard, Stephen; Taylor, Chris (2004). *Combining Methods in Educational and Social Research*. McGraw-Hill International. ISBN 978-0-335-22517-0.
3. Woods, Ronald; Barrow, Robin (2006). *An Introduction to Philosophy of Education*. Taylor & Francis. ISBN 978-0-203-96995-3.

EFFECTIVENESS OF CAI PACKAGE ON SOCIAL SCIENCE FOR SECONDARY EDUCATION

Dr.A.Monforth Samathanam

Need for the Study

With the development of latest thinking in the field of education, it was felt necessary to make the teaching of history quite interesting and real. It is now realized that teaching of history should be conducted at places of historical importance. As a history teacher, the investigator felt the need to use the CAI package he developed as the mode of teaching to interest the students.

To his aid can be the use of computer as a teaching method. In the traditional group centered or teacher centered approach the average students gain more than the others. The individual differences are not catered for. CAI calls for individualized instruction. There is self pacing and immediate feedback in it. At present there is no individualized instruction or package for teaching social sciences to the secondary school students. Some students find learning social sciences a monotonous activity and feel boredom. The teachers work fails and it calls for inserting of technology based teaching. The difficulties faced by teachers in teaching social sciences and students in learning the same pose a challenge to the research world. Hence the need for the research and development of CAI Package to teach Social Science for Secondary Education.

Statement of the Problem

Using CAI Package to Teach Social Science for Secondary Education (IXth Standard) in Order to bring Effectiveness in Learning the Subject and to Create Interest

Operational Terms and Definitions

Computer Assisted Instruction	:	refers to an individual's auto learning.
Social Science	:	refers to syllabus prescribed for students of ninth standard under State Board System of Tamil Nadu.
Secondary Education	:	refers to knowledge imparted to students ninth standard under State Board System of Tamil Nadu.

Variables of the Study   :   The variables involved in this study are as follows:

1. **Independent Variable**   :   Computer Assisted Instruction
2. **Dependen**t **Variable**   :   Gain Performance
3. **Intervening (Population) Variable :**   Sex: (Male / Female)

Objectives of the Study

1. To find out the effectiveness of the CAI package on Social Science on IXth standard students
2. To find out the difference if any exists among IX Standard students in terms of sex in learning Social Science through CAI package

Hypotheses of the Study

1. There is effectiveness in each and every individual of IX standard students after learning Social Science through the CAI package.
2. There is Mastery Level attainment in each and every individual student's performance in Social Science learnt through CAI package.

Assistant Professor in Education, Pope John Paul II College of Education Pondicherry

3. The gain performance of the IX standard students at Mastery Level l (a minimum of 90 per cent gain ratio) after learning Social Science through CAI package is associated with Sex.

Methodology in Brief

　　　Experimental method was used to realize the above mentioned objectives. A single group quasi experimental design was applied for the study. A representative sample of 150 students from the secondary level under Tamil Nadu State Board System served the study. They were selected by Purposive sampling technique from Cuddalore District, Thiruvannamalai District and schools in Pondicherry city.

Tools Used

1. CAI Package to be developed by the investigator and the Supervisor.
2. Criterion-Referenced Achievement test on Social Science developed by the Investigator.

Statistical Techniques

The following Statistical Techniques were used in the present study:

$$\text{GAIN RATIO} = \frac{\text{Post-test score} - \text{Pre-test score}}{\text{Maximum Possible Score} - \text{Pre-test score}} \times 100$$

1. GAIN RATIO
2. Percentage Analysis
3. 't' test

Hypothesis 1

　　　There is effectiveness in each and every individual of IX standard students after learning Social Science through the CAI package.

Table 1
Gain Performance of the Individual IX Standard Students after Learning Social Science through the CAI Package

Number	Pre Test Score Above Average	Post Test Score Above Average	Gain In Percentage
150	68	150	100

　　　There is a difference between the Pre-test and the Post-test scores of each and every individual of IX standard students. This is because of the treatment, i.e, CAI package on Social Science. The package has been constructed in such a manner to attract the students and appealing to the senses of the IX standard students and to make them attractive for learning through the CAI package. The effect is therefore the difference.

Hypothesis No.2:　　　There is Mastery level attainment in each and every individual student's performance in Social Science learnt through CAI package.

Table 2
Frequency distribution and mastery levels after learning Social Science through CAI Package

Mastery Level							
I (90 % and above)		II (80 % and above)		III (70 % and above)		IV (60 % and above)	
F	%	F	%	F	%	F	%
40	27	83	55.3	114	76	150	100

　　　It is evident from table no.2 that all the students involved in this study have attained a minimum of 60 per cent gain ratio in Social Science due to the CAI package. It means that all the students who were subjected to learning by the treatment of the CAI package have attained at least Mastery Level IV.

It is evident from table no. 2   that 76,55.3 and 27 per cent of the students have attained a minimum of Mastery Level III, Mastery Level II and Mastery Level I respectively.

To conclude, the CAI package on Social Science for secondary education is found to be more effective for the students and also when the mastery level increases the achievement level decreases.

