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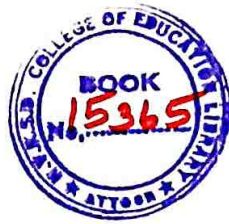
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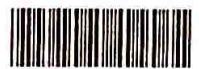
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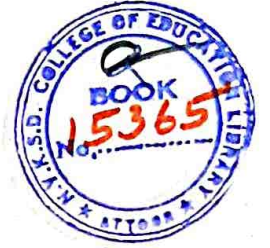


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FRONTIERS IN EDUCATION AND RESEARCH

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Dr. G. VISVANATHAN, Ph.D.,

Vice-Chancellor



27.02.2013

MESSAGE

It gives me immense pleasure in sending you this message of greetings and good wishes on the occasion of the 50th anniversary of its foundation. It is always a proud moment to celebrate such a joyful occasion. From its establishment as a pioneer College of Education in 1963, the college has grown towards greater heights in achieving its milestones in teaching and research. Its reputation as an outstanding college of education is evident from the remarkable progress it has made since its establishment. On the occasion of completing half a century of its meaningful journey for the valuable and earnest cause of education, I am extremely happy to know that, the college is striving to expand its horizon by offering Ph.D. Programme in education other than B.Ed., M.Ed. and M.Phil. courses. It is indeed a moment of pride that you have carved a niches for yourself in the field of education. I take this opportunity to extend my accolade for the commendable, concerted and dedicated effort and teamwork of N.V.K.S.D. fraternity for their praiseworthy achievements in imparting holistic education. My fervent hope and prayer is that it will continue to play a significant role in Higher Education and maintain its excellence with great distinctions in the times ahead.

My blessings and good wishes will always be with the college for all its future endeavours.

Dr. G. Visvanathan
27/2/13
(Dr.G.VISVANATHAN)

To

The Principal,
N.V.K.S.D. College of Education, (Aided)
Attoor,
Kanyakumari District -629 191.

From the Chief Editor's Desk.

Life is a journey. The path we take, what we look back on, and what we look forward to is up to us. We determine our destination. The academic year 2012-2013 is significant in the history of our institution. The year marks the Golden Jubilee of its establishment. It has been a long and enriching journey of 50 years. The objective of the institution's is best expressed through the vision: Gnana, Dharma, Sneha. Our institution facilitates improvement of quality of life for disempowered and disadvantaged through holistic, integrated and capacity – building activities. Through the years our efforts has been to Educate, Empower and Enlighten. Such an all-round system of education has helped N.V.K.S.D. family produce an ever increasing list of alumni who have made a name for themselves in diverse fields. We strive for quality a great virtue, the presence of which makes our institution a model for the whole community. Our activities have been designed to meet the needs of students, employers and the local/national/international community.

As innovative talent is the most sought after commodity in this competitive world, we build on current research initiatives ensuring quality research to uncover solutions that transform lives and communities. Becoming a part of the history and heritage of our institution is surely a sought – after challenge to every young professional seeking to grow in a profession of choice and holistic development. As we march ahead into a new dawn with renewed vigour and hope I am reminded of the lines:

We cannot know what will occur
;
Make our journey worth the taking
And pray we're wiser than we were
In the beginning
It's the beginning
Now we begin

This is a humble tribute to the founding father and successive leadership for their shared vision and the shared commitment.



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Editorial

Power of technology – sky is the limit ...

“We need technology in every classroom and in every student and teacher’s hand, because it is the pen and paper of our time, and it is the lens through which we experience much of our world.” – David Warlick

Today, technology is one of the most discussed subjects of everyday life. Facebook, Twitter, Computers, Smart phones, Tablets etc. are some of the words which are recognized by almost everyone. The ride of life has become a pleasure with its beneficial application in various fields. Technology is an increasingly important aspect of modern educational life and has dramatically revolutionized the way of thinking, working and living of modern man. It is a ubiquitous part of life. The indescribable wealth of resources and the myriads of information and knowledge it is sharing enhance and stimulate the process of learning. Technology is the need of the hour and it is an important part of society. Though technology constantly evolves, society seems to be fascinated by the eruption of its advancement. The impact of technology is so strong that it seems to be immersed in our daily lives. It brings the tools of empowerment into the hands and minds of those who use them. Technology can become the “wings” that will allow the educational world to fly farther and faster than ever before if we allow it (Jenny Arledge). Therefore, integrating technology into education is a boon and a required must for empowerment.

Education has changed drastically due to the fact that it has become virtual, technical and automated, wherein, it is difficult to isolate the impact of technology. It offers tremendous promise for enhancing the academic experience and it is like a tool to support education. Integration of technology into the curriculum revolutionizes the learning process and its outcome. It has now become an integral part of class room instruction. It replaces the status of students as just consumers and makes them innovators. "Teachers need to integrate technology seamlessly into the curriculum instead of viewing it as an add-on, an afterthought, or an event." (Heidi-Hayes Jacobs). The current trend of globalization and the growing influence of its effective integration also enhances essential life skills such as communication skill, interpersonal skill, critical thinking skill, reasoning ability, creative thinking skill, accepting personal and social responsibilities, decision making skill, cross-cultural understanding etc. Effective incorporating of technology heightens learners' self-efficacy, self-esteem, improving students attendance, promoting positive attitude, increased involvement in learning activities, better engagement and motivation, self-paced learning, better communication and interaction, freedom to be more creative and the like. It can improve reading and writing skills as well. If properly implemented,

technology will help students acquire the skills they need to survive in a complex, highly technological and knowledge-based society.

The electronic age we live in demands that education benefits learning in a manner that is in keeping and updating with the most current technological developments. Its integration in learning situations broadens the scope of education and enhances student learning. The incorporation has simplified the process of education and has made the process of teaching-learning easy and economical. Effective technological integration is achieved when the use of technology is routine, transparent and supports curricular goals. It poses an intellectual challenge to the students. With technology becoming a major part in today's education, teachers should understand the advantages of incorporating technology in their classrooms. They must learn to harness and use the valuable resources that technology offers so that learning can be successful. Hence, inclusion of technology not only ensures quality in the educational system but increases developing world skills – live, learn and work successfully. Technology helps making teaching and learning more meaningful and fun. It is high time for us to recognise the power of technology as the sky is its limit....

Editor

Dr.V.S. Mini Kumari

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PARENTAL STRESS: WILL IT INFLUENCE JOB INVOLVEMENT OF TEACHER EDUCATORS?

* Dr. K. Vijayakumari

ABSTRACT

The present social system accelerates the process of isolating a family from other family members, especially from the elders. Children of working parents in a nuclear family are alone in their home for more time compared to others. This will create some stress on the working parents which may influence their involvement in their job. This study analyses the influence of sex and parental stress on job involvement among teacher educators. Sample for the study consisted of 200 parents who are teacher educators of training colleges. Pearson 'r' and two-way ANOVA were used for analysis of the data and found that there is significant negative correlation between job involvement and parental stress; results of two-way ANOVA made the investigator conclude that male and female teachers do not differ in their job involvement, but job involvement differs significantly with different levels of parental stress. Teacher educators with high parental stress have low involvement whereas those with low parental stress have high job involvement. The interaction effect of sex and parental stress on job involvement was not significant.

INTRODUCTION

The teacher is one of the most vital elements that influences the system of education. The educational process is governed by the extent of his/

her receptivity and initiative. The teacher and the teaching process revolutionize the whole human society in the rationally desired directions. Teachers are the role models of their students and when it comes to the teacher educators, they directly influence the prospective teachers and the future citizens in the long run. The quality of the teacher training programme determines the progress of a Nation by creating committed and well equipped teachers who are capable of developing good citizens.

No educational reconstruction can take place effectively without an adequate preparation of teachers. This in turn depends upon the involvement and initiation of teacher educators in their job.

Job involvement is an important aspect related to any job. The teaching profession is not an exception. The wholehearted involvement of teacher educators in the field of education will be an inspiring force for the coming generation. Personal as well as social factors influence one's involvement in his/her profession. It is observed in many research studies that the performance drops off when the stress is raised to high levels (Bhatt, 1997; Gupta & Kulkarni, 2001). Teaching is a profession in which human interactions are at the most which may cause many stressful situations. Now a days the concept of large family has changed to small ones and at the same

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time, most of the parents are employed. The present social system accelerates the process of isolating a family from other family members, especially from the elders. Children of working parents in a nuclear family are alone in their home for more time compared to others. Working parents are often worried about the activity of their children during their absence from home (Barnett & Garies, 2006). In the present complex society, unsupervised children and teenagers are at high risk for juvenile crime, sexual abuse and victimization. This causes much stress to parents especially those who are employed. This condition is applicable for teacher educators also. The stereotypical roles for male and female are changing and both mother and father are curious about their children's protection and development. Hence an analysis of the relation of sex and parental stress on job involvement of teacher educators will help the improvement of the performance in their profession which in turn will improve the education system as a whole.

OBJECTIVES

- To study whether there is significant relationship between parental stress and job involvement of teacher educators.
- To study whether the main and interaction effect of sex and parental stress on job involvement are significant.

HYPOTHESES

Following are the hypotheses of the study

- Job involvement will not be significantly related to parental stress.
- The main effects of sex and parental stress on job involvement of teacher educators will not be significant.
- The interaction effect of sex and parental stress on job involvement of teacher educators will not be significant.

METHOD

Survey method was used for the present study.

SAMPLE

The study was conducted on a sample of 200 teacher educators of B.Ed colleges who are parents also. Stratified sampling technique was used for selecting the sample from 14 districts of Kerala state.

TOOLS

The variable job involvement was measured using Job Involvement Scale (Vijayakumari & Sreelatha, 2007) and parental stress was measured through Parental Stress Scale (Manikandan & Vijayakumari, 2006).

STATISTICAL TECHNIQUES

For the analysis of collected data Pearson's Product moment coefficient of correlation and Two-way ANOVA were used.

RESULTS AND DISCUSSION

In order to test the first hypothesis, Pearson's coefficient of correlation (r) was calculated and the value obtained is -0.53. Sign of the correlation coefficient obtained is negative indicating a negative relationship between the variables. The numerical value indicates that the relation between the variables is moderate. The value is higher than that required for significance at 0.01 level and hence the relationship is significant. This indicates that the variable job involvement has a negative, moderate relationship with parental stress. Shared variance is 28.09 which can be interpreted as 28 percent of variation in job involvement can be predicted by the variation in parental stress.

To test the second and third hypotheses, Two-way ANOVA was done. The results of ANOVA are summarized in table 1.

Table 1
Results of ANOVA (2 x 3) of Job involvement by Sex and Parental Stress

Source of Variation	Sum of Squares	df	Mean Sum of Squares	F - Value
Sex	104.26	1	104.26	0.74
Parental Stress	8463.38	2	4231.69	30.16**
Sex X Parental Stress	3.86	2	1.94	0.01
Residual	27220.21	194	140.31	

** $p \leq 0.01$

The F value obtained for the main effect of sex on job involvement is 0.74 which is far less than the value required for significance at 0.05 level for $df(1, 194)$. This indicates that, the main effect of sex on job involvement is not significant at 0.05 level. That is job involvement does not differ significantly for different levels of sex – male and female teacher educators.

The interaction effect of sex and parental stress on job involvement is not significant at 0.05 level as the F-value obtained is less than the value required for significance for $df(2,194)$. That is, the influence of sex on job involvement does not vary at different levels of parental stress or the influence of parental stress on job involvement does not vary at different levels of sex.

In the case of parental stress, F-value is 30.16 which indicates a significant main effect on the variable, job involvement (0.01 level). That is, job involvement varies according to the level of parental stress- Low, Average and High.

As the main effect of parental stress on job involvement is found to be significant at 0.01 level, One-way ANOVA and Scheffe test were done as follow up. The results obtained are summarized as Table 2 and Table 3.

Table 2
Results of One-Way ANOVA of Job involvement for Parental Stress

Source of Variation	Sum of Squares	df	Mean Sum of Squares	F - Value
Between groups	8861.13	2	4430.57	31.94**
With groups	27324.87	197	138.1	
Total	36186	199		

** $p \leq 0.01$

Table 3
Comparison of means scores (Scheffe's procedure) on Job involvement

Groups	Mean differences
Low- & Average Parental Stress	11.13**
Low- & High Parental Stress	16.73**
Average- & High Parental Stress	5.59*

* $p \leq 0.05$, ** $p \leq 0.01$

Results of One-way ANOVA and Scheffe test revealed that job involvement of Low and Average; Low and High Parental stress groups differ significantly (both differences significant at 0.01 level). The two groups of teacher educators with Average and High parental stress differ in their job involvement and the difference is significant at 0.05 level.

The sign of the mean differences obtained indicates a high job involvement for low parental stress group and a low level job involvement for a high parental stress group. That is job involvement decreases as the parental stress increases.

FINDINGS

- Job involvement of teacher educators is significantly and moderately related to parental stress and the relationship is negative.
- Job involvement does not vary among male and female teacher educators.
- As the parental stress increases, job involvement of teacher educators decreases. That is job involvement of teacher educators with low parental stress is higher than that of high and average parental stress. Similarly job involvement of teacher educators with average parental stress is higher than that of teacher educators with high parental stress.

IMPLICATIONS

Teacher educators must be provided with proper training programmes to have positive impact on their functioning, help them reduce their stress and involve them fully in their profession. Job involvement of teacher educators is found to be negatively related to parental stress. They are persuaded to divert their attention from academic matters to the house hold matters. Both male and

female teachers face the problem of parental stress. Therefore, they must frame their mind to accept the importance of the dual roles simultaneously. Considering the dual nature of the role played by teachers, it is better to rearrange the work pattern. Moreover various stress management techniques may be introduced as practical exercise in teacher education curriculum which will help them in the future. These techniques will surely help them to develop a sound personality which will bring about a desirable behaviour among the teacher educators, and will bring about desired changes in the future generation in the long run.

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A STUDY ON THE ATTITUDE OF STUDENT TEACHERS TOWARDS THE B.ED PROGRAMME OF INDIRA GANDHI NATIONAL OPEN UNIVERSITY

B.K.Asha* R.L.Bindu**

ABSTRACT

Of late many of the Universities have started offering distance learning programmes, of which Indira Gandhi National Open University (IGNOU) is the largest University in the world with international jurisdiction. The professed aim of IGNOU is to provide excellent quality education in all the different disciplines of study available including the B.Ed. programme. The present study was conducted to assess the level of attitude of student teachers with regard to their different characteristics. The method adopted by the researcher for the present study is survey technique. The data have been analysed with respect to different background variables and findings have been arrived at. The present study reveals that the level of attitude towards IGNOU B.Ed. programme of student teachers is not affected considerably by their background variables.

INTRODUCTION

With the establishment of first Open University in UK in 1969 and in Andhra Pradesh of India in 1982, the concept of Open Universities marked an evolutionary innovation in the educational scenario. Presently India possesses 15 Open Universities, among which the Indira Gandhi National Open University (IGNOU) is the largest in enrolment of learners and coverage of area. IGNOU was

established by an act of Parliament in 20th September, 1985. It takes the responsibility of providing the access to higher education to the people especially to whom access for the formal system of education is difficult or impossible. Every year about three lakhs of learners are newly admitted in this University for various programmes and about 300 academic programmes in different disciplines are offered by this University.

IGNOU also offers teacher education programmes such as B.Ed., M.Ed. etc for developing quality and strength of teacher education in India. It provides B.Ed for non-professional teachers and professional teachers with lower category of qualification such as D.T.Ed. Though the teachers with different age group, experience and mental capabilities are enrolling in B.Ed. programme of IGNOU, it is very much important about their attitude towards the programme in which they have enrolled. A strong, positive attitude, finally, is most effective when it is self-generated. People whose outlook on life is, by contrast, basically negative can actually attract failure. The stronger a person's attitude, whether positive or negative, the stronger the magnetic field of energy it generates, drawing good or bad fortune to oneself.

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** Associate Professor, Department of Education, University of Kerala, Thycaud, Thiruvananthapuram – 695014.

SIGNIFICANCE OF THE STUDY

Merely to stumble onto success, like someone finding buried treasure in the garden of his ancestral home, is delusion's way of softening one up for another plunge into failure. Above all, true success means self-mastery (Bildikar, 1998). The success of distance learning programme entirely depends upon the background characteristics, expectations and competencies of the learner and it is entirely individual centered. The attitude of the individual towards the programme makes the whole system smooth and effective. The history of distance learning or education through distance mode in India goes way back when the universities started offering education through distance mode. Nowadays many of the universities have started offering distance learning programmes through which mass population enriches their educational status (Haughton, 1997).

Due to the necessity of the Government and thirst of the individual it seems that a considerable category of teachers are doing their B.Ed. programme through distance learning in IGNOU. Hence it is appropriate to diagnose the attitude of student teachers to find the limitations of sources if any and ways to improve them. In this context, the researchers feel that a study on the attitude of student teachers towards their B.Ed programmes through IGNOU is significant/helpful towards identifying their future perspectives and competencies.

OBJECTIVES

The objectives of the present study are:

- To study the level of attitude of student teachers towards IGNOU B.Ed. programme
- To study the significant difference if any between the student teachers in their level of attitude towards IGNOU B.Ed. programme with regard to their gender, age, marital status, locale, experience, subject and nature of management.

HYPOTHESES

Hypotheses of this study are:

- The level of attitude towards IGNOU B.Ed. programme of student teachers is average.
- There is no significant difference among student teachers in their level of attitude towards IGNOU B.Ed. programme with regard to their gender, marital status, and locale.
- There is no significant difference among student teachers in their level of attitude towards IGNOU B.Ed. programme with regard to their age, experience, subject and nature of management.

METHOD

The method adopted for the present study is survey method.

SAMPLE

Random sampling technique was adopted to choose the sample of 480 student teachers.

TOOL

The tool used in the present study to collect the data is Attitude Scale for Student Teachers which was prepared and validated by the researchers. The tool consisted of 22 items. Each item has three options Agree, Undecided, Disagree, among which the candidates have to opt any one. Scorings were done as 3, 2 and 1 and in reverse for negative items

STATISTICAL TECHNIQUES

Mean, Standard Deviation, t-test and ANOVA were used to analyse the data collected.

ANALYSIS OF DATA

Hypothesis 1: The level of attitude towards IGNOU B.Ed programme of student teachers is average.

Table 1**Level of attitude towards IGNOU B.Ed. programme of student teachers**

Number	Negative		Neutral		Positive	
	No	%	No	%	No	%
480	133	27.7	191	39.8	156	32.5

From the table it is clear that more than one third (39.8%) of the student teachers seem to have neutral attitude towards the IGNOU B.Ed. programme, whereas 32.5% and 27.7% of them are found to have positive and negative attitude towards IGNOU B.Ed programme respectively.

Hypothesis 2: There is no significant difference in the level of attitude towards IGNOU B.Ed. programme of student teachers with regard to their gender, marital status, and locale.

Table 2**The Mean, Standard Deviation, and 't' value of attitude towards IGNOU B.Ed. programme of student teachers with regard to selected background variables**

Background Variables		No.	Mean	S.D	t value	'p' value	Result
Gender	Male	116	61.85	4.13	1.87	0.06	NS
	Female	364	62.66	4.06			
Marital Status	Married	452	62.51	4.08	0.91	0.36	NS
	Unmarried	28	61.78	4.13			
Locality	Rural	192	62.78	4.09	1.38	0.16	NS
	Urban	288	62.26	4.08			

NS – Not Significant

From the above table it is clear that the 'p' values are less than 0.05, the proposed hypothesis is accepted. Hence, there is no significant difference among the student teachers in the level of attitude towards IGNOU B.Ed. programme in relation to their gender, marital status, and locale.

Hypothesis 3: There is no significant difference in the level of attitude towards IGNOU B.Ed. programme of student teachers with regard to their age, experience, subject and nature of management.

Table 3
F value of attitude towards IGNOU B.Ed programme of student teachers with regard to the selected background variables

Variable	Source of variance	Df	Sum of squares	Mean square	F ratio	'p' value	Result
Age	Between	2	29.20	14.60	0.87	0.41	NS
	within	477	7986.38	16.74			
Experience	Between	2	10.39	5.19	0.31	0.73	NS
	Within	477	8005.19	16.78			
Subject	Between	2	63.95	31.97	1.91	0.14	NS
	Within	477	7951.26	16.67			
Nature of Management	Between	2	14.37	7.18	0.42	0.65	NS
	Within	477	8001.27	16.77			

NS – Not Significant

From the above table it is clear that the 'p' values are less than the 0.05, the proposed hypothesis is accepted. Hence, there is no significant difference among the student teachers in their attitude towards IGNOU B.Ed. programme in terms of their age, experience, subject and nature of management.

FINDINGS

Most of the first year student teachers seem to have moderate level of attitude towards IGNOU B.Ed. programme. The findings of the study clearly indicate that there is no significant difference among the students in the level of attitude towards IGNOU B.Ed. programme in terms of their gender, locale, age, experience, subject, nature of management and marital status.

The results of the present study clearly reveal that the level of attitude towards IGNOU B.Ed. programme of student teachers is not affected severely by their background variables like gender, age, experience, subject, nature of management and

marital status. It implies that the attitude of student teachers towards IGNOU B.Ed programme is not determined or influenced by general exposures but decided by their personal experiences and situations they have perceived from individual environments (Jackson, 1986). It is very difficult to choose a better environment that may develop the attitude of student teachers towards their B.Ed. programme.

It is observed that many distance learners themselves have a low opinion of the value of distance learning programmes including B.Ed as compared to the exposure received by the learners is not comparable with the regular course learners. It implies that the Programme-in-Charge of the Centre concerned should put more efforts to improve the attitude of the learners of the programme for enriching their knowledge and skills by providing various inputs like the workshop and counselling classes being arranged by the university. Apart from all other factors,

exposure and contact developed by the authorities of the Study Centre and the Regional Centre may help a lot to improve the attitude, because direct experiences help to shape the attitude positively than the theoretical learning (Kathaleen, 2001).

More number of guest lectures may be arranged with the subject experts in the Study Centres to help them to have positive attitude towards the programme. Results of the study proved that the effectiveness of distance learning programme is similar to that of regular programme (Mehrotra, 1968). The facilities available in the Study Centres and the Regional Centres should be improved so as to satisfy the needs of the learners. More academic assistance may be given by the teacher educators regarding the allocation of teaching schools and preparation of the teaching aids.

More care may be shown towards the preparation of programme materials. The library facilities of the study centres also can be enhanced with easy access to learners (Singh, 1990).

CONCLUSION

Attitude is the factor which decides the effectiveness of any phenomenon related to human beings. In many of the cases, the results or effectiveness of an activity may be influenced by the attitude of the learners. Contact classes can be made more useful by conducting the classes more

effectively and appropriately for the learners. The attitude of the learners cannot be expected to modify over night; rather a tedious effort has to be placed continuously for long time which can ultimately develop better attitude which may improve the utility of the programme. The authorities in every stage related to the programme should contribute to their maximum so that the programme will be more useful.

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TEACHING COMPETENCE OF ELEMENTARY SCHOOL TEACHERS IN RELATION TO THEIR TEACHER BURNOUT

* Binulal. KR

ABSTRACT

The present study investigates the relationship between teaching competence and teacher burnout of elementary school teachers based on gender, marital status, type of management, educational qualification and teaching experience. Here the investigator used survey method to collect data from a sample of 180 elementary school teachers. According to the results of the study, there exists a negative relationship between teaching competence and teacher burnout. More over it is observed that the findings of the study hold implications for the professional development of teachers.

INTRODUCTION

Teaching competence is usually used to refer to an integrated cluster of knowledge, skills and attitudes which are necessary to fulfil specific tasks at a required level. It is also believed that teachers have the prerequisite knowledge of the subjects they teach as well as the skills to teach effectively and with confidence. Teaching competence also includes having access to effective and current instructional strategies and skills enabling students to engage with and achieve expected standards of a course. Students need mentally and physically fit adults who can guide them as they find their way in our world. Burned out

teachers suffer from irritability (Huberman, 1993), and they are found to be responsible for student apathy. Many studies on burnout stress a behavioural aspect of the syndrome while many others stress a mental aspect. Oranje (2001) divides studies on burnout into three categories. First, burnout is considered to be a coping problem. i.e. burnout stems from the negative outcome of an individual's judgment of his own abilities in relation to real or imagined stressors in their environment. Second, some studies view burnout as a state of both physical and mental exhaustion that strikes the individuals involved for a long time in situations that exact a heavy emotional toll. Third, some studies take the view that it is the environment that produces stressors responsible for the onset of burnout. Examples of such environmental stressors are the social relationships of the teachers with students, colleagues and principals and the organizational working circumstances. Maslach and Jackson defined burnout as three-dimensional syndrome consisting of emotional exhaustion, low personal accomplishment and depersonalisation. Particularly, professionals working in human services e.g. teachers, physicians, social workers and nurses are vulnerable to burnout. Here emotional exhaustion refers to the feelings of being emotionally drained by intense contact with other people; depersonalisation

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refers to the negative attitude or callous responses toward people; and reduced personal accomplishment refers to decline in one's sense of competence and of successful achievement in working with people. Teachers' burnout has increasingly received recognition as a widespread problem than any other occupational group. Singh and Billingsley (1996) found factors such as stress, burnout, work overload, and job dissatisfaction contribute to teacher attrition while factors such as, administrative support, reasonable role expectations, and decreased workplace stress contribute to teachers' intention to stay in teaching.

Hence the present study is an attempt to find out the relationship between teaching competence and teacher burnout among elementary school teachers.

OBJECTIVES

- To compare the mean scores of teaching competence of elementary school teachers based on gender, marital status, type of management, educational qualification and teaching experience.
- To compare the mean scores of teacher burnout of elementary school teachers based on gender, marital status, type of management, educational qualification and teaching experience.
- To study whether there exists any significant relationship between teaching competence and teacher burnout of the total sample and sub samples based on gender, marital status, type of management, educational qualification and teaching experience.

HYPOTHESES

- There is no significant difference in the mean scores of teaching competence for the subsamples based on gender, marital status, type of management, educational qualification and teaching experience.
- There is no significant difference in the mean scores of teacher burnout for the subsamples based on gender, marital status, type of management, educational qualification and teaching experience.
- There is no significant relationship between teaching competence and teacher burnout for the total sample and sub samples based on gender, marital status, type of management, educational qualification and teaching experience.

METHOD

Survey method was used by the investigator in order to collect necessary data for the present study.

SAMPLE

The sample consisted of 180 elementary school teachers drawn from Kollam district of Kerala on the basis of stratified random sampling method.

TOOLS

The study employed Maslach Burnout inventory for teachers and a scale of Teaching Competence (prepared by the investigator) as tools.

STATISTICAL TECHNIQUES

To analyse the data mean, standard deviation, t-test and Pearson correlation were used.

RESULTS AND DISCUSSION

The collected data were subjected to statistical analysis to arrive at findings and conclusions.

Table 1
Test of significance of difference between the mean scores of teaching competence of elementary school teachers based on gender, marital status, type of management, educational qualification and teaching experience

Subsamples based on		N	Mean	SD	't' value	Remarks
Gender	Male	72	32.42	3.42	1.23	NS
	Female	108	31.74	4.03		
Marital Status	Unmarried	66	31.90	3.42	0.326	NS
	Married	114	32.08	4.02		
Type of Management	Govt.	80	33.13	3.49	3.63	0.01
	Private	100	31.12	3.82		
Educational Qualification	UG	56	31.82	3.73	0.464	NS
	PG	124	32.10	3.85		
Teaching Experience	Above 5yrs	102	31.73	3.96	1.159	NS
	Below 5yrs	78	32.38	3.58		

NS = Not significant

From table 1 it can be concluded that the difference between the mean scores of teaching competence with respect to the subsamples based on gender ($t=1.23$, $p>0.05$), marital status ($t=0.326$, $p>0.05$), educational qualification ($t=0.464$, $p>0.05$) and teaching experience ($t=1.159$, $p>0.05$) are not significant at any level. But in the case of type of management, there is significant difference between the teachers working in government and private schools ($t=3.363$). From the mean scores it is observed that government school teachers are more competent in teaching competence than private school teachers.

Table 2

Test of significance of difference between the mean scores of teacher burnout of elementary school teachers based on gender, marital status, type of management, educational qualification and teaching experience.

Subsamples based on		N	Mean	SD	't' value	Remarks
Gender	Male	72	17.72	3.55	0.029	NS
	Female	108	17.74	3.27		
Marital Status	Unmarried	66	19.02	3.65	4.07	0.01
	Married	114	16.98	2.97		
Type of Management	Govt.	80	17.22	3.24	1.83	NS
	Private	100	18.14	3.44		
Educational Qualification	UG	56	17.99	3.83	0.683	NS
	PG	124	17.61	3.16		
Teaching Experience	Above 5yrs	102	18.14	3.37	1.86	NS
	Below 5yrs	78	17.20	3.33		

NS = Not significant

From table 2 it is concluded that the difference between the mean scores of teacher burnout with respect to the subsamples based on gender ($t=0.029$), type of management ($t=1.83$), educational qualification ($t=0.683$) and teaching experience ($t=1.86$) are not significant at any level. But in the case of marital status, there is significant difference between the unmarried and married teachers ($t=4.07$). From the mean scores it is observed that the level of teacher burnout is higher for unmarried teachers ($M=19.02$) than the married ($M=16.98$).

Table 3
Relationship between teaching competence and teacher burnout

Groups	N	Correlation Coefficient	Level of Significance
Total	180	-0.335	0.01
Male	72	-0.426	0.01
Female	108	-0.285	0.01
Unmarried	66	-0.291	0.05
Married	114	-0.384	0.01
Govt.	80	-0.252	0.05
Private	100	-0.355	0.01
UG	56	-0.475	0.01
PG	124	-0.263	0.01
Above 5yrs	102	-0.326	0.01
Below 5yrs	78	-0.330	0.01

From table 3, it is found that the coefficient of correlation between the scores of teaching competence and teacher burnout for the total sample and the subsamples is significant. (For total sample, male, female, married, private, experience above 5yrs and below 5yrs at 0.01 level and unmarried and government at 0.05 level). Also it is clear that there exists a negative correlation between teaching competence and teacher burnout. It means teachers with less burnout score are highly competent in teaching and teachers with high burnout score have less teaching competence.

FINDINGS

The following are the major findings of the study.

➤ There is no significant difference in the mean scores of teaching competence with respect to gender, marital status, educational qualification

and teaching experience. In the case of type of management their exists significant difference. From the mean scores it is found that government teachers are more competent in teaching than private school teachers.

➤ There is no significant difference in the mean scores of teacher burnout with respect to gender, type of management, educational qualification and teaching experience. In the case of marital status there exists significant difference. From the mean scores it is found that the level of teacher burnout is higher for unmarried teachers than the married.

➤ There exists negative significant correlation between teaching competence and teacher burnout for total sample and the subsamples based on gender, marital status, type of

management, educational qualification and teaching experience.

IMPLICATIONS

It is essential to point out the implications of the present study for the professional development and overall well being of teachers and to make action plans for improving the working conditions of teachers and other staff members at schools. The results of the present study emphasize the need for intervention programmes that focus on pupil interaction, reducing high workloads and improving school climate.

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LEARNING STYLE PREFERENCES OF X STANDARD STUDENTS

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ABSTRACT

This study attempts to examine the learning styles of X standard students. 'Learning style Inventory' constructed and validated by the investigator was used to collect the data. The sample consists of 400 X standard students from eight schools of Thiruvananthapuram District. The study revealed that the majority of X standard students prefer to have auditory and visual learning styles.

INTRODUCTION

The ways that people go about gathering and interpreting information can be surprisingly different. These preferences are referred to as learning styles. In the view of Sarasin(1998) learning style refers to the preference or predisposition of an individual to perceive and process information in a particular way or combination of ways. The most commonly used categories of learning styles are based on sensory preferences namely auditory, visual, tactile and kinesthetic. Auditory learners learn best by listening to verbal instruction. Visual learners may be receptive to visual forms of information. Tactile and kinesthetic learners learn best by touching and manipulating objects.

Learning styles have a significant contribution to the academic performance of students. If the students are able to use their natural style, they may find learning much easier and quicker. Awareness of one's learning style will help a person to maximize his learning.

The teacher's awareness of the students' learning style will help him/ her to adopt teaching

strategies that would maximize the students' learning potential. When mismatches exist between learning styles of majority of students in a class and the teaching style of the teacher, the students may get bored and become inattentive in class and perform poorly in tests.

Teachers should know the learning styles of each and every student. Teachers should make the child aware about their learning styles and thus to maximize their academic performance. Hence this study is conducted to find out the learning style preferences of x standard students.

OBJECTIVES

- To study the prominent learning styles adopted by X standard students.
- To study whether there is any significant differences in the learning style preferences of X standard students with respect to the selected background variables namely a) gender b) Type of management c) Locale and d) medium of instruction

METHOD

The investigator adopted the normative survey method for the study.

SAMPLE

The population constitutes the X standard students of Thiruvananthapuram District of Kerala State. The sample consists of 400 X standard students selected by multi stage random sampling technique.

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TOOL

Learning style Inventory constructed and validated by the investigator was used to collect the data.

STATISTICAL TECHNIQUES

Percentage and t- test were used for statistical analysis

RESULTS AND DISCUSSION

1. Percentage wise analysis of Learning Style Preferences of X standard students

Table 1
Learning Style Preferences of X standard students

Learning style	Count	Percentage
Auditory	180	45
Visual	150	37.5
Kinesthetic	70	17.5

Percentage wise analysis of learning styles of X standard students showed that 45% of X standard students have the auditory learning style and 37.5% of X standard students prefer visual learning style. Only 17.5% of X standard students prefer Kinesthetic learning style.

2. Analysis of Learning Style Scores using t- test

Table 2
Gender and Learning Style

Learning Style	Boys		Girls		t-value	Level of significance
	Mean	S.D	Mean	S.D		
Auditory	20.2	4.7	22.9	3.59	6.43	0.01
Visual	18.7	4.4	20.4	3.25	4.44	0.01
Kinesthetic	19.8	4.8	21.9	4.11	4.63	0.01

From table 2, it is clear that significant difference exists between the learning style of boys and girls with regard to Auditory, Visual and Kinesthetic learning styles. Mean values show that girls prefer auditory, visual and kinesthetic styles compared to boys.

Table 3
Type of Management and Learning Styles

Learning Style	Government		Private		t-value	Level of Significance
	Mean	S.D	Mean	S.D		
Auditory	21.3	4.3	22.4	4.22	2.57	0.05
Visual	19.3	3.8	20.2	3.95	2.14	0.05
Kinesthetic	20.9	4.6	21.0	4.48	0.21	NS

Results in table 3 show that significant difference exists between government and private school students in their auditory and visual learning style preferences. The Mean values show that scores regarding auditory style is significantly high among private school students when compared to government school students, similar result can be observed for visual learning style also. No significant difference was noted between government and private school students in their kinesthetic learning style.

Table 4
Locale and Learning style Preferences

Learning Style	Rural		Urban		t-value	Level of significance
	Mean	S.D	Mean	S.D		
Auditory	20.7	4.8	22.5	3.73	4.16	0.01
Visual	19.1	4.0	20.0	3.75	2.53	0.05
Kinesthetic	19.5	4.5	22.0	4.28	5.71	0.01

From table 4, it is clear that there exists significant difference between rural and urban school students in their learning style preferences. Mean values show that urban students scored high in learning style compared to rural students.

Table.5
Medium of Instruction and Learning Styles

Learning Style	Malayalam medium		English Medium		t-value	Level of Significance
	Mean	S.D	Mean	S.D		
Auditory	20.7	4.9	22.25	3.6	4.3	0.01
Visual	19.4	3.63	19.9	4.2	1.41	NS
Kinesthetic	19.9	4.7	21.7	3.27	3.92	0.01

Table 5 show that significant difference exists between Malayalam and English medium students in their auditory and kinesthetic learning styles. Mean values show that English medium students score high in learning styles compared to Malayalam medium students.