Frequency Distribution and Percentage Analysis of Mastery Levels: Sex

Hypothesis no.3:   The gain performance of the IX Standard Students at mastery level I (a minimum of 90 per cent gain ratio) after learning Social Science through CAI package is associated with SEX.

Table 3
Frequency distribution and percentage of mastery levels after learning Social Science through CAI Package with regard to SEX

SEX	Level of Learner	Mastery Level							
		I (90 % and above)		II (80 % and above)		III (70 % and above)		IV (60 % and above)	
		F	%	F	%	F	%	F	%
Male	Below Average					5	27.7	18	100
	Average			20	80	23	92	25	100
	Above Average	28	84.8	32	96.9	33	100		
	In-Toto	28	36.8	52	68.4	61	80.3	76	100
Female	Below Average			10	35.7	25	89.3	28	100
	Average			15	68.2	17	77.2	22	100
	Above Average	19	79.1	22	91.7	24	100		
	In-Toto	19	25.6	47	63.5	59	66	74	100

F-Denotes Frequency   %- Denotes Percentage

Below Average Students

It is evident that from table no3. that all the below average students both male and female involved in this study have attained a minimum of 60 per cent gain ratio in learning Social Science due to the CAI package. It means that all the students who were subjected to learning by the treatment of the CAI package have attained at least Mastery Level IV.

It is evident from table no.3 that 27.7 and 89.3 per cent of male and female students have attained a minimum of 70 per cent performance. To conclude, the CAI package on Social Science for IX standard students is found to be more effective for female students than male students.

Average Students

It is evident that from table no.3 that all the average students both male and female involved in this study have attained a minimum of 60 percent gain ratio in learning Social Science due to the CAI package. It means that all the students who were subjected to learning by the treatment of the CAI package have attained at least mastery level IV.

It is evident from table no.3 that 92 and 77.2 percent of the students both male and female have attained a minimum of 70 percent gain performance. To put it differently, female students are found better facilitated in learning Social Science through the CAI package than male students.

It is evident from table no.3 that 80 and 68.2 per cent of male and female students have attained a minimum of 80 per cent performance.

To conclude, the CAI package on Social Science for IX standard students is found to be more effective for female students than male students.

Above Average students

It is evident that from table no.3 that all the above average students both male and female involved in this study have attained a minimum of 70 per cent gain ratio in learning Social Science due to the CAI package. It means that all the students who were subjected to learning by the treatment of the CAI package have attained at least Mastery Level III.

It is evident from table no.3 that 96.9 and 91.7 per cent of the above average male and female students have attained a minimum of 80 percent have attained a minimum of 80 per cent gain performance.

It is evident from table no.3 that 84.8and 79.1 per cent of the students both male and female have attained a minimum of 90 per cent gain performance. To put it differently, male students are found better facilitated in learning Social Science through the CAI package than female students. To conclude, the CAI package on Social Science for IX standard students is found to be more effective for male students than female students.

In-toto (Below Average, Average and above Average Learners)

It is evident from the table no.3 that all the students both male and female involved in this study have attained a minimum of 60 percent gain ratio in learning Social Science due to the CAI package. It means that all the students who were subjected to learning by the treatment of the CAI package have attained at least Mastery level IV.

It is evident from the table no.3 that 80.3, 68.4 and 36.8 percent of the male students have attained a minimum of Mastery Level III, Mastery Level II and Mastery Level I respectively, whereas 89.2, 63.5 and 25.6 percent of the female students have attained a minimum of Mastery Level III, Mastery Level II and Mastery Level I respectively.

It is observed that a higher percentage of male students have attained mastery Level I performance than female students. In other words, the CAI package on Social Science for IX standard students is found to be more effective for male students than for female students. It means that there is a positive association between the effectiveness of the CAI package and male students.

Hence the gain performance at Mastery Level I (a minimum of 90 per cent gain ratio) due to the CAI package is associated with sex.

II.Hypotheses Verification

1. There is effectiveness in each and every individual of IX standard students after learning Social Science through the CAI package –**Accepted**
2. There is Mastery Level attainment in each and every individual pupil's performance in Social Science learnt through CAI package – **Accepted**
3. The gain performance at Mastery Level l (a minimum of 90 per cent gain ratio) after learning Social Science through CAI package is associated with Sex - **Accepted**

Educational Implications

The findings of the present study clearly indicate that, all the three levels of the students viz., below average, average and above average have attained a minimum of sixty percent gain ratio after learning Social Science through the CAI package. It reveals that by using the CAI package even the below average students can achieve the minimum level of sixty percent in their subjects. In other words, the educational policy makers and administrators can consider the use of the CAI package at all the stages of educational programme for the benefit of the three levels of the students in general and below average learners in specific.