FINDINGS

- Auditory learning style is adopted by 45 percent of X standard students and Visual learning style by 37.5 percent and only 17.5 percent adopt kinesthetic learning style.
- Gender and locale of the school have influence on the learning styles of X standard students.
- All the sub samples namely boys , girls, government school students, private school students, rural, urban , Malayalam and English medium students adopt auditory learning styles.

CONCLUSION

Present investigation reveals that a striking difference exists in the learning style preferences of X standard students. These differences could be attributable to the children's learning style (Snider 1990). So students if taught in their preferred learning style will yield maximum achievement. Teachers should design teaching methods and experiences that match students' learning styles. The study revealed that the majority of X standard students prefer auditory and visual learning styles. So teaching should be aided with audio visual materials. Proper training should be given to the students for developing their listening and observation skills.

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EFFECT OF SCHOOL ENVIRONMENT ON ACADEMIC ACHIEVEMENT OF SECONDARY SCHOOL STUDENTS

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ABSTRACT

Education is a process of self realization and involves the bringing out of the students' own intellectual and moral capacities to their highest possible potential. Environmental factors help an individual to form and develop various attitudes. The school is a socio-psychological system. School environment and academic achievement of students are the prime concern of teachers, educators and psychologists. The present study is an attempt to find out the effect of school environment on academic achievement. In this modern age achievement is considered to be a key factor for personal progress. Survey method was adopted in this study. The tool used in this study was School Environment Inventory. Quarterly examination marks were taken as a measure of achievement. The statistical techniques employed were t-test and correlation. Findings revealed that school environment and academic achievement of secondary school students was significantly and positively correlated with each other.

INTRODUCTION

The way to improve education is through a healthy environment at each school

– John Goodlad Denver, 1986

Education is the dynamic force in the life of an individual influencing his physical, mental, emotional and social development. It is the ability to meet life's

situations. Education of humans depends on the environment that they enjoy. Learning is dependent on experience and largely determined by the nature of the learner's environment. So the environment provides the network of forces and factors which make the individual learn new things. The environmental forces guide human development, for better or worse, throughout life (Coon & Mitter, 2007: 86). For generating healthy and vibrant academic environment, mobility in the academic profession has also to be consciously encouraged in schools. School as a human organization is a social system with its formal and informal structure interacting with each other (Mohan & Ashok, 2011).

School climate refers to the social and environmental factors that contribute to one's subjective experience of a school: the tone in, and attitudes toward, a school. It is the physical and psychological aspects of the school that provide the preconditions necessary for teaching and learning to take place (Tableman, 2004). School climate is defined as the patterns of social interaction that characterises an organization (Halpin & Croft, 1963). It refers to the quality and character of school life. It is based on patterns of school life, experience, norms, goals, values, interpersonal relationships, teaching learning, leadership practices and organisational structures. A healthy school environment can directly improve students' health and effective learning and

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thereby contribute to their development as skilled and productive members of society. The environment of school supports learning and also focuses on the behaviour of students. Feeling safe – socially, intellectually and physically is a fundamental need. Feeling safe in school powerfully promotes student learning and healthy development (Devine & Cohen, 2007).

Academic achievement is the major concern of educational policy makers of every country. It is the prime concern of all types of educational endeavours. Over the last two decades, however, the role of social and emotional development in the educational process has been acknowledged (Fopiano & Haynes, 2001). Research has demonstrated that school climate is an integral part of effective schools. The level of achievement of a student at any stage depends on the extent to which his natural potentialities have developed. To a great extent, the achievements of students affect their future success and performance. Particularly at the secondary school stage, great emphasis is laid on the achievement. Hence the investigators decided to conduct this study.

OBJECTIVES

The following are the major objectives of the study.

- To prepare a School Environment Inventory.
- To study the mean difference if any, between male and female secondary school students on school environment and academic achievement.
- To study the mean difference if any, between urban and rural secondary school students on school environment and academic achievement.
- To study the mean difference if any among different religious groups of secondary school students on school environment and academic achievement.
- To study the mean difference if any, between the government and private secondary school

students on school environment and academic achievement.

- To study the relationship between the school environment and academic achievement of secondary school students.

HYPOTHESES

The following null hypotheses have been formulated, giving due recognition to the objectives of the investigation.

- There is no significant difference between male and female secondary school students on school environment.
- There is no significant difference between rural and urban secondary school students on school environment.
- There is no significant difference among Hindu, Christian and Muslim secondary school students on school environment.
- There is no significant difference between government and private secondary school students with regard to school environment.
- There is no significant difference between the male and female secondary school students on academic achievement.
- There is no significant difference between the rural and urban secondary school students on academic achievement.
- There is no significant difference between the Hindu, Christian and Muslim secondary school students on academic achievement.
- There is no significant difference between the government and private secondary school students on academic achievement.
- There is no significant correlation between school environment and academic achievement of secondary school students.

METHOD

The investigator adopted the normative survey method for conducting the study.

SAMPLE

The present study was conducted on a sample of 400 secondary school students.

TOOL

Personal Information Schedule and School Environment Inventory (SEI) were the tools used in

RESULT AND DISCUSSION

the study. SEI consisted of 40 questions under the various aspects of school environment. The validity of the tool was established with the help of experts and the reliability of the tool was found to be 0.76. Total marks obtained in the quarterly examination were taken as achievement scores.

STATISTICAL TECHNIQUES

t- test and coefficient of correlation were the major statistical techniques used.

Table 1
Results of Test of Significance for the School Environment Scores of Secondary School Students with regard to the Background Variables

Variable		N	Mean	SD	t- value	Level of Significance
Sex	Male	200	18.02	2.98	3.39	0.01
	Female	200	15.07	3.02		
Locality	Rural	200	15.73	3.51	4.81	0.01
	Urban	200	14.18	2.92		
Religion	Hindu	173	15.76	3.53	4.47	0.01
	Christian	176	14.18	2.92		
	Christian	176	14.18	2.92	4.65	0.01
	Muslim	051	12.13	2.73		
	Hindu	173	15.76	3.53	7.78	0.01
	Muslim	051	12.13	2.73		
Type of Management	Government	205	15.81	3.52	5.26	0.01
	Private	195	14.13	2.89		

Table 2
Results of Test of Significance for the Academic Achievement Scores of Secondary School Students with regard to the Background Variables

Variable		N	Mean	SD	t- value	Level of Significance
Sex	Male	200	64.08	12.34	4.20	0.01
	Female	200	68.94	14.63		
Locality	Rural	200	63.12	12.81	1.48	NS
	Urban	200	65.14	14.51		
Religion	Hindu	173	68.58	16.09	4.95	0.01
	Christian	176	60.78	13.22		
	Christian	176	60.58	13.22	1.06	NS
	Muslim	051	62.78	12.91		
	Hindu	173	68.58	16.09	2.60	0.01
	Muslim	051	62.78	12.91		
Type of Management	Government	205	64.73	14.53	2.75	0.01
	Private	195	68.71	13.36		

Table 3
Correlation between School Environment and Academic Achievement of Secondary School Students

Variable	N	r	Level of Significance
School Environment	200	0.42	0.05
Academic Achievement	200		

FINDINGS

Based on the results shown in Table 1,2 and 3 the following findings are derived.

- The male and female students significantly differ in their school environment.
- The rural and urban students significantly differ in their school environment. Rural students have healthier school environment than urban students.
- The Hindu and Christian students significantly differ in their school environment.
- The Christian and Muslim students significantly differ in their school environment.
- The Hindu and Muslim students significantly differ in their school environment.
- The government and private school students significantly differ in their school environment. Government school students have better school environment than private school students.
- The male and female students significantly differ in their academic achievement. The female higher secondary school students showed higher level of academic achievement than the male students
- The rural and urban students did not differ significantly in their academic achievement.
- The Hindu and Christian students significantly differ in their academic achievement. The higher secondary school students belonging to Hindu religion exhibited higher level of academic achievement than the Christian students.
- The Christian and Muslim students did not differ significantly in their academic achievement.
- The Hindu and Muslim students significantly differed in their academic achievement.
- The government and private school students significantly differed in their academic

achievement. Private school students had better academic achievement than Government school students.

- There is significant positive relationship between School Environment and Academic Achievement of secondary school students.

CONCLUSION

The findings of the study revealed that there exists a significant positive correlation between school environment and academic achievement of secondary school students. Hence it may be concluded that better school environment leads to better academic achievement.

IMPLICATIONS

The research findings of this study imply that school environment influences the academic achievement of secondary school students. It shows that there is a direct link between a students' success and the school environment. School environment ought to be made conducive to learning and optimum development of character. Teachers, parents management and government can play a vital role in providing proper school environment. Sincere effort have to be made in schools to expand the facilities. Libraries have to be equipped with adequate learning materials for developing awareness on various subjects and the students must be encouraged to read journals and magazines. Laboratories need to be well equipped with required scientific apparatus. Classroom teaching might be supplemented by practical works. Field trips, excursions and other co-curricular activities may be organized for developing interest among the students.

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ANXIETY AMONG STUDENTS IN DIFFERENT TYPES OF HIGHER SECONDARY SCHOOLS

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ABSTRACT

In the present competitive scenario, students have anxiety about their present and future career to sustain their life. This article explains the anxiety of male and female higher secondary students studying in various schools through descriptive method. The sample was randomly drawn from the population of the higher secondary students in various schools. From the population 794 higher secondary students were randomly selected as the sample for this study. The data was analyzed with the help of statistical techniques such as mean, standard deviation, 't' test and 'F' value. The study revealed that the male students have more anxiety than the female students. The aided school students have more anxiety than government and self financing school students.

INTRODUCTION

The Kothari Commission (1964-66) rightly pointed out in its report about the importance of education as, "The destiny of India is being shaped in her classrooms". For Kothari the duty of the teacher is to mould the personality of the students to meet the challenges of the present and the future. Education is a social necessity and a social process. It stands for growth, development, progress, enlightenment and empowerment in all walks of life. The Indian education system is mainly focusing on the development of cognitive and the conative domains by ignoring the affective domain.

The present education system with a heavy syllabus is a burden for the students. The admission to new courses (professional course) is based on the marks secured by the students. When there is the desire to secure more marks in the examination, there is anxiety and frustration among the students which leads to mental exhaustion. Parents also put pressure on their children to score high marks. Due to these reasons the students are anxious whenever there is a test in the class.

NEED FOR THE STUDY

Higher Secondary education occupies a prominent place in our educational set up. It provides the link between the secondary education and higher education. It is the feeder stage for higher education. It is pivotal as regards opportunities for higher studies. Therefore, higher secondary students may have some preference for certain types of career depending upon what they study at this stage.

Anxiety and tension thus produced acts as a chronic stress state (an inflammatory condition) and affects the heart from an early age, leading to heart attacks. Today, heart attack between the age group of 25 to 30 is alarmingly high. Many of the self financing colleges admit students with minimum marks in the Plus two examination by receiving capitation fees. This is one of the major reasons for failure in examinations.

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In such cases, lack of concentration and reduced involvement in studies lead to many psychological disorders. Pressure mounted by the parents on the students and the demands of the teachers and school to ensure a 100 percent pass with good grade pass, worsen the situation rapidly.

Thus anxiety, which is a kind of emotion, plays a significant role in the life of every human being at every stage. The investigator felt that there would be a difference in the anxiety and academic achievement of higher secondary students in relation to certain selected variables. This investigation, therefore, attempts to assess the level of anxiety of Higher secondary students.

OBJECTIVES

- To study the level of anxiety of higher secondary students.
- To study the level of anxiety of male and female higher secondary students.
- To study the significant difference between male and female higher secondary students in their anxiety.

RESULT AND DISCUSSION

- To study the difference among the different types of of higher secondary school students in their anxiety.

MEHOD

The survey method was used for the present study.

SAMPLE

All the higher secondary students studying in Kanyakumari, Thoothukkudy and Tirunelveli district formed the population of the study. From the population, the investigator randomly selected 794 higher secondary students as the sample for the study.

TOOL

For data collection the investigator adopted the Anxiety Scale developed by Manjurani Agarwal (1979).

STATISTICAL TECHNIQUES

Mean, Standard deviation, 't' test and 'F' test were used to analyse the data.

Table 1
Level of Anxiety of Higher Secondary Students

Variables	Low Level		Moderate Level		High Level	
	N	%	N	%	N	%
Anxiety	126	19.9	556	70	112	14.4

From the table it is seen that 70% of the students have moderate level of anxiety

Table 2
Level of Anxiety of Male and Female Higher Secondary Students

Variables	Low Level		Moderate Level		High Level	
	N	%	N	%	N	%
Male	62	15.0	277	67.2	73	17.7
Female	64	16.8	263	68.8	55	14.4

From the table it is seen that 67.2 percentage of the male students have moderate level of anxiety and 68.8 percent of the female students have moderate level of anxiety

Table 3

Difference between Male and Female students in their Anxiety

Gender	N	Mean	SD	't'	At 5% level
Male	412	41.97	5.85	1.89	NS
Female	382	41.25	4.94		

It is inferred from the above table that the calculated 't' value (1.89) is less than the table value of 't' (1.96) for 794 degrees of freedom at .05 level of significance. Hence the null hypothesis is accepted. Hence it is concluded that there is no significant difference between male and female higher secondary students in their anxiety.

Table 4

Difference among government, aided and self - financing school students in their Anxiety

Source of variation	Sum of Squares	df	Variance	Calculated Value of 'F'	Remarks at 5% level of Significance
Between	245.50	2.00	122.75	4.17	Significant
Within	233310.75	791.00	29.47		
Total	23556.25	793.00			

(For 2, 791 df at 5% level of significance the table value of 'F' is 2.68)

It is inferred from the above table that there is significant difference among government, aided and self-financed school students in their anxiety.

While comparing the mean scores of government (mean=41.51), aided (mean=42.33) and self-financed (mean=40.98) school students, aided school students have more anxiety than government and self-financed school students.

FINDINGS

- 70.7% of the higher secondary students have moderate level of anxiety.
- 67.2% of male higher secondary students have moderate level of anxiety.
- 68.8% of female higher secondary students have moderate level of anxiety.
- There is no significant difference between male and female higher secondary students in their anxiety.

- There is significant difference in the anxiety of students studying in different types of schools. Aided school students have high level of anxiety than the government and self-financing school students.

CONCLUSION

From the present investigation, it is found that only 70.0 % of the sample have moderate level of anxiety. When the sample of the study was classified in terms of their gender, it is observed that 67.2% of male students and 68.8% of female students have moderate level of anxiety. The aided school students have more anxiety than self-financing and government school students.

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EFFECTIVENESS OF SMART CLASS IN TEACHING SCIENCE FOR IX STANDARD STUDENTS

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ABSTRACT

Smart class is a digital initiative of Educomp, which is rapidly transforming the way teachers teach and students learn in schools with innovative and meaningful use of technology. It is a comprehensive solution designed to assist teachers in meeting with their classroom challenges and enhancing students' academic performance with simple, practical and meaningful use of technology. The present study is an attempt to find out the effectiveness of smartclass in teaching science for IX standard students. Equivalent group design was used for conducting the study. The study has revealed that teaching science through smart class is more effective than the traditional lecture method.

INTRODUCTION

Worldwide there has been a strong push to get educational technology into the hands of teachers and students - yet it remains a reality that most teachers across the world continue to struggle with their day to day challenges in classrooms and remain completely un-impacted by technology even today. The Primary reason for this is that most technology integration initiatives developed for schools ignore to look at the specific pain areas and real life challenges that teachers experience in classrooms. Not only should the solution address the pain areas of the teacher but also follow a path which blends seamlessly with their own individual traditional teaching styles. There is a need to provide them with

digital content that is mapped precisely to curriculum. The method also needs to be simple, minimally invasive, user-friendly and have minimal dependence on teachers own skills. Equally essential is ongoing handholding support from training to maintenance.

Powered by the world's largest repository of digital content mapped to Indian School Curriculum, smart class brings in technology right next to the blackboard for teachers in the classrooms. Students learn difficult and abstract curriculum concepts watching highly engaging visuals and animations. This makes learning an enjoyable experience for students while improving their overall academic performance in school. Smart class also enables teachers to instantly assess and evaluate the learning achieved by their students in class with an innovative assessment technology - smart assessment system - designed by Educomp.

SMART CLASS

Smart Class is a comprehensive solution designed to assist teachers in meeting their day-to-day classroom challenges and enhancing students' academic performance with simple, practical and meaningful use of technology. Smart Class provides teachers with instant access to multimedia content and instruction materials mapped exactly to the specific curriculum guidelines for use in class. It also enables teachers to instantly assess and evaluate the learning achieved by their students in class with innovative use of technology. Smart class helps

teachers to ensure that every child in the class is learning, given the wide diversity of learning styles in the classroom. It is also highly efficient in maintaining student's interest and engagement in learning inside the classroom. Smart Class simplifies the problems of teaching abstract concepts that are difficult for students to visualize or relate to through the provision of three-dimensional, interactive multi-media modules.

NEED FOR THE STUDY

School and higher education systems are straining under budget cuts. The demand for knowledge workers with specialized skills is growing by 11 percent a year. Many jobs will require lifelong training and a continuous updating of skills. And the education industry has grown increasingly complex and difficult to quantify, as students pursue a variety of alternative learning paths. The good news is that there have been advances in educational technology - cloud computing, open source systems, virtualization, analytics - that can help our systems refresh outdated infrastructures with new functionality. They can become more interconnected, instrumented and intelligent. Many schools have closed, and funding for public education has been eroded. Through a Reinventing Education grant, IBM is providing a solution that will enable teachers and educational experts to interconnect systemically for the first time across the state, sharing high-quality content and collaborating on critical topics. In recent years, computer technology has become a popular tool used to improve the education of students in all the countries. Technology has affected us in every aspect of our lives from communication to education. It is time now for students to introduce the concept of smart class where teaching happens through digital instruction materials, 3D animated modules and videos.

More than 1000 schools in India are successfully using smart classes. It seems that presentation of innovative techniques have a positive effect on students achievement in many subjects. By

keeping these points in mind the present study "Effectiveness of Smart Class in Teaching Science for IX Standard Students" was undertaken.

OBJECTIVES

- To study the significant difference if any, between control group and experimental group students in their mean scores of post test.
- To study the significant difference if any, between the mean scores of gain scores (total) of control group and experimental group.

HYPOTHESES

- There is no significant difference between control group and experimental group students in their mean scores of post test.
- There is no significant difference between the mean scores of gain scores (total) of control group and experimental group.

METHOD

DESIGN OF THE STUDY

Experimental design is the blue print of the procedures that enables the researcher to test hypotheses by reaching vivid conclusions about relationships between independent and dependent variables. In this experimental research, the investigator has chosen two groups pre-test and posttest equivalent group design for the study.

In this experimental method two groups of subjects are selected. One of the equivalent groups serves as the control group in which the subjects are taught by traditional method. The other group serves as the experimental group in which the subjects are taught using Educomp smart class package.

SAMPLE

Sample is a smaller representation of a large whole. The investigator has randomly selected students of IX Standard to serve as both experimental and control groups. There were twenty five students in each group.

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STATISTICAL TECHNIQUES

The following statistical techniques were used in the study

1. Mean
2. Standard Deviation and
3. 't' test

CONDUCTING THE EXPERIMENT ADMINISTRATION OF THE PRE-TEST

Just before the treatment the entry behavior test was administered and it was found out that all the selected samples possess the entry behavior. The bio-data was also collected. Pre-test was administered and the results were analysed. The means of the pre-test scores of both experimental and control group are almost equal. Hence, the experimental and control group were matched.

TABLE 1
Difference Between the Mean Scores of Post Test of Control Group and Experimental Group

Group	N	Mean	SD	't'	Remarks at 0.01 level
Control	25	17.95	2.01	10.19	S
Experimental	25	23.30	2.03		

Degrees of freedom : 48

The above table shows that the computed 't' value 10.19 is greater than the table value 2.58 at 0.01 level. So, the null hypothesis is rejected. Hence it can be said that there is significant difference between control group and experimental group students in their mean scores of post test.

TREATMENT

The experimental group was taken to the smart class. These students were taught with multimedia way wherever necessary. They were given the post-test soon after the exposure. After this the control group was taught in the conventional method by the investigator himself. The investigator trained them in such a way that there should not be any experimental bias. Soon after the session was over care was taken in giving the post-Test.

RESULTS AND DISCUSSION

Hypothesis: 1

There is no significant difference between control group and experimental group students in their mean scores of post test.

Hypothesis:2

There is no significant difference between the mean scores of gain scores (Total) of control group and experimental group.

Table 2
Difference between the mean scores of gain scores (Total) of control group and experimental group

Group	N	Mean	SD	't'	Remarks at 0.01 level
Control	25	14.75	1.89	8.08	S
Experimental	25	19.75	2.73		

Degrees of freedom: 38

The table shows that the computed 't' value is greater than the table value 2.71 at 0.01 level. Consequently, the null hypothesis is to be rejected. As it can be said that there is significant difference between the mean scores of gain scores (Total) of control group and experimental group.

FINDINGS

- > There is significant difference between control group and experimental group students in their mean scores of post test.
- > There is significant difference between the mean scores of gain scores (Total) of control group and experimental group.

DISCUSSION

These findings have shown that the two groups of the present study are equal in the pretest, whereas the students of the experimental group performed well when they are taught with the innovative multimedia instruction. This shows that the smart classroom method is more effective than the traditional lecture method. The students of the

experimental group were given exposure to smart class room. The experimental group students had more practice in applying the concepts learnt since it was performed through the self learning.

CONCLUSION

Smart class no doubt is a new information technology product and also is a new thrust area for teaching professionals to use multimedia in an effective way. Computer is a primary tool used in the smart class programme. Smart class has changed the way of information gathering, repackaging and distributing to fellow professionals with its sound and visual capabilities. The technologists are trying to overcome the problems and are working progressively for different applications. Certainly smart class will occupy a prominent place in the information era as a modern tool in the 21st century.

The new technology will pave the way for new opportunities and a paradigm shift. Smart class will play a vital role in the educational field by developing self-learning educational materials and computer aided instructional course materials. So it is the right

time for the realization of new technology and the smart class programme.

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SELF-CONCEPT OF HIGHER SECONDARY STUDENTS

Dr. Bini.C.L.

ABSTRACT

The present research study attempts to find out the self-concept of higher secondary students. The investigator randomly selected 18 higher secondary schools, giving proper representation to Government, Aided and Unaided schools from Tirunelveli, Thudhukkudi and Kanniyakumari Districts. From each school samples of fifty students were selected randomly and thus the sample consisted of 900 Higher secondary students. The tool used for collecting data was a standardized 'Self-concept scale' by N.K. Chadha (1985). Statistical techniques used were Mean, Standard Deviation, 't' test, and 'F' test. The result showed that the level of self-concept of higher secondary students is medium. It was also found that the self-concept differs with medium of instruction, locale, type of management, type of family, parental education and parental occupation.

INTRODUCTION

The self is a system of attitudes, feelings and perceptions that the individual has of himself. The self is a key construct in several schools of psychology. In sociology these two parts of the self are called the 'I' and the 'me' (Mead, 1934). The 'I' is the spontaneous, creative part of the self; the 'me' is the self as social object, the part of the self that responds to others' expectations. Self-concept or self-identity is the mental and conceptual awareness.

The core of self-concept is the feeling which one has about oneself and such a self-evaluation greatly influences one's behavior, colours one's

interpretation of environmental situations and interferes with one's judgments. The child's self-concept develops gradually through its own actions and reactions in the family, the school, peer groups and the society at large. Hereditary factors, family influence and external social environment are the important determinants of self-concept. The school can help in the development of positive self-concept in children by acceptance, affection and provision of opportunities for achievement of every child.

It has been found that self-concept is closely related to one's personality development. Hence it is essential to investigate the self-concept of higher secondary students.

OBJECTIVES

- To study the level of self-concept of higher secondary students.
- To study whether there is any significant difference in the self-concept of higher secondary students with respect to the following variables.
 - a. Gender, b. Medium of instruction, c. Location of school, d. Type of family, e. Subject group, f. Type of management, g. Father's education, h. Mother's education, i. Father's occupation, j. Mother's occupation.

METHOD

Normative survey method was followed in the study for collecting data.

SAMPLE

Random sampling technique was employed. The investigator randomly selected 18 higher

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secondary schools, by giving proper representation to Government, Aided and Unaided schools from Tirunelveli, Thuthukkudi and Kanyakumari districts. From each school a sample of 50 students were selected randomly and thus the sample consisted of 900 higher secondary students.

TOOL

For the purpose of the data collection 'Self-concept scale' by N. K. Chadha (1985) was used.

STATISTICAL TECHNIQUES

In the present study Mean, Standard Deviation, 't' test and 'F' test are used for data analysis.

RESULT AND DISCUSSION

SELF-CONCEPT OF HIGHER SECONDARY STUDENTS

The frequency and percentage of students in each category of self-concept is given in Table 1.

Table 1
Frequency and percentage of students in each category of Self-Concept

Self concept	Count	Percentage
Low	168	18.7
Average	578	64.2
High	154	17.1

It is seen from the above table that the majority of students lie in the medium category indicating that the self-concept of the higher secondary students is medium.

Comparison of mean scores of self-concept of Higher secondary students with respect to background variables is given in Table 2.

Table 2

't' value of Self-concept scores of Higher Secondary students with respect to the background variables Gender, Medium, Locale and Type of family.

Variables	Mean	SD	N	t	Level of significance	
Gender	Male	123.12	25.9	450	1.09	Not Significant
	Female	124.91	23.1	450		
Medium	Tamil	121.63	26.1	408	2.67	0.05
	English	125.99	23.0	492		
Locale	Rural	120.61	25.2	441	4.13	0.05
	Urban	127.30	23.4	459		
Type of family	Nuclear	126.09	24.6	480	2.72	0.05
	Joint	121.65	24.3	420		

Table 2 shows that the obtained 't' values for the background variables Medium of Instruction Locale and type of family were greater than the table value and the 't' values were significant at 0.05 level. Hence it is inferred that there is significant difference between Tamil medium-English medium, Rural-Urban, and Nuclear-Joint family students in their Self-Concept. But the obtained 't' value for the variable gender was smaller than the table value and the 't' value is not significant. So it is inferred that there is no significant difference between male and female higher secondary students in their Self-Concept.

Table 3
'F' value of Self-concept scores of Higher Secondary students with respect to the background variables Subject group, Type of management, Father's education, Mother's education, Father's occupation, Mother's occupation.

Variables	Mean	SD	Source	SS	Df	MS	F	Level of significance	
Subject	Arts	119.3	26.0	Between	17577.71	2	8788.9	15.09	0.05
	Science	130.2	22.3	Within	522506	897	582.5		
	Vocational	123.3	23.8	Total	540083.7	899			
Management	Govt	121.3	26.0	Between	5232.642	2	2616.3	4.39	0.05
	Govt Aided	123.7	23.6	Within	534851.1	897	596.3		
	Private	127.1	23.6	Total	540083.7	899			
Father's education	Illiterate	114.3	26.7	Between	16906.55	2	8453.3	14.49	0.05
	School Education	124.1	24.1	Within	523177.2	897	583.3		
	College Education	128.5	23.0	Total	540083.7	899			
Mother's education	Illiterate	114.4	26.5	Between	13809.9	2	6904.9	11.77	0.05
	School Education	124.7	24.1	Within	526273.8	897	586.7		
	College Education	127.7	23.3	Total	540083.7	899			
Father's occupation	Service	130.7	23.6	Between	13946.73	3	4648.9	7.92	0.05
	Business	121.3	26.8	Within	526137	896	587.2		
	Company	124.1	24.0	Total	540083.7	899			
Mother's occupation	Coop	121.2	22.6	Total	540083.7	899		10.05	0.05
	Service	127.7	22.8						
	Business	123.5	20.7						
	Company	124.0	26.3						
	Coop	107.3	26.5						
	HW	125.4	24.0						

Table 2 shows that the obtained 'F' values for the variables Subject group, Type of school, Father's education, Mother's education, Father's occupation, Mother's occupation were greater than the table value. So 'F' values were significant at 0.05 level. Hence it is inferred that there is significant difference in the self-concept of higher secondary students with respect to the background variables Subject group, Type of school, Father's education, Mother's education, Father's occupation and Mother's occupation.

FINDINGS

> The higher secondary students have medium level of Self - Concept .

> There is significant difference in mean scores of Self-Concept of higher secondary students with respect to the following variables:

- a) Medium of instruction b) Location of school c) Type of family d) Type of school e) Subject groups g) Father's education h) Mother's education i) Father's occupation j) Mother's occupation

CONCLUSION

The findings of the study have revealed that the higher secondary school students have medium level of self-concept. The self-concept also differs with medium of instruction, locale, type of management,

type of school, parental education and parental occupation. The children of college educated parents have higher Self-Concept. Hence the parents of other categories may be given functional education so that they may improve upon their vocation and enhance their status. Specific training on improvement of Self-Concept may be arranged for children by providing activities and situations at home to analyze their strengths and weaknesses.

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EFFECTIVENESS OF CO-OPERATIVE LEARNING ON ACHIEVEMENT AND RETENTION IN MATHEMATICS OF XI STANDARD STUDENTS OF KANYAKUMARI DISTRICT

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ABSTRACT

Students can benefit more from group work, which includes peer support and fear-free atmosphere. If groups are to learn with support from their peers, they must perceive the importance of working together. This paper aims at studying the comparison of adjusted mean scores of achievement and retention in Mathematics of Cooperative learning group and Traditional method group. The findings of the study have proved that when they worked together their mean scores of achievement and retention in Mathematics were higher when compared to traditional method of learning.

INTRODUCTION

Mathematics is the language in which God has written the universe. It enters every walk of life. Our entire civilization depends on the intellectual penetration and utilization of nature, which has its real foundation in Mathematics. Roger Bacon has rightly remarked, "Mathematics is the gate and key of the Sciences... Neglect of Mathematics works injure all knowledge, since he who is ignorant of it cannot know the other sciences or the things of the world. And, what is worse, men who thus ignorant are unable to perceive their own ignorance and so do not seek a remedy" (Sidhu 2002). Realising its social relevance, Kothari commission (1964-66) suggested, "Science and Mathematics should be taught on a compulsory basis to all pupils as a part

of general education during the first ten years of schooling". Also the commission recommended that, "Proper foundation in the knowledge of Mathematics should be laid at the school". It is an essential subject to the students to develop the skills of reasoning, logical thinking and problem solving. Most of the pupils learn Mathematics through rote memorization without having any proper understanding of basic concepts. So the learnt materials cannot be retained during their examination. Those who fail in the subject later develop hatred towards it.

In the words of Eggen and Kauchak (2001), "It is impossible to reach every student in the classroom by using only one instructional strategy". According to NCTM (2000), "Effective teaching requires knowing and understanding Mathematics, students as learners and pedagogical strategies". Mathematics learning involves connecting new ideas to the ideas that they already know. Teachers of Mathematics need to be able to understand what students know and how they can present new material, with their prior knowledge of Mathematics. Hence, there is an imperative need to adopt learner-centered approaches in the classroom.

Cooperative learning is one of the learner centered approaches which provides the social setting, in which a small group of students with different abilities work together and use their skills for the success of each member of the group. Working co-

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operatively is a joint activity by sharing knowledge to arrive at a joint understanding of the task. In Co-operative learning, students construct their own knowledge through the process of sharing and discovering and become active rather than passive learners. Working in group provides mutual encouragement, assistance and more positive learning. When students explain and teach concepts to each other, retention of these concepts improves. Hence, the responsibility of the teacher especially at the higher secondary level becomes increasingly important to encourage small group learning activities and develop thinking skills and problem-solving skills by constructing their own knowledge. Therefore, the investigator wanted to study the effectiveness of cooperative learning approach on achievement and retention in Mathematics of higher secondary students.

OBJECTIVES

- > To compare the adjusted mean scores of achievement in Mathematics of cooperative learning group and traditional method group by taking pre-achievement in Mathematics as covariate.
- > To compare the delayed mean scores of achievement in Mathematics of co-operative learning group and the traditional method group.

HYPOTHESES

- > There is no significant difference in the adjusted mean scores of achievement in Mathematics of cooperative learning group and traditional method group by taking pre-achievement in Mathematics as covariate.
- > There is no significant difference in the delayed mean scores of achievement in Mathematics of co-operative learning group and the traditional method group.

METHOD

DESIGN OF THE STUDY

The investigator employed 'Equivalent group Pretest - Post-test control group design' for the study.

VARIABLES

The independent variable selected for the experiment was co-operative learning approach. Achievement and Retention in Mathematics as the dependent variables.

SAMPLE

The research study was carried out on a sample of 214 Mathematics group students of class XI from two Government Aided rural and urban locality schools namely St. Joseph's Higher Secondary school, Mulagumoodu and St. Mary Goretti Higher Secondary School, Manalikkarai in Kanyakumari District of Tamil Nadu. Stratified sampling technique was used. The investigator applied matched group technique to equate the groups. The two groups (the experimental and the control groups) were matched on the basis of Intelligence test (Ravens Progressive Matrices), Socio-economic status, Achievement marks in Mathematics Age and Gender. After forming the groups randomly one group was taken as the experimental group and the other was taken as the control group of sample size 107 students each.

INSTRUMENTATION

The tools used for the present study were

- > Lesson transcripts based on jigsaw method of Co-operative learning.
- > Achievement test in Mathematics (constructed and validated by the investigator).

RELIABILITY AND VALIDITY OF THE TOOLS

Lesson transcripts on Co-operative learning were subjected to experts' opinion. The experts suggested that the lesson transcripts possessed adequate content validity. The reliability of the achievement test in Mathematics was found out by

Test-Retest method and the reliability was found to be 0.874. The face validity and content validity of the test were found out by submitting the test to five experts and they expressed their consent about the suitability of the items and relevancy of the content area.

DATA COLLECTION

In this study, the investigator used Jigsaw method of Co-operative learning. The investigator prepared lesson transcripts for plus one level Mathematics for the topics 'Functions and Graphs', and 'Analytical Geometry'. Achievement test in Mathematics was administered as pretest to both the groups. The experimental group was taught through Co-operative learning approach and the control group was taught same lessons in Mathematics through the traditional method. Then the mean score of retention in Mathematics was found out by administering the same post-achievement test in Mathematics after a period of

one month to both the experimental and the control groups. The data were collected for analysis.

STATISTICAL TECHNIQUES USED

The investigator used the following statistical techniques:

Arithmetic mean, Standard deviation, t-test and ANCOVA

RESULTS AND INTERPRETATION

Comparison of adjusted mean scores of Achievement in Mathematics of Co-operative Learning group and the Traditional method group for the Total Sample.

NULL HYPOTHESIS

There is no significant difference in the adjusted mean scores of achievement in Mathematics of cooperative learning group and traditional method group by taking pre-achievement in Mathematics as covariate.

Table 1
Summary of one way ANCOVA of achievement in Mathematics by taking pretest as a covariate

Group	Adjusted Post test mean	Source of variance	df	SSy.x	MSSy.x	Fy.x	Remark
Cooperative learning	38.04	Between groups	1	5137.23	5137.23	154.375	P<0.01
Traditional method	28.20	With in groups	211	7021.59	33.28		
		Total	212	12158.82			

From table 1 it can be seen that adjusted Fy.x value is 154.375, which is significant at 0.01 level with df 1/211. It indicates that the adjusted mean scores of achievement in Mathematics of the experimental group and the control group differ significantly when pre-achievement in Mathematics

is taken as covariate. Thus the null hypothesis is rejected. Further the adjusted mean score of achievement in Mathematics of the experimental group (38.04) which is significantly higher than that of the control group (28.20). It may therefore be said that the co-operative learning approach was found to be

statistically more effective than that of the traditional method in enhancing achievement in Mathematics among higher secondary students.