After analysis the achievement of the learners at three levels, the following educational Implications are arrived at:

1. The fact that a minimum of 90 per cent of students have attained a minimum of 60 per cent gain performance in learning the Social Science topics indicates that learning through CAI package is very effective and it can be encouraged for all the learners.
2. The below average students need to be encouraged. So that they may be motivated to perform well.
3. The average and above average learners need to be encouraged to continue with the same spirit and motivation of learning.
4. Female students need to be motivated to be interested in the contextual learning as they are in the technological aptitudes. Last one decade has seen the achievement of tenth standard results where females achieved higher than male students but this CAI package has helped the male students to achieve better.

References

1. Chinnappan.K (2010) "**A Study of Effectiveness of Video Lessons in Teaching Child Right Education to B.Ed., Teacher Trainees**", Thesis Submitted to Tamil University, Tanjavur.
2. Delphine Mary. A., Sivasankari. N. and Mariaseeli (2012), **"U-learning as an Emerging Educational Technology in Teaching English",** Proceedings of the KAAS International Conference, St.Ignatius College of Education, Palayamkottai.
3. Kannan.B. and Muthumanickam, A. (2006). **"Active Teaching Learning with Powerpoint",** Proceedings of the National Level Conference, St. Xavier's College of Education, Palayamkottai.

AWARENESS AND UTILISATION OF SOCIAL NETWORKING SITE OF FACE BOOK AMONG SECONDARY TEACHER EDUCATION STUDENTS

Dr.D.Sivakumar

Abstract

The purpose of the study is to explore social networking site (SNS) Face book among B.Ed., students in cuddalore District. It is adopted with survey method and used 200 students as the sample size. Data was collected by means of questionnaire from the B.Ed., Students. The Findings show that 80% of students in are aware of Face book and their usage level is high. It is concluded that students should be stimulated to share more on academic activities through the social networking site. There is no significant difference in Awareness and Utilization of Face book among B.Ed trainees with respect to (1) Gender (2) Locality (3) Educational qualification.

Key Words: Face book, Social networking site, B.Ed., Students.

Introduction

The exchange of thoughts through social Networking site is popular among college students. Information communication technology is added boon to young lads now a day. The timeless and limitless connectivity create new path ways and strategies. People access all new technology strategies in their way of life but lack of accessing skill make prevention among users. People use face book because through this they can easily contact their old, Current and future friends through sharing. Social media are the tools and platforms that people use to publish contents and interact socially on line (*Health field, 2013*). In contemporary society, establishing social networks is more important than ever, in order to manage changes in technology and expectations in the current economy (*Trubiff and overholtzer, 2009). Smith, Salaway and Caruso (2009)* opined that students can use social networks to express themselves and also, they have the ability to meet other students from all over the world. Social networks are part and parcel of young students and provide self expression and sharing among peers, friends, relatives and family members.

Statement of the Problem

More studies were conducted to find out the impact of social networking sites on young generation, but the present work is conducted to explore awareness and utilization of Face book among B.Ed., students.

Review of Literature

Subramonian *(2008)* reported that the findings of the study conducted to understand the role of SNS in College students' lives. The Survey of Pew Internet (2010) says that face book is the most commonly used social network among adults. Social media refer to media for social interaction which use highly accessible and scalable publishing techniques. They include the various online technology tools that enable people to communicate easily via Internet to share information and resources *(Greendhow, 2009).* Leo.N. Edegoh *(2013)* investigated face book and relationship management among under graduate students of Anambra state university, Uli, Nigeria. The results revealed that lot of students make friends and also rediscover their old friends through face book. They use the face book regularly or often because they are part of their routine life schedule.

Principal, CK College of Education, Cuddalore

Lavanya.V; Francisca.S;(2015) studied, "Influence of social media on social cognition of college students with reference to gender". The present study was conducted to investigate the influence of social media on social cognition of college students with reference to gender. To solve the present problems the investigators employed descriptive method using survey technique. The results indicated that the male students were greatly influenced by social media than the female students. There is no significant difference between college students in social cognition with reference to gender. There is significant positive correlation between influence of social media and social cognition of college students with reference to gender.

Objectives

The following objectives are formulated to guide the present study

1. To determine the number of hours B. Ed students expose themselves to face book.
2. To find out the regularity at which B.Ed., Students to make friends on the face book.
3. To determine the rate at which B.Ed., students renew old friend through face book.
4. To determine the gratification of the B.Ed., students to derive using face book.
5. To find out the significant difference between male and female students in their Awareness and Utilization of Face book.
6. To find out the significant difference between rural and urban students in their Awareness and Utilization of Face book.
7. To find out the significant difference between UG and PG students in their Awareness and Utilization of Face book

Hypotheses

1. There is no significant difference between male and female students in their Awareness and Utilization of Face book.
2. There is no significant difference between rural and urban students in their Awareness and Utilization of Face book.
3. There is no significant difference between UG and PG students in their Awareness and Utilization of Face book

Methodology

The study adopted is survey method. A total of 200 Copies of questionnaire were distributed to B.Ed students with use of purposive and simple random sampling technique.