Comparison of mean scores of Retention in Mathematics of Co-operative Learning group and Traditional method group.

Null hypothesis

There is no significant difference in the delayed mean scores of achievement in Mathematics of co-operative learning group and the traditional method group.

Table 2
Comparison of delayed mean scores of achievement in Mathematics

Group	Mean	SD	N	Mean difference	t	Remark
Cooperative learning	33.47	8.41	107	4.96	4.80	p<0.01
Traditional method	28.51	6.63	107			

From table 2, it can be seen that the t-value (4.80) is significant at 0.01 level with df 212. It indicates that there is significant difference in the delayed mean scores of achievement in Mathematics of the cooperative learning group and the traditional method group. Therefore, the null hypothesis that there is no significant difference in the delayed mean scores of achievement in Mathematics of co-operative learning group and the traditional method group is rejected. Further, the delayed mean scores of achievement in Mathematics of the cooperative learning approach group is (33.47) which is higher than that of the traditional method group whose delayed mean score is (28.51). It may therefore be said that the Co-operative learning group was found to have significantly higher retention in Mathematics than that of the traditional method group.

FINDINGS

The Co-operative learning approach was found to be statistically more effective than that of the traditional method in enhancing achievement in Mathematics among higher secondary students.

The co-operative learning group was found to have significantly higher retention in Mathematics than that of the traditional method group.

CONCLUSION

The study has revealed that Co-operative Learning Approach is more effective than the traditional method in enhancing achievement in Mathematics. Therefore the co-operative learning approach could be used for teaching Mathematics at higher secondary level. The Co-operative learning approach results in greater retention of subject matter, than that of the traditional method. Hence teachers should be encouraged to practice and use Co-operative Learning Approach in teaching Mathematics. Faculty improvement programmes namely orientation courses, refresher courses, seminars and workshops could be organized for teachers to familiarize them with the various aspects and techniques of Co-operative learning approach.

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PREPARATION AND TESTING OF ENVIRONMENT BASED MODEL FOR TEACHING BOTANY AT HIGHER SECONDARY LEVEL

* Dr. Renuka Sonny L.R.

ABSTRACT

Environment-based learning follows the principle of learning by doing, learning by enjoying and learning by problem solving. The present study is an attempt to find out the effectiveness of Environment-Based Model for teaching some families of Angiosperms in Botany at higher secondary level. The investigator adopted experimental method for conducting the study. The experimental design was Pre-test Post test design. The findings of the study revealed that Environment-Based Model is more effective than the traditional method of teaching. Since the Environment - Based Model was found to be effective, the curriculum framers may give due care to incorporate Environment Based Model in the higher secondary school Botany curriculum.

INTRODUCTION

Education means the process by which the individual is helped to develop his/her innate potentialities so that they are well equipped for a gracious and harmonious life in the world. The teaching of science should be based on experiment or observation and to be in relation to the associated practical work, particularly that performed by the pupils themselves in their physical and biological world or 'Environment' which consists of biotic (living) and abiotic (non-living) components. UNEP defines Environment as "the whole outer

physical and biological system in which man and other organism live as a whole, albeit a complicated one with many interacting components." A multitude of environmental problems such as deforestation, desertification, soil erosion, silting of rivers, impoverishment of important flora and loss of biodiversity, depletion of non-renewable sources of energy, global warming, pollution of land, water and air have resulted from rapid industrialization. Environmental education may comprise three linked components: Education about the environment (knowledge), Education for the environment (Values, attitudes, positive action), Education in or through the environment (a resource).

Outdoor learning provides chances for the active participation of children in the learning situation and permits scope for activity, freedom to move, to explore and to experiment which in turn will contribute directly to the discovery learning and afford chances for grasping the true spirit of science. Proper utilization of outdoor resources in science teaching can make the teaching-learning process more effective, interesting and meaningful. The school garden is a good laboratory for the secondary and Higher Secondary School students. Any part of the school ground may be utilized as a school garden if it does not interfere with other activities.

NEED FOR THE STUDY

Department of General Education, Kerala, evaluated performance of the students in S.S.L.C. examination in various subjects especially in science. It revealed that majority of students had no proper concept formation or application of principles in science subject. On further verification it was found that such a state of affairs occurred mostly due to the fact that the teachers were not properly equipped for science teaching. Majority of the teachers were generally satisfied with the verbal presentation of text book matter, without giving importance to innovative approaches and learning through direct experience. Therefore, the quality of science education in schools has to be improved. This will help the children learn science more efficiently and effectively. Even though sufficient environmental resources are available in and around school premises, it is not adequately used by the teachers. We should provide direct experience to students which helps in the interaction of the environment. Traditional method of teaching is just the transmission of knowledge but Environment-based model of teaching provides scientific knowledge as well as inculcate the habits of searching for more knowledge. Environment-based learning follows the principles of learning by doing, learning by enjoying and learning by problem solving. Within and around each school are hundreds of worthy things far more valuable than are available in the most expensively equipped laboratories. Hence a systematic study of the environment is necessary for students in schools and colleges.

OBJECTIVES

- > To prepare Environment-Based Model (EBM) for teaching/learning some families of Angiosperms in Botany at Higher Secondary level (Plus one).
- > To study effectiveness of Environment-Based Model by comparison of the achievement in Botany of the treatment groups - Environment-

Based Model (EBM) group and Lecture Method (LM) group for total sample and sub samples based on following variables:

- i) Gender ii) Management

> To study the effectiveness of Environment Based Model by comparison of the achievement in Botany of the treatment groups-Environment Based Model (EBM) group and Lecture Method (LM) group for total sample based on instructional objectives:

- i) Knowledge ii) Understanding
- iii) Application iv) Skill

METHOD

The investigator adopted experimental method for the study.

TOOL

Environment-Based Model for teaching the plant families such as Malvaceae, Fabaceae, Rubiaceae and Asteraceae at Higher Secondary level (plus one)

Achievement test in Botany based on the topics selected for preparing the model (Prepared by the investigator)

Kerala Non- Verbal Group Test of Intelligence (Prepared and standardized by Dr.A.Sukumaran Nair)

SAMPLE

Four schools were selected for the study. The students of two schools were taught through Environment-Based Model and the students of other two schools through Lecture Method. The total sample consists of 213 students. The experimental group consists of 105 students and the control group consists of 108 students.

The experimental design was pre-test post test parallel group design.

The variables - The methods of teaching is independent variable and achievement is the dependent variable.

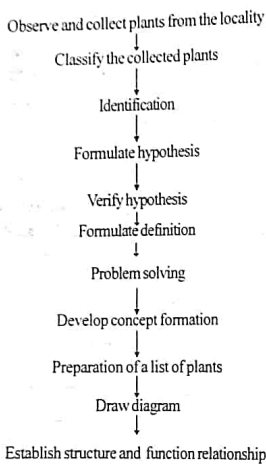
PRETEST

The investigator administered the achievement test in Botany (pretest) to Environment Based Model group (N=105) and Lecture Method group (N=108) to assess the entry behaviour of the students.

Environment based Model on Some Families of Angiosperms

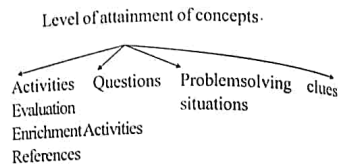
Environment- Based Model on some Families of Angiosperms such as Malvaceae, Fabaceae, Rubiaceae and Asteraceae for plus one were prepared by the investigator based on the theories and principles of John Dewey, Froebel and Bruner.

The format of Environment- Based Model lesson is given below



The investigator along with students of the Environment Based Model group went to the school premises. Suitable materials, examples, plants, dissection microscope and hand lens were used for

developing the concepts. Students were provided chances to apply the acquired knowledge to the problem situation. Evaluation was given at the end of each unit to test the level of attainment of students. Enrichment activities were also provided. References were given throughout the model.



INSTRUMENTATION

The experimental group was taught through Environment - Based Model. The treatment group was exposed to Lecture method. The experimental topic, ie, plant families were taught with the help of examples, illustrations, charts and drawings. At the end of each class, follow-up activities were also given.

ACHIEVEMENT TEST IN BOTANY

To test the effectiveness of the prepared model the investigator prepared achievement test in Botany.

VALIDITY AND RELIABILITY OF THE TEST

Face validity and content validity are tested. The reliability of the test was found out using split half method. The reliability co-efficient obtained was 0.83.

RESULTS AND DISCUSSION

Comparison of pretest and post-test achievement scores in Botany of Environment Based Model group and Lecture Method group for total sample using analysis of Co-variance

The average achievement of students (total sample) in Botany at pretest level are 22.70 and 24.40 for control group and experimental group

respectively. The average score at post test level are 25.56 and 37.17 for control and experimental group respectively.

Table 1
Summary of Analysis of Co-variance of pretest and post- test achievement scores of students of EBM and LM groups (total sample)

		Sum of Squares	df	Mean Square	F	p
Pre-test (X)	Between Groups	153.2	1	153.2	8.73**	0.003
	Within Groups	3721.9	212	17.6		
	Total	3875.1	213			
Post-test (Y)	Between Groups	7216.0	1	7216.0	249.98**	0.000
	Within Groups	6119.6	212	28.9		
	Total	13335.6	213			
Adjusted Post-test (Y.X)	Between Groups	6242.2	1	6242.2	232.52**	0.000
	Within Groups	5664.4	211	26.8		

The F statistics for the final score (Fy=249.98) is significant at 0.01 level, which means that the average achievement scores of experimental (37.17) group is significantly above that of control group (25.56) at post test level. From Fyx, it is clear that the final average score on achievement, after adjustment for the initial difference in experimental group (36.87) is significantly different from that of the control group (25.85). Thus it can be concluded that Environment Based Model for teaching Botany is statistically more effective than the Lecture Method for the total sample

Comparison of pre- test and post test achievement scores in Botany of Environment- Based Model group and Lecture Method group using Analysis of Covariance for boys

The average achievement scores in Botany for boys at pretest level are 22.74 and 23.60 for control group and experimental group respectively. The average score at post- test level are 25.87 and 38.40 for control and experimental group respectively.

Table 2
Summary of Analysis of Covariance of pretest and post- test achievement scores in Botany of EBM and LM groups for boys

		Sum of Squares	df	Mean Square	F	p
Pre- test (X)	Between Groups	15.5	1	15.5	1.03	0.313
	Within Groups	1262.8	84	15.0		
	Total	1278.2	85			
Post- test (Y)	Between Groups	3347.6	1	3347.6	82.86**	0.000
	Within Groups	3393.7	84	40.4		
	Total	6741.3	85			
Adjusted Post- test (Y.X)	Between Groups	3039.1	1	3039.1	86.2**	0.000
	Within Groups	2926.1	83	35.3		

(** - significant at 0.01 level)

The F-statistics for the final score ($F_y=82.86$) is significant at 0.01 level. It means that the average achievement scores of experimental group (38.40) is significantly above that of control group (25.87) at post test level. From $F_{y,x}$, it is clear that the final average score on achievement, after adjustment for the initial difference in experimental group (38.17) is significantly different from that in the control group (26.16). So the Environment-Based Model for teaching Botany is statistically more effective than the Lecture Method for boys.

Comparison of pretest and post-test achievement scores in Botany of Environment based model group and Lecture method group using Analysis of Covariance for girls

The average achievement scores in Botany for girls at pretest level are 22.68 and 25.03 for control and experimental group respectively. The average scores at post-test level are 25.38 and 36.19 for control and experimental group respectively.

Table 3

Summary of Analysis of Covariance of pretest and post-test achievement scores in Botany of EBM and LM groups for girls

		Sum of Squares	df	Mean Square	F	p
Pre-test (X)	Between Groups	176.1	1	176.1	9.22**	0.003
	Within Groups	2404.9	126	19.1		
	Total	2581.0	127			
Post-test (Y)	Between Groups	3716.3	1	3716.3	180.71**	0.000
	Within Groups	2591.2	126	20.6		
	Total	6307.5	127			
Adjusted Post-test (Y.X)	Between Groups	3087.5	1	3087.5	158.6**	0.000
	Within Groups	2433.4	125	19.5		

(** - significant at 0.01 level)

The F-statistics for the final score ($F_y=180.71$) is significant at 0.01 level. It is clear that the average achievement scores of experimental group (36.19) is significantly above that of control group (25.38) at post test level. So Environment - Based Model for teaching Botany is statistically more effective than Lecture method for girls.

Comparison of pretest and post-test achievement scores in Botany of EBM and LM

groups using analysis of covariance for students in government schools

The average achievement scores of students of Government schools at pre-test level are 24.65 and 25.04 for control group and experimental group respectively. The average scores at post-test level are 26.50 and 39.65 for control group and experimental group respectively.

Table 4
Summary of analysis of covariance of pretest and post-test achievement scores in Botany of EBM and LM groups (students in government schools)

		Sum of Squares	df	Mean Square	F	P
Pre-test (X)	Between Groups	3.8	1	3.8	0.25	0.620
	Within Groups	1559.7	101	15.4		
	Total	1563.5	102			
Post-test (Y)	Between Groups	4450.3	1	4450.3	133.99**	0.000
	Within Groups	3354.6	101	33.2		
	Total	7805.0	102			
Adjusted Post-test (Y.X)	Between Groups	4373.2	1	4373.2	134.45**	0.000
	Within Groups	3252.7	100	32.5		

(** - significant at 0.01 level)

The F statistics for the final score ($F_y=133.99$) is significant at 0.01 level. It is clear that the average achievement scores of experimental group (39.65) is significantly above that of control group (26.50) at post-test level. From $F_{y,x}$, it is clear that the final average score on achievement, after adjustment for the initial difference in experimental group (39.60) was significantly different from that in the control group (26.55). So the Environment-Based Model for teaching Botany is statistically effective than the Lecture method for students in Government schools.

Comparison of pretest and post-test achievement scores in Botany of EBM and LM groups using analysis of Co-variance for students in Aided schools

The average achievement scores in Botany of students in Aided schools at pre-test level were 20.89 and 23.80 for control group and experimental group respectively. The average scores at post-test level were 24.68 and 34.87 for control and experimental group respectively.

Table 5

Summary of Analysis of Covariance of pretest and post-test achievement scores in Botany of EBM and LM groups (students in Aided schools)

		Sum of Squares	df	Mean Square	F	p
Pre-test (X)	Between Groups	234.5	1	234.5	14.69**	0.000
	Within Groups	1740.2	109	16.0		
	Total	1974.7	110			
Post-test (Y)	Between Groups	2883.6	1	2883.6	151.67**	0.000
	Within Groups	2072.3	109	19.0		
	Total	4955.9	110			
Adjusted Post-test (Y.X)	Between Groups	2094.8	1	2094.8	119.64**	0.000
	Within Groups	1891	108	17.51		

(** - significant at 0.01 level)

The F test applied in the initial achievement scores of students in Aided schools ($F_x=14.69$) showed that average achievement scores of Botany is significant for experimental group and control group at pre-test level. The F statistics for the final score ($F_y=151.67$) is significant at 0.01 level. It is clear that the average achievement scores of experimental group (34.87) is significantly different from that in the control group (24.68). So the Environment-Based Model for teaching Botany is statistically more effective than the Lecture method for students in Aided schools.

Comparison of pretest and post-test achievement scores in Botany of Environment Based Model

group and Lecture Method group using analysis of Co-variance based on instructional objectives

Comparison of Pretest and Post-test achievement scores in botany of Environment-Based Model group and Lecture Method group for the total sample under the objective knowledge

The average achievement scores of total sample under the objective knowledge at pretest level are 7.47 and 7.04 for control group and experimental group respectively. The average scores at post-test level are 8.25 and 9.78 for control and experimental group respectively.

Table 6

Summary of Analysis of Co-variance of pretest and post-test achievement scores in Botany of EBM and LM groups for the total sample under the objective knowledge

		Sum of Squares	df	Mean Square	F	p
Pre-test (X)	Between Groups	10.1	1	10.1	5.06	0.025
	Within Groups	422.8	212	2.0		
	Total	432.9	213			
Post-test (Y)	Between Groups	125.7	1	125.7	43.25**	0.000
	Within Groups	616.3	212	2.9		
	Total	742.0	213			
Adjusted Post-test (Y.X)	Between Groups	138.8	1	138.8	49.19**	0.000
	Within Groups	595.3	211	2.8		

(** - significant at 0.01 level)

The F test applied in the initial achievement scores for total sample under the objective knowledge ($F_x=5.06$) showed that average achievement in Botany is not significant for experimental group and control group at pretest level. The F statistics for the final score ($F_y=43.25$) is significant at 0.01 level which means that the average achievement of experimental group (9.78) significantly differs from that of the control group (8.25). So Environment-Based Model for teaching Botany is statistically more effective than the Lecture method for the total sample under the objective knowledge.

Comparison of pretest and post-test achievement scores in Botany of EBM and LM groups using analysis of Covariance for the total sample under the objective understanding

The average achievement scores of total sample under the objective understanding at pretest level are 10.81 and 13.25 for control group and experimental group respectively. The average scores at post-test level are 12.10 and 18.13 for control and experimental group respectively.

Table 7
Summary of Analysis of Covariance of pretest and post-test achievement scores in Botany of EBM and LM groups for the total sample under the objective Understanding

		Sum of Squares	df	Mean Square	F	p
Pre-test (X)	Between Groups	318.4	1	318.4	41.6**	0.000
	Within Groups	1622.5	212	7.7		
	Total	1941.0	213			
Post-test (Y)	Between Groups	1945.3	1	1945.3	148.77**	0.000
	Within Groups	2772.0	212	13.1		
	Total	4717.3	213			
Adjusted Post-test (Y.X)	Between Groups	1048.8	1	1048.8	92.68**	0.000
	Within Groups	2387.7	211	11.3		

(** - significant at 0.01 level)

The F test applied in the initial achievement scores of total sample under the objective understanding ($F_x=41.6$) shows that the average achievement in Botany is significant for experimental and control group at pretest level. The F statistics for the final score ($F_y=148.77$) is significant at 0.01 level which means that the average achievement of experimental group (18.13) is significantly different from that of the control group (12.10). So Environment-Based Model for teaching Botany is statistically more effective than the Lecture Method

for the total sample under the objective understanding.