Data Analysis

Table – 1

Number of hours the B.Ed., Students expose themselves on face book

Responses	Frequency	Percentage (%)
1 Hour daily	72	36
2- 4 Hours daily	68	34
5 Hours and above daily	60	30
Total	**200**	**100**

Table one shows that 36% of the respondents (n=72) expose themselves to face book one hour daily, 34% (n=68) expose themselves to face book 2-4 hours every day and 30% (n=60) respondents stay on face book for up to 5 hours and above daily. This result shows that the frequency of students' exposure to face book is quite high.

Table – 2

Regularity of B.Ed., Students making friends on face book

Responses	Frequency	Percentage (%)
Regularly	89	44.5
Occasionally	32	16.0
Week end	60	30.0
Never	19	9.5
Total	**200**	**100**

Table two shows that 44.5 respondents (n=89) make friends on face book on a regular basis while 16% (n=32) makes friends on occasionally, 30% (n=60) makes friends on face book at week end, 9.5% (n=19) never make friends on face book. This result shows that 44.5% of them are regularly using face book to make friends.

Table – 3

Rate of B.Ed., Students rediscovered old friends through face book

Responses	Frequency	Percentage (%)
Often	116	58
Rarely	74	37
Never	10	5
Total	**200**	**100**

Table – 3 shows that 58% (n=116) respondents often rediscovered old friends through face book, while 37% (n=74) of the respondents opined that they rarely rediscover old friends through face book. However, 10% (n=10) of the respondents stated that they had never rediscovered old friends through face book. More than 50% of them rediscovered old friends through face book.

Table – 4

Gratification of B.Ed., Students derive from using face book

Responses	Frequency	Percentage (%)
Collect General information	79	39.5
Academic Purpose	12	6.0
Share their achievement	109	54.5
Total	**200**	**100**

Table-4 shows that 39.5% (n=79) respondents search General Information's through face book, where as 54.5% (n=109) respondents stated that they share their achievement through face book, only 6% (n=12) respondents used to collect academic information through face book. More than 50% of them are sharing their achievement through face book.

Hypothesis.1

There is no significant difference between male and female students in their Awareness and Utilization of Face book

Table -5

Difference between male and female students in their awareness and utilization of Face Book

Variable	Male (N=58)		Female (N=142)		Cal. 't' Value	Cal. 'P' Value	Remarks at 5% & 1% Level
	Mean	SD	Mean	SD			
Awareness and Utilization of Face book	171.65	16.994	173.05	15.280	1.044	0.297	NS

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

(At 5% level of significance, the *'p'* value is 0.05)

*Since the calculated value of 't' is less than and the calculated value of '*P*' is greater than the table value for degrees of freedom at 5% level, the hypothesis is accepted.* There is no significant difference between male and female students in their Awareness and Utilization of Face book

Hypothesis.2

There is no significant difference between rural and urban students in their Awareness and Utilization of Face book

Table -6
Difference between Rural and Urban Students in their Awareness and Utilization of Face Book

Variable	Rural (N=108)		Urban (N=92)		Cal. 't' Value	Cal. 'P' Value	Remarks at 5% & 1% Level
	Mean	**SD**	**Mean**	**SD**			
Awareness and Utilization of Face book	172.00	15.356	172.96	16.228	0.737	0.461	NS

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

(At 5% level of significance, the *'p'* value is 0.05)

Since the calculated value of 't' is less than and the calculated value of '*P*' is greater than the table value for degrees of freedom at 5% level, the hypothesis is accepted. Therefore, there is no significance difference between rural and urban *in their Awareness and Utilization of Face book*

Hypothesis.3

There is no significant difference between UG and PG students in their Awareness and Utilization of Face book

Table -7
Difference between UG and PG Students in their Awareness and Utilization of Face Book

Dimensions	UG (N=129)		PG (N=71)		Cal. 't' Value	Cal. 'P' Value	Remarks at 5% &1% Level
	Mean	**SD**	**Mean**	**SD**			
Total	171.82	15.419	174.15	16.719	1.723	0.085	NS

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

(At 5% level of significance, the *'p'* value is 0.05)

Since the calculated value of 't' is less than and the calculated value of 'P*' is greater than the table value for degrees of freedom at 5% level, the hypothesis is accepted. Therefore, there is significant difference between UG and PG students in their* Awareness and Utilization of Face book

Discussion of Findings

The present study clearly shows that B.Ed., students' exposure to face book usage is high, that is 36% of students are using face book on daily basis. 44.5% of students are using face book regularly to make friends. The finding also reinforces the submission of W*ard (2013)* that the social media provide users with the opportunity to find friends, business contact and become a part of community 58% of students are using face book often. This result is similar to S*mith, Salaway and Caruso (2009).* This is also again similar to study that 54.5% of students are sharing their achievement through face book related to S*colbe (2006).* He stated that some social network sites also bring people together based on common language or shared interest, racial, sexual, religious or national based identities.

Conclusion

The study has revealed that B.Ed., student of Cuddalore District were exposed to face book and good number of them are high users. The students are using face book regularly to make friends. More than 50% of them are finding old friend through face book. More than 50% of respondents share their achievement through face book. Based on the findings of the study, the paper concludes that fifty percentages of students could use the plat form of face book for academic performance.