Comparison of pretest and post-test achievement scores in Botany of EBM and LM groups using Analysis of Covariance for the total sample under the objective application

The average achievement scores of total sample under the objective application at pretest level are 2.17 and 1.85 for control group and experimental group respectively. The average scores at post test level are 2.52 and 4.64 for control and experimental group respectively.

Table 8

Summary of Analysis of Covariance of pretest and post-test achievement scores in Botany of EBM and LM groups for the total sample under the objective application

		Sum of Squares	df	Mean Square	F	p
Pre-test (X)	Between Groups	5.4	1	5.4	10.35**	0.002
	Within Groups	110.6	212	0.5		
	Total	116.0	213			
Post-test (Y)	Between Groups	241.1	1	241.1	346.92**	0.000
	Within Groups	147.3	212	0.7		
	Total	388.4	213			
Adjusted Post-test (Y.X)	Between Groups	236.1	1	236.1	340.18**	0.000
	Within Groups	146.4	211	0.7		

(** - significant at 0.01 level)

The F statistics for the final score ($F_y = 346.92$) is significant at 0.01 level which means that the average achievement of experimental group (4.64) is significantly different from that of the control group (2.52). So Environment - Based Model for teaching Botany is statistically more effective than the Lecture method for the total sample under the objective application.

Comparison of pretest and post-test achievement scores in Botany of EBM and LM

groups using Analysis of Covariance for the total sample under the objective skill.

The average achievement scores of total sample under the objective skill at pretest level are 2.25 and 2.18 for control group and experimental group respectively. The average score at post test level are 2.67 and 4.61 for control and experimental group respectively.

Table 9
Summary of Analysis of Co-variance of pretest and post-test achievement scores in Botany under EBM and LM groups for the total sample under the objective skill

		Sum of Squares	df	Mean Square	F	P
Pre-test (X)	Between Groups	0.3	1	0.3	0.39	0.533
	Within Groups	145.8	212	0.7		
	Total	146.1	213			
Post-test (Y)	Between Groups	202.7	1	202.7	248.19**	0.000
	Within Groups	173.1	212	0.8		
	Total	375.8	213			
Adjusted Post-test (Y X)	Between Groups	204.6	1	204.6	254.35**	0.000
	Within Groups	169.7	211	0.8		

(** - significant at 0.01 level)

The F statistics for the final score ($F_y = 248.19$) is significant at 0.01 level which means that the average achievement of experimental group (4.61) is significantly different from that of the control group (2.67). So Environment-Based Model for teaching Botany is statistically more effective than the Lecture Method for the total sample under the objective skill.

CONCLUSION

In the study, Environment-Based Model was found more effective than the traditional method of teaching for developing different process skills, and problem solving ability of higher secondary students. If sufficient practice is given to teachers to adopt

this model for teaching, the students will become innovators and discoverers in their later life. The Environment-based model has great relevance for teachers who intend to improve his/her own instructional method. They should develop the habit of leading children to acquire ideas and knowledge through this model. The Environment-Based Model of instruction helps teachers to cultivate students' power of observation, classification, identification, ability to formulate hypothesis, verify hypothesis, draw diagram, concept formation, higher level thinking and problem solving. Since the Environment-Based Model was found to be effective, the curriculum framers may give due care to incorporate Environment-Based Model in the higher secondary school Botany curriculum.

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PARENTS' AWARENESS ABOUT BASIC SCIENCE COURSES AND THEIR PROSPECTS

* Dr. B. William Dharma Raja



ABSTRACT

Science is a vital part which a developing country like India must focus on. Scientific knowledge, interest in science and scientific research contribute to the development of any nation. Educationists of our nation keep on voicing about the decline of interest in basic science. It is necessary to enhance the attitude of parents as well as students towards basic science and its courses. The present investigation is an attempt to study the awareness of parents about basic science courses and their prospects. The investigator adopted survey method for conducting the study. The study has revealed that there is significant difference in the parents' awareness about basic sciences with regard to locality of residence and child's gender and there is no significant difference in parents' awareness with regard to parental status and child's medium of learning.

INTRODUCTION

Basic sciences form the substratum of all applied sciences. Advancement in sciences is an obligatory condition for future technological revolutions. While innovative science and scientific discoveries have the potential of enabling a quantum leap in human civilization,

hunt of sciences promotes a culture of open mindedness and rationality. India has a rich tradition in abstract thinking and has contributed to scientific discoveries since antique times. As India ventures into the 21st century and seeks to institute itself as a knowledge superpower, it is essential that a strong foundation in science should be decisively in place. This will help the nation in building excellence in technology, achieving self-reliance and in propelling economic growth and prosperity, and consequently raising the living standards of all its citizens. Yet, as the economy progresses, it has become increasingly difficult to ensure a sustained input of fresh young scientists and educationists into the system. This situation has become particularly alarming in the basic sciences. Since developing competence in the basic sciences has a long-incubation period, it is important that this problem be addressed with alacrity. Science and Mathematics are living subjects which grow rapidly and give rise to new areas which build on other existing areas. Therefore, they need a constant input of fresh and young talent.

National Knowledge Commission (NKC) envisaged a number of recommendations to attract talented youths towards basic sciences. It is

worthwhile to note that developing countries like China and South Korea have invested massively in science education in the past few decades and are reaping enormous benefits today in terms of economic development and global standing in science (NKC, 2008). For India to become a knowledge society, we need to strengthen the foundations by building a strong culture of basic sciences among the youth. So it is an urgent need to create awareness on basic sciences, basic science courses and their perspectives among the youth and their parents in our nation.

SIGNIFICANCE OF THE STUDY

Change is the only phenomenon which is permanent. The field of education is not an exception to this dictum. Over the past few years, students have shown a strong decline in interest in choosing basic science courses as far as higher education is concerned. Many students opt for engineering, medical science and computer science courses. The Information Technology (IT) boom, the byproduct of the western culture, has influenced the lifestyle of the Indians. The lucrative salary and job opportunities available for an IT professional are much wider than that of a science professor or teacher. Parents, who want their children to be successful, insist on their choosing a career based on applied sciences. The school toppers and proficient students go in for medical and engineering courses but the average students opt for basic science courses. As they do not have the basic inquisitiveness or interest in these courses, they fail to develop the right scientific temper.

Science is a vital part which a developing country like India must focus on. Scientific knowledge, interest in science, and scientific research contribute to the development of any

nation. Educationists of our nation keep on voicing about the decline of interest in basic science. It is an alarming problem which needs to be rectified. It is necessary to enhance the attitude of the parents as well as students towards basic science and its courses. It is important to create awareness on the opportunities which the basic science courses offer.

OBJECTIVES

- To study the awareness of the parents about basic science courses and their prospects
- To study the significant difference, if any, in parents' awareness about basic science courses and their prospects with regard to select background variables

METHOD

The investigator adopted the survey method of research and gathered information to study the awareness of parents of secondary and higher secondary students about Basic Science Courses and their prospects.

SAMPLE

Here the population refers to the parents of secondary and higher secondary students studying in Tirunelveli, Thoothukudi and Kanyakumari Districts following the syllabus of Tamil Nadu State Board of Education. The investigator has used stratified random sampling technique and collected data from 2185 parents whose students are studying in 30 schools – 10 in Kanyakumari District, 12 in Tirunelveli District and 8 in Thoothukudi District.

TOOL

The tool used for the present study was Awareness Scale on Basic Science Courses and it was developed by the investigator and content validity was established with the support of four teacher educators in science education. Since it

had to be administered among the parents in the school campus itself, the number of items was kept minimal and it was only six. The scale had four points, namely, *strongly agree*, *agree*, *disagree* and *strongly disagree*, and the positive items were given scores as 4, 3, 2 and 1 respectively and the negative items as 1, 2, 3 and 4, respectively.

RESULTS AND DISCUSSION

The statistical techniques employed in this study were: t test for independent groups, One-way ANOVA and Post ANOVA (Scheffee test). The analysis is shown in the following tables.

Table 1
Difference in Parents' Awareness about Basic Science Courses – t Test Analysis

Variable		N	Mean	S.D	t value	p value
Parental Status	Father	720	22.5903	3.27806	.779	.436
	Mother	1416	22.7076	3.29824		
Locality of Residence	Rural	1821	22.5464	3.31375	3.600	0.000**
	Urban	374	23.2139	3.02398		
Ward's Gender	Male	1181	22.4234	3.33476	3.666	.000**
	Female	1014	22.9359	3.18387		
Ward's Medium of Learning	Tamil	1405	22.6669	3.26010	.129	.897
	English	790	22.6481	3.30383		

** Significant at 1% Level

Table 1 shows that there is significant difference in the parents' awareness about basic sciences with regard to locality of residence and child's gender; and there is no significant difference in the parents' awareness with regard to parental status and ward's medium of learning.

Table 2
Difference in Parents' Awareness about Basic Science Courses – F Test Analysis

Variable	Source	Sum of squares	df	Mean score	F value	p Value
Age	Between	27.327	2	13.663	1.274	0.280
	Within	23507.135	2192	10.724		
Parental Education	Between	114.904	2	57.452	5.377	.005**
	Within	23419.558	2192	10.684		
Father's Occupation	Between	47.127	2	23.564	2.199	.111
	Within	23487.335	2192	10.715		
Mother's Occupation	Between	115.404	2	57.702	5.401	.005**
	Within	23419.058	2192	10.684		
Monthly Income	Between	101.913	2	50.956	4.767	.009**
	Within	23432.549	2192	10.690		
Number of Children	Between	113.804	2	56.902	5.326	0.005**
	Within	23420.658	2192	10.685		

** Significant at 1% Level

Table 2 shows that there is significant difference in the parents' awareness about basic sciences with regard to parental education, mother's occupation, monthly income, and number of children; and there is no significant difference in the parents' awareness with regard to age and father's occupation.

Table 3
Scheffe's Test on the Mean Scores of Parents' Awareness about Basic Science Courses

	College	School	Illiterate	Mean Difference	p value
	Parental Education	23.15	22.59		0.55
23.15			22.44	0.71	0.01**
		22.59	22.44	0.15	0.72
Mothers' occupation	Government	Private	Homemaker	Mean Difference	p value
	23.35	22.67		0.68	0.04*
	23.35		22.56	0.79	0.00**
		22.67	22.56	0.10	0.82
Monthly income	Low	Average	High	Mean Difference	p value
	22.63	22.42		0.21	0.46
	22.63		23.21	0.58	0.03*
		22.42	23.21	0.79	0.01**
Number of Children	1	2	3 and above	Mean Difference	p value
	22.43	22.93		0.50	0.00**
	22.43		22.74	0.31	0.27
		22.93	22.74	0.18	0.64

** Significant at 1% Level

Table 3 shows that the college educated parents are more aware of the basic science courses than school-educated and illiterate parents; Government-employed female parents have more awareness about basic science courses than privately employed and home maker counterparts; Highly earning parents have more awareness about basic science courses than average and poor earning counterparts; and parents who have two children have more awareness about basic science courses than parents who have only one child.

FINDINGS

- College-educated parents are more aware of the basic science courses than school-educated and illiterate parents.

- Government-employed female parents have more awareness about basic science courses than privately employed and homemaker counterparts.
- Highly earning parents have more awareness about basic science courses than average and poor earning counterparts.
- Parents of two children have more awareness about basic science courses than parents who have only one child.

IMPLICATIONS

The government should allot sufficient funds for science education on all levels and actively encourage the participation of women and students

from rural areas and other under-represented in science and technology sector. The government may conduct special campaign for parents to give awareness on fundamental science courses. Special programmes about science courses may be broadcast through mass media. The government is popularizing the discipline by means of popular science articles, organizing lectures, through various scholarship schemes and through the establishment of science centers etc. These exposures should be given widely. In government employments, special quotas may be given to the basic science students, at least for a short period.

Management should conduct Parent-Teacher Association meetings to convey the importance of basic science courses. Counseling programmes have to be conducted to improve the basic science courses. If the students have more interest in pursuing basic science courses, the teachers may counsel the parents, as the parents support is the prime factor in the Indian context. The administrators should make the parents understand the importance of basic science through pamphlets illustrating the prospects of choosing basic science courses. Every parent should know about the details of basic science courses, their job opportunities, salary, etc.

If the students have extra interest in studying basic science courses, the teachers should convey it to the parents, because parents' support are indispensable in the Indian context. Following this, parents are supposed to allow their children to

pursue basic science courses. They should indulge in a healthy dialogue with the younger generation by listening more and dictating less. Interests of the children in pursuing higher education should be recognized and admitted by the parents. The parents may consider the interest of their children and give them freedom of choice. Parents may also refer their children to the teachers while selecting the courses for higher studies.

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A STUDY ON THE EFFECTIVENESS OF INQUIRY METHOD IN IMPROVING THE RESEARCH SKILLS OF HIGHER SECONDARY STUDENTS

* Dr R. Devika

ABSTRACT

In the present study the investigator made an attempt to study the effectiveness of inquiry method in improving the research skills of higher secondary students. The non-equivalent pretest-posttest group design was adopted. The sample consisted of 50 students each in the experimental and control group. ANCOVA was the major statistical technique used. Results indicate that inquiry method is effective in improving the research skill of higher secondary students.

INTRODUCTION

The inquisitive nature of human mind always results in new discoveries and innovations. Inquiry is thus, nothing new to humankind. The process of inquiry starts from the time of our birth, and has become a prerequisite for success in all subjects of the curriculum, for preparation for work, for further education, and for lifelong learning. The purpose of inquiry and research is to encourage high levels of critical thinking so that processes and resources are appropriate, and conclusions are based on supporting evidence and problems are solved and decisions made that will extend learning for a lifetime.

Inquiry is a complex process of constructing personal meaning, applying critical thinking skills, solving problems, creating understanding, and questioning. Inquiry gains prime importance in any

stream of learning and the development of inquiry skills makes a learner work and think like a scientist. The constructivist approach to teaching recognizes that building new knowledge is a personal matter and learners find it easier to make sense of new experiences when scientific inquiry skills are used. Inquiry skills help the learner to operate at higher order cognitive skills such as interpretation, analysis, synthesis, creativity, critical thinking skill etc. According to Black and Hugh (1982), inquiry method is significant in improving the higher order thinking skills of students. Leonilla (1989) found that inquiry teaching was more effective in developing inquiry skills than the conventional method. Students taught by inquiry mode of instruction improved their science process skills, critical thinking, scientific attitude, achievement and laboratory skills than students taught by traditional approach (Nemar, 1980). Research skill includes critical thinking, problem solving, analysis and dissemination of data. Critical thinking is accepting nothing at face value, but rather examining the truth and validity of arguments and evaluating the relative importance of ideas. Critical thinking includes evaluating and weighing different sides of an argument, applying reason and logic to determine the merits of arguments, and drawing and evaluating conclusions from logical arguments and data analysis. Problem solving is the ability to identify, define and analyze problems, to create solutions and evaluate them, and to choose

Assistant Professor N.S.S. Training College Ottappalam.

the best solution for a particular context. Scientific analysis often requires mathematical techniques to manipulate data, such as graphing experimental results or using statistical tests to examine differences between sets of data. Thus, inquiry and research skills are interwoven. New knowledge and understanding of various concepts can be attained through the process of inquiry and research.

OBJECTIVES

The following are the objectives formulated for the study:

- > To study the effectiveness of Inquiry Method in improving the achievement of students in computer science.
- > To study the effectiveness of Inquiry Method in the development of research skills of higher secondary students.

HYPOTHESES

The following are the hypotheses formulated for the study:

- > The Inquiry Method is an effective strategy for teaching computer science at the higher secondary level.
- > The Inquiry Method for teaching computer science is an effective strategy for the development of research skills of higher secondary students.

METHOD

EXPERIMENTAL DESIGN

The experimental method was found most appropriate for the study. The non-equivalent pretest-post test group design was selected for the study. As it was difficult to arrange equivalent groups by

matching the students, the investigator conducted the experiment in intact classroom groups and then statistically equated the groups by applying the technique of Analysis of Covariance (ANCOVA) to analyse the pretest and post-test scores.

SAMPLE

Representative samples of 100 higher secondary students in standard XI were taken for the experiment. The total sample was divided into control group and experimental group, each group consisting of 50 students.

TOOL

The tools used for the study are:

1. Lesson Transcripts based on Inquiry Method
2. Lesson Transcripts based on Conventional Teaching Method.
3. Achievement Test in Computer Science. (Standardised by the investigator)
4. Inquiry Skills Test (Standardised by the investigator)
5. The Kerala University Verbal Group Test of Intelligence.

STATISTICAL TECHNIQUES

The investigator used the following statistical techniques for the study.

1. Measures of Central Tendency and Dispersion
2. Analysis of covariance (ANCOVA)

ANALYSIS

Based on the test scores, the analysis of variance, F-ratio and t-value were calculated and tabulated accordingly

Table 1
The Results of the Summary of Analysis of Variance of the Pretest and Post-test Scores in Computer Science of Pupils in the Experimental (IM) and Control (CTM) Groups

Source of variation	df	SS _x	SS _y	MS _x	MS _y	F _x	F _y
Among means	1	37.21	814.76	37.21	814.76	7.95**	80.98**
Within Groups	98	458.50	986.00	4.68	10.06		

**p<0.01
The obtained values of F_x and F_y indicate that there is significant difference between the experimental and control groups in their pretest scores and their post-test scores at 0.01 level for the total achievement in Computer science.

Table 2
The Results of the Summary of Analysis of Covariance of the Pretest and Post-test Scores in Computer Science of Pupils in the Experimental (IM) and Control (CTM) Groups

Source of variation	df	SS _{xy}	SS _{y.x}	MS _{y.x}	SD _{y.x}	F _{y.x}
Among means	1	1462.51	2065.07	2065.07	5.34	72.30*
Within Groups	97	86312.00	2770.61	28.56		

**p<0.01
The significant ratio for the adjusted posttest scores shows that the final mean scores of students in the experimental and control groups differ significantly after they were adjusted for the difference in the pretest scores. The significant F ratio necessitates to proceed for test of significance of the difference between the adjusted post-test means of the experimental and control groups.