Recommendations

1. Face book account opening should be motivated to all students.
2. Daily usage of face book should be habitualised through free web browsing.
3. Students should be stimulated to share more on academic activities through the awareness class.
4. Seminar and workshops may be organized to make aware and safety use of face book by all students.

References

1. Greendhow, C. (2009). *Tapping the wealth of social network for professional Development: Learning and Reading with Technology*, (2009), New Haven; yale university press.
2. Heathfield, S.M.(2013).*What is Social Media*? About.com Guide
3. Leo.O.N. Edegoh., Ezekiel.S Asemah and Ita Bassey Ekanem (2013) Face book and relationship management among students of Anambra state university, Uli, Nigeria. International *Review of social sciences and Humanities, Vol 6(1)* , pp.205 – 216.
4. Smith, S.D., Salaway, G and Caruso, T.B.(2008). *The Ecar Study of undergraduate students and Information Technology,* New York, anchor Books.
5. Scolbe, I (2006). *Naked Conversation: How blogs are changing business Talk with customer,* New York, Penguin Press.
6. Subramanyam, M., Reich, S.M., Waechter, N, and Espinoza, G. (2008). Online and Offline social networks use of social networking sites. *Journal of Applied Development Psychology, Vol 29(6),* pp 420-433.
7. Trubitt, L and Overholttzer. (2013). Good Communication:The other social network for successful IT organizations, *Business Horizens, 44(6),* pp 90-101.
8. Ward, S (2013) Social media definition *Abut.com Guide*

A STUDY ON THE EFFECTIVENESS OF INSTRUCTIONAL PACKAGE ON CLIMATE CHANGE WITH REFERENCE TO SHOPPING PRACTICES AMONG B.Ed. STUDENT-TEACHERS IN BANAGLORE CITY

A. Srinivasacharlu

Abstract

Climate change has become a global threat which is affecting the very existence of life. Beside various human sectors at macro level, it is also caused due to the small activities one perform every day like shopping, moving, eating, drinking, working etc. Even though there is a boom of on-line shopping and awareness on eco-friendly shopping, yet many people in Bangalore follow unhealthy shopping practices which contribute significantly to climate change. B.Ed. student-teachers are the future secondary school teachers, who need to practice eco-friendly shopping as they bound to have vital influence on the awareness, attitude and behaviour of school students (future citizens). The study attempts to find out the effectiveness of Instructional Package on Climate Change (IPCC) with reference to shopping practices among B.Ed. student-teachers in Bangalore. Pre-test, post-test parallel group design was used. Climate Change Practices Scale (CCPS) which includes shopping practices as one of its dimensions was used to collect data which was statistically analyzed and interpreted.

Key Words: *Shopping Practices, B.Ed. student-teachers, IPCC, CMTEE and CCPS.*

Introduction

Climate change means the increase of greenhouse gases like carbon dioxide, methane, nitrous oxide, ozone etc. in the atmosphere due to human activities leading to increase in the temperature of earth which affects the very existence of life. Climate change is also caused due to the small activities one perform every day like shopping, moving, eating, drinking, working etc. Shopping is an activity in which a customer browses the available goods or services presented by retailers with the intent to purchase a suitable selection of them. Now people focus is more transferred towards online shopping which has made it easy for people to select any product online from a retailer's website and have it delivered within short time. People need not to consume their energy by going out to the stores and they can save time and cost of travelling.

Need and Importance

Even though there is a boom of on-line shopping and awareness on eco-friendly shopping, yet many people in Bangalore follow unhealthy shopping practices like travelling to other places to buy food; buying inorganically grown food; buying imported and processed food; using plastic and paper bags for grocery items; buying packaged food/products. All these activities contribute significantly to climate change. It is because greenhouse gases are produced during – travelling, food grown with inorganic fertilizers, importing and processing of food, production of plastic and paper bags. Thus there is a need to inculcate eco-friendly shopping practices among the people in Bangalore. B.Ed. student-teachers are the future secondary school teachers, who need to have eco-friendly shopping practices as they have vital influence on the awareness, attitude and behaviour of school students (future citizens). The study attempts to find out the effectiveness of IPCC with reference to shopping practices among student-teachers.

Assistant Professor, New Horizon College of Education, 100 Feet Road, Indiranagar, Bangalore-560008.
E-mail:asrinivasacharlu@gmail.com Mobile No.: 94491 34510.

Statement of the Problem

"A Study on the Effectiveness of Instructional Package on Climate Change with reference to Shopping Practices among B.Ed. Student-Teachers in Bangalore City"

Objectives

1. To develop and validate IPCC for the B.Ed. student-teachers.
2. To construct and validate the CCPS for B.Ed. student-teachers.
3. To compare the effectiveness of IPCC and Conventional Method of Teaching Environmental Education (CMTEE) in enhancing eco-friendly shopping practices among B.Ed. student-teachers.
4. To investigate interaction between 'treatment' and locality, gender and subject with reference to eco-friendly shopping practices among B.Ed. student-teachers.
5. To investigate whether the B.Ed. student-teachers sustain eco-friendly shopping practices fostered through IPCC.

Variables

- Independent Variable – IPCC
- Dependent Variable – Shopping Practices
- Moderate Variables – Gender, Discipline and Locality

Hypotheses

1. There is no significant difference between pre-test scores of E and C Groups with reference to shopping practices.
2. There is no significant difference in the effectiveness of IPCC and CMTEE with reference to shopping practices among B.Ed. student-teachers.
3. There is interaction between treatment and gender–subject, locality–subject; and locality–gender with reference to shopping practices among E group.
4. Immediate and delayed post-test scores of E group differ significantly with reference to shopping practices.

Design

Pre-test Post-test equivalent group experimental design was followed.

Tools

1. Raven's Standard Progressive Matrices Test (RSPMT)
2. CCPS consists of 100 statements grouped under 10 dimensions. The reliability coefficient is 0.87 (split half) and 0.88 (test-retest) and 0.93 (intrinsic validity). The dimension 5 covers shopping practices with 10 statements with level of responses viz. Always (5), Frequently (4), Sometimes (3), Rarely (2) and Very Rarely (1). The omitted statement is given zero.

Sampling Procedure

Multistage purposive sampling technique was employed to select student-teachers from two B.Ed. colleges in Bangalore city as Experimental (E) and Control (C) groups. RSPMT was used to obtain two matched groups (36+36) for the E and C groups.

Treatments for E and C Groups

1. IPCC: This validated package was meant for E group with duration of 40 hours.
    1. Orientation Session (1 Hour)
    2. Printed User Guide
    3. Printed SIMs

        Module 1: The Background of the Climate Change (5 Hours)

Module 2: Impacts of Climate Change (6 Hours)
Module 3: Global Fight on Climate Change (5 Hours)
Module 4: India's Fight on Climate Change (5 Hours)
Module 5: Green Solutions for Climate Change (5 Hours)
Module 6: Climate Change Education (4 Hours)
4. Documentaries and Discussion (3 Hours)
Glimpses of Climate Change –NASA (5.48 Minutes)
Impacts of Climate Change on World (2.22 Minutes)
Climate Change–Causes, Impacts and Solutions (3.55 Minutes)
An Inconvenient Truth (1 Hour and 47 Minutes)
5. Consolidating Sessions (6 Hours)

2. CMTEE: It was meant for C group with duration of 5 hours. It covers the topics like environment; environmental pollution; meaning, importance, objectives and strategies for teaching environmental education at secondary school.

Conducting of the Experiment
- E and C groups were pre-tested on shopping practices.
- E and C groups were given treatment respectively through IPCC and CMTEE.
- After the treatment, E and C groups were immediately post-tested on shopping practices.
- After a gap of 5 weeks E group was administered delayed post-test on shopping practices.

Statistical Analysis and Interpretation of Data
Hypothesis 1: There is no significant difference between pre-test scores of E and C Groups with reference to shopping practices.

Table 1
Comparison of Pre-test Scores of C and E Groups with reference to Shopping Practices

Group	N	Mean	S.D.	't' Value	'P' Value at 0.05 los
C Group	36	28.08	1.933		0.829
E Group	36	28.14	1.641	-0.218	*NS

*NS – Not Significant

The obtained 't' value -0.218 is less than tabled 't' value of 2.0281 and 'P' value 0.829 is more than tabled 'P' value 0.05 level of significance with df 35. This indicates that the E and C groups were alike with reference to shopping practices before treatment.

Hypothesis 2: There is no significant difference in the effectiveness of IPCC and CMTEE with reference to shopping practices among student-teachers.

Table 2
Comparison of Post-test Scores of C and E Groups with reference to Shopping Practices

Group	N	Mean	S.D.	't' Value	'P' Value at 0.05 los
C Group	36	28.03	1.874		0.000
E Group	36	38.83	3.402	-23.534	**S

**S – Significant

The obtained 't' value -23.5341 is more than the tabled 't' value of 2.0281 and 'P' value 0.000 is less than tabled 'P' value 0.05 level of significance with df 35. It means that E group performed better than C group with reference to eco-friendly shopping practices. Hence it may be concluded that IPCC proves to be more effective than CMTEE in increasing eco-friendly shopping practices among B.Ed. student-teachers.

Hypothesis 3 (a): There is interaction between treatment and gender–subject with reference to shopping practices among E group.