Table 3
The Results of the Test of Significance of Difference between Adjusted Means for the Post-test Scores in Computer science of Pupils in the Experimental (IM) and Control (CTM) Groups

Group	N	M _x	M _y	M _{y.x}	SE _{Dy.x}	t-value
Experimental Group	50	22.84	32.44	32.08	0.76	10.26**
Control Group	50	21.62	23.92	24.27		

**p<0.01

The significant t-value and M_{y.x} scores of the two groups reveal that the mean post-test score of the experimental group is better than the control group in their achievement test in computer science (total score).

Table 4
The Results of the Summary of Analysis of Variance of the Pretest and Post-test Scores in Research Skills of Pupils in the Experimental (IM) and Control (CTM) Groups

Source of variation	df	SS _x	SS _y	MS _x	MS _y	F _x	F _y
Among means	1	54.76	37.84	54.76	37.84	10.56**	7.47**
Within Groups	98	508.40	496.72	5.19	5.07		

**p<0.01

The calculated values of F_x and F_y indicate that there is significant difference between the experimental and control groups in their pretest scores and their post-test scores at 0.01 level for the research skills.

Table 5
The Results of the Summary of Analysis of Covariance of the Pretest and Post-test Scores in Research Skills of Pupils in the Experimental (IM) and Control (CTM) Groups

Source of variation	df	SS _{xy}	SS _{y.x}	MS _{y.x}	SD _{y.x}	F _{y.x}
Among means	1	3.420	27.30	27.30	1.71	9.35**
Within Groups	97	3962.00	283.11	2.92		

**p<0.01

The significant F ratio for the adjusted post-test scores shows that the final mean scores of students in the experimental and control groups differ significantly after they were adjusted for the difference in the pretest scores. This necessitates proceeding for testing the significance of difference between the adjusted post-test means of the experimental and control groups.

Table 6
The Results of the Test of Significance of Difference between Adjusted Means for the Post-test Scores in Research Skills of Pupils in the Experimental and Control Groups

Group	N	M _e	M _c	M _a	SE _{D_g}	t-value
Experimental Group	50	6.16	7.52	7.52	0.25	7.68**
Control Group	50	6.04	5.60	5.60		

**p<0.01

From the significant t-value and the mean post-test score, it is obvious that the experimental group is better than the control group for the research skill.

FINDINGS

The following are the findings of the study:

1. The Inquiry Method is an effective strategy for improving achievement of students in computer science (M_e for IM = 32.08 and M_c for CTM = 24.27, t = 10.26, p<0.01 for achievement).
2. The Inquiry Method is found to be effective in the development of research skills of higher secondary students. (M_e for IM = 7.52 and M_c for CTM = 5.60, t = 6.67, p<0.01 for research skills).

CONCLUSION

The investigation leads to the conclusion that the Inquiry Method is effective in the teaching of Computer science. From the significant t-value and the mean post-test score (Table 6), it is obvious that the experimental group is better than the control group for the research skills. It may therefore be concluded that the Inquiry Method is more effective

in developing research skill of higher secondary students.

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Editorial

Living a Life of Values ...

Swami Vivekananda said, "Education should combine the scientific knowledge of the West with the spiritual wisdom of the East. Education should be built on a spiritual foundation. Till then, there is no salvation for the people. Only such education could discipline the intellect, nourish fellow-feeling and develop social responsibility."

Life is precious to everyone. If life is so precious, the values of life are even more precious. They are the guiding principle upon which we live. Values make up who we are. They define our character and hence considered to be so sacred and fundamental to an individual. They are something that a person considers to be extremely important for developing worthiness and respect for life. They are social principles and standards held by an individual which greatly influence the way he lives. Therefore they contribute directly to the quality of one's life. Real education comes from developing and living with these values. Honesty, integrity, respect for elders, respect for others, purity of mind, adherence to truth, discipline, devotion to duty, compassion, courage, modesty and forgiveness are some of the values that are to be fostered and promoted through the academic process of education.

Our present-day education system lacks value education. It is all about book learning and passing of examinations. It has neglected concern for values. It merely makes man into a money-making machine who pursues his living only for earning monetary benefits. It triggers a sense of competition to acquire position, fame, glory and money. It is responsible for creating restlessness, terrorism, corruption, social irresponsibility, disobedience, lack of respect and related such evils in man. The result is the deterioration of values in society. The advancement in science and technology has also

harm our value-atmosphere negatively by converting man into a mere materialistic being.

Concern for value education has been rapidly increasing in recent years as a result of a crisis of values that our society is currently experiencing. Good education is inconceivable if it fails to inculcate values essential to good life and social well-being. Hence education should accept that great responsibility of inculcating values in man. The incorporation of value education into the syllabus allows students to prepare themselves to become complete and balanced individuals useful to society with noble qualities and self-dependency. Value education helps them to lead a better life as responsible and useful citizens who could contribute to the welfare of society. Sai Baba says, "Promotion of human values should become an integral part of education. Education should strive to achieve national unity and national integration. Teachers and educationists should shed narrow loyalties and serve the society. By instilling human values into students and teachers, India can become an ideal country and an example to the whole world."

Values are not only caught but also taught. They should be developed systematically through planned efforts. Here teachers can play a prominent role in transmitting values to the minds of students. They can become powerful instruments in inculcating values in their children.

By instilling values they can mould virtuous citizens, who are an asset to their families and society. As per a saying, a poor teacher teaches, an average teacher teaches, a good teacher explains, an excellent teacher demonstrates and a great teacher inspires. To inspire the students, a teacher should assume twin roles - one to be a role model to others and the other to model himself - all by inculcation of values.

Thus values are regarded as enviable, imperative and inseparable from the life of the individual. It permeates the whole life, in developing the human personality in all its dimensions - intellectual, physical, social, ethical and moral. They are extremely important for our overall well-being and provide a structure for our life. Therefore, for the sustainable human development, there is a strong need for a sound value-based education. To conclude, we can quote the words of Mahatma Gandhi which signify the essence of values:

*Your beliefs become your thoughts,
Your thoughts become your words,
Your words become your actions,
Your actions become your habits,
Your habits become your values,
Your values become your destiny.*

Editor
Dr.V.S. Mini Kumari

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Capability Approach in Higher Education: An Empirical Analysis

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ABSTRACT

Capability approach involves looking beyond equal allocation of specific resources to minimize differences in the extent to which individuals face obstacles in achieving their capability potential. If one sees education as a preparation for adult life and agrees that certain capabilities are needed for life their higher education should be framed to help the individual to develop those capabilities. The present study is an attempt to assess various types of capabilities among the college students. The study revealed that majority of the students have low and middle level score in IAC. It was also found that male and female students do not differ significantly in the total score and also on the seven components of IAC (Inventory for Assessing Capability).

INTRODUCTION

Higher education plays a dominant role and is an integral part of development in every sphere of life. Not only does it play a catalytic role in ensuring faster economic and social development, but also plays a vital role in building our national character. The last quarter of the twentieth century has brought education high on the agenda of many nations. It occupies a pivotal position in the educational structure. In fact providing manpower for many areas of production, planning, management technological development, it influences practically every important

activity. India has a fairly large and diversified education system. Its billion-plus population consists of a higher proportion of children and young individuals especially in the age group of 6-24 years, which is the most prospective age group in terms of academic inclinations. This age group accounts for more than one third of the India's population and can be great resource for development and growth. Higher education is seen as a driving force for the technological progress and economic development of the nations. It gives returns which change the quality of life, individuals, society and nation as a whole. In addition, they inculcate the spirit of individual's dignity and self-respect, which in a true sense are hallmarks of a person's freedom. One simply cannot quantify these returns and try to judge them in terms of economic growth but they are the entities that build a nation. Higher education protects and strengthens human endeavors for a healthier and lasting civilized existence in the globe.

HIGHER EDUCATION IN INDIA

India's system of higher education is the third largest system in the world in terms of enrollment and largest in terms of number of institutions. But the absence of equity, quality and access plagues Indian higher education. Expansion of higher education is needed for extending its benefits to all communities but at the same time the quality in higher education has to be maintained. Higher education is all about establishing and expediting social mobility.

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For a pluralistic society which is democratically established, denial to provide means of social mobility is unacceptable as it is unfair. There should not be any waste of potential talent. Educational systems that do not take measures to increase the participation of underrepresented groups will become less competitive in every sense of the word.

The development of higher education in India, in the pre-independence and post-independence period, presents a picture of light and shade. Though the present university system in India owes its origin

to the British period, Indian tradition has always favored learning. The growth of higher education in India, in the last five decades, presents a very impressive picture. At the time of Independence, there were only 30 universities and 700 colleges in the country with 1.9 lakh students enrolled in higher education system. But, after independence there has been a phenomenal growth in all these numbers. At present the number of universities has gone up to 634 and number of colleges from 33,020 to 1,69,76,000.

Table 1
Growth of higher education in India

Year	Universities	Colleges	Students enrollment
1950-51	30	700	1,97,000
2010-2011	634	33,021	1,69,76,000

Table 1 shows the growth of higher education in India. At the same time higher education system in India has hardly done anything about 40 percent of people who live in poverty and are illiterate mainly due to lack of access to worthwhile education. Numerical deficiencies of higher educational institutions has been recognized as a hindrance to inclusive growth of the sector in India. National planning on expansion to be able to successfully address the short fall, should be assisted by foolproof data for prioritization of needs. Socio-economic development among deprived groups should be evolved through appropriate policies for their empowerment. Higher education, through its multifarious activities, could rectify the imbalances especially through research and development activities targeting them.

CAPABILITY APPROACH IN HIGHER EDUCATION

The educational policies are most often evaluated in terms of outcomes that bring the best result for a largest number of people nationally and internationally from growth in economy. Its central

tenet is that while evaluating educational policies one must look at each person not as a means to economic growth or social stability but as an end. We must evaluate the freedom people have to make decisions and also should work to remove obstacles that hinders their freedom, that is expand each individual's capabilities. Capability approach involves looking beyond equal allocation of specific resources to minimize differences in the extent to which individuals face obstacles in achieving their capability potential.

The education system needs to correct practices of educational exclusion by ensuring that all students are eligible for higher education, especially those from the deprived backgrounds are meaningfully included in the education programmes. Policy relating to governance of educational institutions should also ensure that parents and students are engaged in decision-making processes. Teachers should demonstrate their commitment to a culture of inclusivity by ensuring access and continuity of students at tertiary level of education. The curricula should reflect the philosophies of inclusive education in encouraging wide ranging perspectives and opinions. In evaluating higher education, the capability

approach distinguishes between the freedoms, or opportunities, an individual has from their actual achievements. Nussbaum (2001) states that society should guarantee to every individual a threshold level of central human capabilities. As higher education is inextricably linked to quality of life, it can make a substantial difference in the lives of people and address deep rooted causes of poverty and backwardness. It plays a role, Amartya Sen argues, "not only in accumulating human capital but also in broadening human capability" (1995). Mahatma Gandhi, the father of our nation, had specific perspectives in every aspect of life such as socio-economic, political and educational scenario. His educational thought is holistic in nature. It leads to the development of all aspects of human personality. In Gandhi's scheme of education, vocational training or work experience is of utmost importance. Vocationalization leads to economic self-sufficiency which is utmost important to tribal communities. Further the education as envisaged by Gandhi brings the idea of bringing changes in the community by an educated person which is similar to the concept of agency by Amartya Sen. The ultimate aim of self-reliance and self-realisation is the essential outcome of this method of education.

RATIONALE OF THE STUDY

The state of Kerala stands out as a model in the development of India. There has been wide appreciation for its achievements in social development, particularly with respect to the spread of education, health, services and implementation of land reforms. But these achievements have however not adequately translated to better achievements in higher education scenario. The common complaint among job recruiters during campus placements in colleges of Kerala is that they lack the essential skills for the jobs recruited. Further the growing violence and unrest in Kerala society necessitates the need to

undertake an analysis of capabilities achieved through higher education.

OBJECTIVES

1. To develop an inventory to measure student capabilities
2. To assess the various types of capabilities among the college students
3. To compare the capabilities of male and female college students

METHOD

Survey method was adopted for conducting the study.

SAMPLE

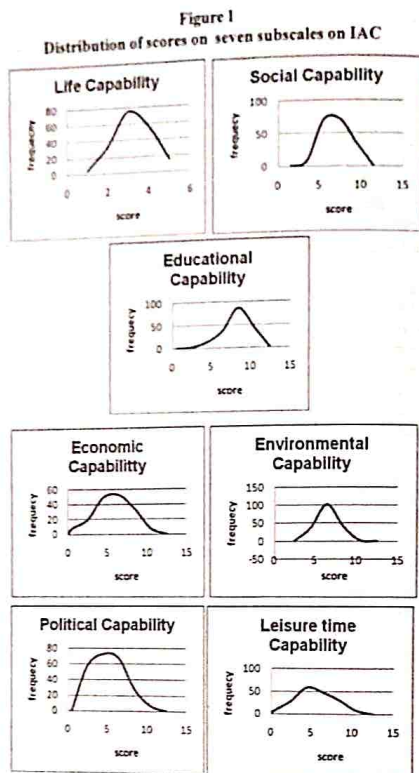
Sample for the study consisted of 183 college students selected at random from Arts and science colleges of Wayanad district of Kerala.

TOOL

For assessing capabilities an inventory was developed with seven components: life capability, social capability, educational capability, economic capability, environmental capability, political capability and leisure time capability based on the theoretical writings of Sen (1999), Nussbaum (2001), and Walker & Unterhalter (2007). A three-point Likert scale with 15 items with each component containing five items was developed for the present study.

RESULTS AND DISCUSSION

The data collected on capabilities of college students were analysed. The scores were subjected to statistical treatments with a view to reveal the important statistical properties possessed by them. The graphical presentation of the score distribution is shown in Figure-1 for the seven subscales on IAC.



The graphical presentation shown in Figure 1 indicates that the distribution of scores are almost normal on all the seven components of capability. The normality of score distributions was further tested by finding the measures of central tendency, skewness and kurtosis and was judged by the following criteria: (i). closeness of the measures of central tendency; (ii) low value of skewness and (iii) value of kurtosis (ku) being close to that of Normal Probability Curve (NPC) – ku for the normal curve is 0.263. The relevant statistics for IAC and seven subscales are given in Table 2

Table 2
Mean, Median, Mode, Standard Deviation, Skewness and Kurtosis of scores on the Inventory for Assessing Capabilities (IAC) and the seven subscales

Sl. No	Components	Mean	Median	Mode	Standard Deviation	Kurtosis	Skewness
1	IAC	44.75	45.00	44.00	6.497	0.289	0.357
2	Life capabilities	6.11	6.00	6.00	1.754	0.048	-0.077
3	Social capabilities	7.10	7.00	6.00	1.548	0.023	-0.762
4	Educational capabilities	5.61	6.00	6.00	2.325	-0.286	-0.358
5	Economic capabilities	8.05	8.00	8.00	1.689	-0.812	0.149
6	Political capabilities	6.52	6.00	6.00	1.304	0.096	-0.283
6	Environment capabilities	5.91	6.00	6.00	1.747	0.338	0.357
7	Leisure time capabilities	5.45	5.00	4.00	2.303	0.063	0.357

The closeness of the measures of central tendency, negligible value of skewness and the nearness of kurtosis to that of NPC indicate that the score distribution approximates normality to a great extent on IAC and the seven components.

Further the subjects were categorized into three groups on the basis of their scores obtained on IAC. This was done by the conventional procedure of standard deviation (s) distance from mean. For this the mean value of the scores in IAC 44.75 was taken and students who got above 44.75 - s, i.e. 51.247, were taken as High group; those with scores below the score of 44.75 - s, i.e. 38.253, were taken as low group; those scoring between 51.247 and 38.253 were taken as middle group.

Table 3
Classification of respondents based on scores on IAC

Group	Low	Medium	High	Total
Frequency	70 (%)	67 (%)	46 (%)	183

Comparison of the scores of IAC between samples based on gender

To analyse the gender difference in the scores of IAC, the variable gender being dichotomous in nature, two-tailed test of significance of difference between mean scores of large independent samples was applied and the details of this analysis are presented in Table 4.

Table 4
Gender-wise analysis of the test of significance of scores on IAC

Gender	N	Mean	SD	Critical Ratio	Significance
Male	85	47.7308	7.117	1.312	N.S*
Female	118	45.4585	6.093		

*Not significant

The critical ratio of the test of significance of difference between the mean scores of male and female students is found to be 1.312 which is less than 1.96, the value required for significance at 0.05 level. This indicates that there is no statistically significant difference in the scores of IAC between male and female students.

Comparison of scores on components of IAC

The scores on seven components of IAC were compared between male and female students. Two-tailed test of significance of large independent samples was used for the purpose. The results are given in Table 5.

Table 5
Gender-wise analysis of test of significance for scores on seven components of IAC

Component	Group	N	M	SD	Critical Ratio
Life capability	Male	85	2.25	1.720	1.048
	Female	118	2.71	1.788	
Social capability	Male	85	2.25	1.654	1.159
	Female	118	2.01	1.485	
Educational capability	Male	85	3.18	1.914	0.722
	Female	118	2.48	1.728	
Economic capability	Male	85	5.89	2.411	1.102
	Female	118	5.47	2.279	
Environment capability	Male	85	2.02	1.784	0.647
	Female	118	1.85	1.742	
Political capability	Male	85	2.54	1.425	0.106
	Female	118	2.72	1.239	
Lesson time capability	Male	85	5.40	2.500	0.158
	Female	118	5.47	2.148	

The critical ratios of the test of significance of difference between scores of female and male students for the seven components of IAC were not found statistically significant at any level of significance. This indicates that there is no gender difference in capability on its various components among the college students.