Table 3a
A two-way ANOVA of Shopping Practices in regard to interaction of treatment and Gender–Subject

Source	df	Mean Square	'F' Value	'P' Value (0.05 los)
Corrected Model	3	62.600	9.223	0.000 **S
Intercept	1	46723.355	6883.721	0.000 **S
Gender	1	64.601	9.518	0.004 **S
Subject	1	99.276	14.626	0.001 **S
Gender * Subject	1	0.299	0.044	0.835 *NS

* NS – Not Significant   ** S – Significant

The obtained 'F' value 0.044 is less than tabled 'F' value 4.00 with df 1 and 32. The obtained 'P' value 0.835 is not significant as this value is more than tabled 'P' value 0.05 level of significance. It implies that IPCC is equally effective in increasing eco-friendly shopping practices among B.Ed. student-teachers irrespective of their gender-subject.
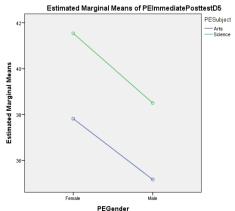
Table 3a (i)
Gender–Subject wise mean and significance values of Shopping Practices

E Group Gender	E Group Subject	Mean	df	'F' Value	'P' Value (0.05 level)
Female (24)	Arts (11)	37.818	1	12.150	0.001 **S
	Science (13)	41.538	32		
Male (12)	Arts (06)	35.167	1	4.911	0.034 **S
	Science (06)	38.500	32		

* NS – Not Significant   ** S – Significant

The obtained 'F' value 12.510 is more than tabled 'F' value 4.00 and 'P' value 0.001 is less than tabled 'P' value 0.05 level of significance with df 1 and 32. It means IPCC has more interaction with female student-teachers belonging to Science than Arts with reference to eco-friendly shopping practices. The obtained 'F' value 4.911 is more than tabled 'F' value 4.00 and 'P' value 0.034 is less than the tabled 'P' value 0.05 level of significance with df 1 and 32. It means IPCC has more interaction with male student-teachers belonging to Science than Arts with reference to eco-friendly shopping practices.

Graph 1
A two-way ANOVA of Shopping Practices among E group by the gender–subject and treatment

Hypothesis 3 (b): There is interaction between treatment and locality–subject with reference to shopping practices among E group.

Table 3b
Summary table of two-way ANOVA of Shopping Practices in regard to interaction of treatment and locality–Subject

Source	df	Mean Square	'F' Value	'P' Value (0.05 los)
Corrected Model	3	77.751	14.487	0.000 **S
Intercept	1	52549.992	9791.200	0.000 **S
Locality	1	77.881	14.511	0.001 **S
Subject	1	119.592	22.283	0.000 **S
Locality * Subject	1	25.942	4.834	0.035 **S

* NS – Not Significant   ** S – Significant

The table reveals that the obtained 'F' value 4.834 is more than tabled 'F' value 4.00 and 'P' value 0.035 is significant as this value is less than tabled 'P' value 0.05 level of significance with df 1 and 32. It implies that effect of IPCC on shopping practices among experimental group is not homogenous as there is significant interaction of IPCC and locality–subject.
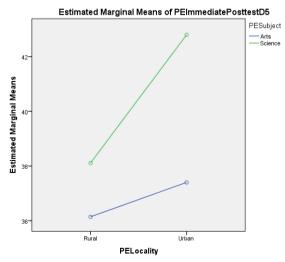
Table 3b (i)
Locality–Subject wise mean and significance values of Shopping Practices

E Group Locality	E Group Subject	Mean	df	'F' Value	'P' Value (0.05 level)
Rural (16)	Arts (07)	36.143	1	2.842	0.102 *NS
	Science (09)	38.111	32		
Urban (20)	Arts (10)	37.400	1	27.166	0.000 **S
	Science (10)	42.800	32		

*NS – Not Significant   ** S – Significant

The obtained 'F' value 2.842 is less than tabled 'F' value 4.00 and 'P' value 0.102 is more than tabled 'P' value 0.05 level of significance with df 1 and 32. It means IPCC is equally effective on rural student-teachers belonging to both Science and Arts with reference to shopping practices. However, IPCC has more interaction with urban student-teachers belonging to science than Arts with reference to shopping practices as the obtained 'F' value 27.166 is more than tabled 'F' value 4.00 and 'P' value 0.000 is less than tabled 'P' value 0.05 level of significance with df 1 and 32.

Graph 2
A two-way ANOVA of Shopping Practices among E group by the locality–subject and treatment

Hypothesis 3 (c): There is interaction between treatment and locality–gender with reference to shopping practices among E group.

Table 3(c)
Summary table of a two-way ANOVA of Shopping Practices by Locality–Gender and Treatment

Source	df	Mean Square	'F' Value	'P' Value (0.05 level)
Corrected Model	3	52.613	6.812	0.001 **S
Intercept	1	46191.750	5980.436	0.000 **S
Locality	1	34.316	4.443	0.043 **S
Gender	1	56.958	7.374	0.011 **S
Locality * Gender	1	24.203	3.134	0.086 *NS

* NS – Not Significant   ** S – Significant

The table reveals that the obtained 'F' value 3.134 is less than tabled 'F' value 4.00 and 'P' value 0.086 is not significant as this value is more than the tabled 'P' value 0.05 level of significance with df 1 and 32. It implies that IPCC is equally effective in increasing eco-friendly shopping practices among B.Ed. student-teachers irrespective of their locality-gender.
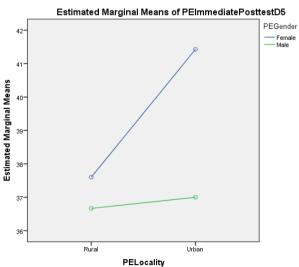
Table 3c (i)
Locality–Gender wise mean and significance values of Shopping Practices

E Group Locality	E Group Gender	Mean	df	'F' Value	'P' Value (0.05 level)
Rural (16)	Female (10)	37.600	1		0.520
	Male (06)	36.667	32	0.423	*NS
Urban (20)	Female (14)	41.429	1		0.003
	Male (06)	37.000	32	10.665	**S

*NS – Not Significant   ** S – Significant

The obtained 'F' value 0.423 is less than tabled 'F' value 4.00 and 'P' value 0.520 is more than tabled 'P' value 0.05 level of significance with df 1 and 32. It means IPCC is equally effective on both female and male student-teachers belonging to rural with reference to shopping practices. In addition, the obtained 'F' value 10.665 is more than tabled 'F' value 4.00 and 'P' value 0.003 is less than tabled 'P' value 0.05 level of significance with df 1 and 32. It means IPCC has more interaction with female student-teachers belonging to urban than male with reference to shopping practices.

Graph 3
A two-way ANOVA of Shopping Practices among E group by the locality–gender and treatment

Hypothesis 4: Immediate and delayed post-test scores of experimental group differ significantly with reference to shopping practices.

Table 4
Comparison of Immediate and Delayed Post-test of Scores of E Group with reference to Shopping Practices

E Group	N	Mean	S.D.	't' Value	P Value at 0.05 los
Immediate Post-test	36	38.83	3.402		1.000
Delayed Post-test	36	38.83	3.443	0.000	*NS

*NS – Not Significant

The obtained 't' value 0.000 is less than the tabled 't' value 2.0281 and 'P' value 1.000 is more than tabled 'P' value 0.05 level of significance with df 35. It proves that the shopping practices fostered through IPCC are sustainable by the experimental group even after five weeks.

Educational Implications

1. B.Ed. student-teachers as future secondary school teachers need to play a decisive role eco-friendly shopping practices among adolescent students who are future citizens.
2. Colleges of Education can screen documentaries on relationship between shopping and climate change for B.Ed. student-teachers.
3. There shall be a provision for a specific module on eco-friendly shopping practices as a part of teaching of Environmental Education at College of Education.
4. Center for Environmental Education, Bangalore can organize awareness programmes on eco-friendly shopping for B.Ed. student-teachers.
5. Colleges of Education can motivate student-teachers take up the campaign on eco-friendly shopping.

Limitations

1. The study was confined to B.Ed. Student-teachers studying in Bangalore.
2. The study was limited to two parallel groups from two of B.Ed. Colleges affiliated to Bangalore University.
3. The study was confined to moderate variables like gender, locality and subject.
4. Sample groups were selected from two separate Colleges of Education due to the non-availability of good number of them.

Suggestions for Further Study

1. A study can be taken up to know the effectiveness of IPCC on attitude among student-teachers towards eco-friendly shopping practices.
2. A study can be conducted with variables like marital status, qualification, religion, socio-economic status etc.
3. A survey can be undertaken to know the level of ECP among student-teachers.

Conclusion

The study has proved that IPCC is more effective than CCTEE in increasing eco-friendly shopping practices among B.Ed. student-teachers. This calls for the proper integration of IPCC in B.Ed. curriculum which also helps the student-teachers to influence secondary school students (who are future citizens) towards practicing eco-friendly shopping now and in future.

Bibliography

1. *Down to Earth*. Center for Science and Environment, New Delhi (Regular Reference).
2. Eugene Cordero, Anne Marie Todd, and Diana Abellera (2008). *A Study on Climate Change Education and the Ecological Footprint*. Bulletin of American Meteorological Society. 865-872.
3. Ravindranath M.J. (2013). Climate Change and Education for Sustainable Development in Teacher Education – What Do Teacher Educators and Teacher Trainees think? *Published in the abstracts of Indian Council for Social Science Research (ICSSR)*. 10-18.
4. Srinivasacharlu A. and Dr. M.S. Talawar (2014). Construction and Standardization of Climate Change Practices Scale (CCPS). *INIGO EDU RESEARCH Journal*. 1(2), 1-7.
5. Tse Ka Ho Alan (2013). *A Study on Students perceptions on Climate Change and Engagement in Low-Carbon Behaviours.* Hong Kong, University of Hong Kong, Faculty of Science. http://hdl.handle.net/10722/194578
6. *The Hindu Newspape*r. ISSN: 0971-751X, Chennai, India (Regular Reference).
7. UNESCO (2009). *International Seminar on Climate Change Education.* Paris.

Webliography

1. en.wikipedia.org (Accessed on 15th June, 2016)
2. www.eco-friendly-digest.com (Accessed on 16th June, 2016)
3. www.canadianliving.com *(*Accessed on 16th June*,* 2016)
4. https://storify.com (Accessed on 17th June 2016)
5. www.mashable.com (Accessed on 19th June 2016)
6. www.life.gaiam.com (Accessed on 19th June 2016)
7. https://achangingclimate.org (Accessed on 19th June 2016)
8. www.ipcc.ch (Accessed on 19th January 2016)