FINDINGS AND THEIR EDUCATIONAL IMPLICATIONS

Analysis of students' capabilities revealed that the male and female students do not differ significantly in the total scores on the inventory and also on the seven components of IAC. This confirms the fact that in Kerala women are given equal opportunities in higher education and are not discriminated based on gender. Another significant finding is that majority of students have low and middle level scores in IAC. This shows that there is a need for further measures to improve their capabilities. Higher education develops capabilities which ultimately lead to human development. The capabilities developed are influenced by factors like resources available to a person, the environment and personal attributes. Students are also affected by the opportunities available to them like type of schooling, courses of study available in higher education, quality of higher education, the attitudes and value towards education and the facilities and environment in the institutions. Curricular and co-curricular programs should be planned in such a way that can address the physical, mental, emotional and spiritual needs of students. Students should not feel alienated in the higher education institutions and there is a need to foster a culture that is congenial to all students. Support services should be provided to sustain them in colleges. Students need structures that they will help them to build the social and cultural capital, necessary for engagement and success in and beyond the classroom. Higher education can cultivate and offer learning strategies that is useful beyond their studies throughout their life. This empirical study also revealed that all the colleges have student clubs and associations. These should be made more active and students should be positively encouraged to

participate in such programmes to develop their social and political capabilities. Colleges follow traditional class structure which continues to reinforce a dependent rather than an empowered attitude. Student-centred instruction not only encourages a deeper understanding of the subject matter, but also allows the student an opportunity to experience the confidence they need in later life. Vocationalisation leads to economic self-sufficiency. Gandhiji believed that the students must be trained to become an earning unit after the completion of their studies. Unemployment problem could be eradicated through need-based education. Vocationalisation and skill enrichment during higher education can improve the economic capabilities of students. Agriculture and related activities are the main occupations in Wayanad. Therefore vocational courses to preserve the occupational practices and to teach modern methods to reform them are necessary. Environmental education is a must for sustainable development. Gandhian vision for life, education through life and education throughout life should be the motto for higher education.

CONCLUSION

Higher education witnessed tremendous innovation and expansion at the turn of the new millennium. Today, the universities are the assess for human resource development, technological advancement and socio-political development. But, they are also faced with the challenges to meet the need for productive employment, effective use of information technology and research contributions to face the demands of the knowledge society. Higher education institutions have the main responsibility for equipping students with advanced knowledge and skills required for positions of responsibility. The capability approach in higher education should yield the students for job orientation and skills to face life. They must have the potential to develop capabilities that foster progress and prosperity. The Gandhian concept of basic education can be the foundation for such an education but Sen's concept of capability approach in higher education can make them fully functioning individuals. This can promote self-directed

lifelong learning for socio-economic development and leadership initiatives among the students.

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Awareness and Attitude of the Faculty Members of Arts and Science Colleges towards Open Educational Resources

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ABSTRACT

Open Educational Resources are teaching, learning or research materials that are in the public domain or released with an intellectual property licence that allows for free use, adaptation and distribution. The present study made an attempt to analyse the awareness and attitude of the faculty members of Arts and science colleges towards Open Educational Resources. The survey was conducted among the samples of 98 faculty members of Arts and science colleges in Kanyakumari district using self-structured questionnaire. The study revealed that awareness, usage and attitude among the faculty members are only at a low level.

INTRODUCTION

The concept of open educational resources is fairly simple and it can be explained as an idea for sharing the knowledge for free through the Internet for the benefit of society as a whole. Open Educational Resources are defined as "technology-enabled, open provision of educational resources for consultation, use and adaptation by a community of users for non-commercial purposes" (UNESCO, 2002). They are typically made freely available on the web or the Internet. Their principal use is by teachers and educational institutions. Open educational resources include learning objects such

as lecture material, references and readings, simulations, experiences and demonstrations, as well as syllabi, curricula and teachers' guides.

OPEN EDUCATIONAL RESOURCES (OERs)

Open educational resources are many type of educational materials that are in the public domain or intended with an open licence. The nature of these open materials means that anyone can legally and freely copy, use, adopt and re-share them. Open educational resources range from textbooks to curricula, syllabi, lecture notes, assignments, tests, projects, audio, video and animation (UNESCO, 2013). Open-access literature is digital, online, free of charge, and free of most copyright and licensing restrictions (Suber, 2007). Organization for Economic Cooperation and Development (OECD) define open educational resources as "digitized materials offered freely and openly for educators, students and self-learners to use and reuse for teaching, learning and research". Open access is a very important part of the knowledge transfer and it is the best way to bring the concepts of Open Educational Resources to the wider public.

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NEED AND SIGNIFICANCE OF THE STUDY

Open access is an alternative form of scholarly communication that emerged from the traditional mode of scholarly publishing. The basic concept of open access is the online accessibility to scientific literature for readers at no charge and without technical barriers and it is made into reality with the help of developments in information and communication technology. Open access to knowledge is a key contributor in providing universal access to information and knowledge. The issue of open access is recently gathering global encouragement and support. Parallel to other scholarly publications media, open access becomes frequently used resources for the intellectual productivity by the academic community in the higher education system. Several initiatives have been initiated at the national as well as global level for the promotion and development of open access educational resources. Open access educational resources in the form of open access journals and similar sources are used by the academic community for the day-to-day teaching and learning. Several studies have been conducted both in developed as well as in developing countries like India about various aspects of open access movement and open access educational resources. Now-a-days, most of the users are not familiar with open educational resources movement and also its usage, they are addicted to the traditional commercial publication media and software packages. Some of representative studies were channelled towards challenges of open access to knowledge faced by the librarians (Uzuegbu & McAlbert, 2012); promoting open access to research in academic libraries (Jain, 2012); awareness and use of open access journals by LIS students at the university of Ibadan, Nigeria (Ivwigheghweta & Onoriode, 2012); acceptance and usage of open access scholarly communication by postgraduate students in Tanzania (Dulle, 2011), and open access journals through web portal at the Indian Statistical Institute (Meera & Ummer, 2010). But a closer analysis of available studies shows that study related to

awareness and attitude of the faculty members of Arts and Science colleges towards open access educational resources are scanty. Hence, the investigators are motivated to fill this gap and decided to conduct a study on open access educational resources among the faculty members.

OBJECTIVES OF THE STUDY

1. To determine the level of awareness among the faculty members of Arts and Science Colleges towards open educational resources.
2. To analyse the usage of open access educational resources by the faculty members.
3. To determine the attitude of the faculty members towards open educational resources.
4. To compare the awareness and attitude of the faculty members towards open educational resources with respect to (a) gender, (b) locale, (c) age, (d) discipline, and (e) information literacy.

HYPOTHESES

1. The level of awareness among the faculty members towards open access resources is satisfactory.
2. Usage of open access educational resources is only at minimum among the faculty members.
3. Faculty members have favourable attitude towards open access resources.
4. There is no significant difference among the faculty members in the mean scores of awareness, and attitude towards open access resources with respect to gender, locale, discipline, and information literacy.

METHOD

The present study intends to analyse user awareness and attitude towards open educational resources and hence the method used for the present study is survey method.

SAMPLE

The sample for the present study consisted of 125 faculty members of Arts and Science Colleges in Kanyakumari District.

TOOLS

The primary data were collected through the well-structured questionnaire prepared by the investigator in consultation with experts in the field. The questionnaire consists of demographic variables of the respondents, awareness of electronic resources, level of information literacy and attitude scale. The attitude scale has twenty statements of Likert type.

STATISTICAL TECHNIQUES

The collected data were analysed using appropriate statistical techniques using the software SPSS 17.0

ANALYSIS AND INTERPRETATION OF DATA

The primary data collected from the respondents were analysed.

I. DISTRIBUTION OF RESPONDENTS BASED ON DEMOGRAPHIC VARIABLES

The present study analyses the awareness and attitude of the faculty members in terms of selected demographic variables. The details are presented in the table 1.

Table 1
Distribution of respondents based on demographic variables

S.No.	Variables	Category	N	Percentage
1	Gender	Male	46	47
		Female	52	53
2	Locality	Rural	46	47
		Urban	48	49
3	Age	Between 26-35	32	32.7
		Between 36-45	35	36.7
		Above 46	32	31.6
4	Discipline	Arts & Humanities	52	53
		Science	46	47

The table 1 discloses that respondents for the study consists of 46 (47%) males and 52 (53%) females. 32 (32.7%) respondents belong to the age in between 26-35, 32 (36.7%) in between 36-45 and 32 are above 46. Moreover, 52 (53%) respondents belong to Arts & Humanities and the remaining belong to Science discipline.

2. LEVEL OF INFORMATION LITERACY

Information literacy of the respondents is an essential pre-requisite skill for an effective utilization of electronic resources especially the open educational resources. The level of information literacy among the respondents was studied and the details are provided in the table 2.

Table 2
Level of Information Literacy

S.No	Level of Information Literacy	Number of respondents	Percentage
1	Low	47	47.9
2	Average	42	42.9
3	Above Average	9	9.2
Total		98	100

It is clear from the table 2 that only 9 out of 98 respondents have the information literacy skill 'above average', 42 out of 98 have the information literacy skill at 'average' level and 47 respondents have 'low' in information literacy skills. Ninety-one per cent of the respondents have either average or low level in information literacy.

3. AWARENESS TOWARDS OPEN EDUCATIONAL RESOURCES (OERs)

Open educational resources are the directory of open access journals, repositories of institutions as well as private, open archives, open e-books and so on. Awareness of the faculty members towards these open educational resources are summarised in the table 3.

Table 3
Awareness towards Open Educational Resources

S.No	Open Educational Resources	Aware	Unaware	No Idea
1	Open Access Journals	48(48.9)	32(32.7)	18(18.4)
2	Open Repositories	40(40.9)	51(52)	7(7.1)
3	Institutional Repositories	60(61.2)	33(33.7)	5(5.1)
4	Personal repositories/websites	33(33.7)	41(41.8)	24(24.5)
5	Open Archives	27(27.6)	41(41.8)	30(30.6)
6	Open e-books	53(54.1)	45(45.9)	-

Items inside the brackets are in percentage

The table 3 discloses that majority of the faculty members of Arts and Science colleges are unaware of the varied open educational resources except institutional repositories such as INFLIBNET N-List (61.2%) and open e-books (54.1%). Some of the respondents have no idea about various open educational resources.

4. USAGE OF OPEN EDUCATIONAL RESOURCES BY THE FACULTY

Awareness of open educational resources among the faculty members of Arts and Science colleges reveals that majority of them are unaware of the varied open educational resources. In this context, their usage by the faculty members is analysed and presented in the table 4.

Table 4
Usage of Open Educational Resources by the Faculty

S.No	Usage of OERs	No. of respondents	Percentage
1	Very Often	3	3.1
2	Often	29	29.6
3	Rarely	49	50
4	Never	17	17.3
Total		98	100

The table 4 indicates that 29.6 per cent of the respondents uses the open educational resources often, 3 out of 98 uses the OERs very often, 49 out of 98 uses the OERs rarely and 17 out of 98 never uses the OERs. Therefore it is interpreted that the lower awareness among the faculty members leads to the low usage of the OERs when compared to traditional sources.

5. ATTITUDE TOWARDS THE OERs AND CLASSIFICATION OF OERs SCORE

Attitudes of the respondents towards the open educational resources are further studied and the scores obtained by the faculty members of Arts and Science colleges are classified into three groups namely low, medium and average. The details are summarised in table 5.

Table 5
Attitude towards OERs and classification of Score

S.No	Categorisation	Values
1	Mean	48.23
2	Standard Deviation	4.13
3	Percentiles 33.33	39
4	Percentiles 66.33	51
5	Low <39	41 respondents
6	Medium 39-51	66 respondents
7	High >51	11 respondents

The table 5 depicts the mean and standard deviation of attitude score of the faculty members towards the OERs. The mean score reveals that the attitude of the faculty members of Arts and Science College towards the OERs is only at moderate level. It also shows that only 11 out of 98 respondents have high attitude, 41 out of 98 have low attitude and 66 out of 98 have moderate attitude towards the OERs.

6. COMPARISON OF THE ATTITUDE SCORES TOWARDS OERs

The attitude scores of the respondents are further compared with respect to the selected demographic variables. The details are given in the table 6.

Table 6
Comparison of the Attitude Scores towards OERs

S.No	Variable	Category	N	Mean	S.D.	t Value	Remarks
1	Gender	Male	46	49.4	4.27	2.50*	Significant
		Female	52	47.3	4.03		
2	Locality	Rural	50	47.4	4.1	1.84	Not Significant
		Urban	48	48.9	4.15		
3	Discipline	Arts & Humanities	52	46.8	4.05	3.46*	Significant
		Science	46	49.7	4.22		

* indicates the significance at 0.05 level

Table 6 indicates that the faculty members differ in their attitudes towards the OERs with gender ($t=2.50$; $p<0.05$), and discipline ($t=3.46$; $p<0.05$). Hence the part of the hypothesis is rejected at 0.05 level.

7. COMPARISON OF THE ATTITUDE SCORES BASED ON AGE

Similarly agewise difference in attitude score of the respondents was compared using ANOVA. The details of the ANOVA are presented in table 7.

Table 8
Comparison of the Attitude score based on age

Age	N	Mean	S.D.	Source of Variation	df	Mean Square	F value	P value
Between 26-35	32	50.8	4.27	Between Groups	2	320.492	18.92*	<0.05
Between 36-45	35	49.17	3.7					
Above 46	32	44.7	4.5	Within Groups	97	17.54		

* indicates the significance at 0.05 level

It is clear from the table 8 that the calculated value of F is significant at 0.05 level ($F=18.92$; $p<0.5$). This shows that faculty members differ in their attitudes towards the OERs with respect to age.

FINDINGS

Based on the analysis, the following are the findings of the study.

1. Majority of the faculty members of Arts and Science colleges have either an average or low level of information literacy skills in the digital environment.
2. Majority of the faculty members of Arts and Science colleges are unaware of the varied open educational resources except institutional repositories such as INFLIBNET N-List (61.2%) and open e-books (54.1%).
3. Usage of open educational resources (OERs) is only minimum among the faculty members.
4. Majority (66 out of 98) of the faculty members have attitude score towards the OERs only at a medium level.

Faculty members of Arts and Science colleges differ significantly in attitude towards open educational resources with respect to demographic variables gender, age, and discipline.

CONCLUSION

The concept of open educational resources (OERs) is an innovative approach for the effective teaching and learning. It is an effort of the modernisation of the higher education system with the help of modern ICT. The study revealed that awareness, usage and attitude towards the OERs among the faculty members of Arts and Science colleges are only at low. Creating proper awareness and developing a positive mindset among the faculty members of Arts and Science colleges towards the OERs, helps in the moulding of younger generations.

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Relationship between Management Skills and Achievement in Business Studies of Higher Secondary Students in Kollam District

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ABSTRACT

Management skills are sets of qualities and attributes in the personality of managers that enable them to effectively manage the working of a firm. Good managerial skills can create a world of difference in the efficiency and performances of the organisation. Business studies help an individual to make more informed decisions in the everyday business of living. It gives a better understanding of the world of work. It encourages one to think about how and why people start up in business and why they might also consider starting a business. In the present study, the investigators made an attempt to study the relationship between Management Skills and Achievement in Business Studies of Higher Secondary Commerce students. The results revealed that Management Skills and Achievement in Business Studies of Higher Secondary Commerce students are positively and significantly correlated with each other.

INTRODUCTION

Management skills, in other words, are the building blocks upon which effective management rests. Management skills are the means by which managers translate their own style, strategy, and favourite tools or techniques into practice.

Business studies are taught to the students to get an idea about business and all the aspects of

business methods and techniques to manage a business. It also helps to acquire different skills that are required to run and manage a business and provide ample knowledge and abilities to understand, analyze and interpret different aspects of business and management of business. Teaching business studies enables students to acquire managerial skills, its tools, techniques and methods to perform management function effectively. The present study is the analysis of the relationship between the Management Skills and Achievement in Business Studies of Higher Secondary Students in Kollam District.

Review of literature shows that a large number of research studies have been conducted on Business Studies and Management Skills. Studies conducted by researchers like Whitley (1998), Jean Brittan Leslie (2002), Mujtaba (2009), Sayed Reza Sayed Javadin (2010), Kamvble (2011) are examples of representative studies conducted in this area. However studies conducted on the relationship between Achievement in Business studies and Managerial skills are found to be rare and this factor motivated the investigator to take up the study. The study is significant in the sense that it will open to students the doors of business studies to enter the world of management enabling the various managerial skills. The study will also help to find out how far the higher secondary syllabus in business studies achieves the learning objectives.

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OBJECTIVES

- To study whether there is any significant relationship between the Management Skills and Achievement in Business Studies for the whole sample and relevant sub samples of higher secondary commerce students.
- To study whether there is any significant difference in the relationship between the Management Skill and Achievement in Business Studies of the comparable pairs of subsamples.
- To study whether there is any significant difference in the Achievement in Business Studies in three levels of Management Skill groups.
 - High Management Skill Group – Low Management Skill Group
 - Low Management Skill Group – Average Management Skill Group
 - High Management Skill Group – Average Management Skill Group

HYPOTHESES

- There exists a significant relationship between the Management Skills and Achievement in Business Studies for the whole sample and relevant subsamples.
- There exists a significant difference in the relationship between Management Skills and Achievement in Business Studies of the comparable pairs of subsamples.
 - Male - Female
 - Urban – Rural
 - Aided school – Government School
- There exists a significant difference in Achievement in Business studies of the pairs of subsamples taken in terms of the three levels of Management Skill groups.
 - High Management Skill Group – Low Management Skill Group

- Low Management Skill Group – Average Management Skill Group
- High Management Skill Group – Average Management Skill Group

METHOD

Normative survey method was employed for conducting the study.

SAMPLE

A representative sample of 400 students of Higher secondary Commerce stream were selected from different schools in Kollam district giving due representation to gender, locale, and type of schools.

TOOLS

- Management skill test based on dimensions – Administrative Skill, leadership skill, Interpersonal Skill and communication Skill.
- Achievement test scores of students in business studies collected from school records.

STATISTICAL TECHNIQUES

- Pearson Product Moment Coefficient of correlation.
- Fishers 'r' – test for significance of difference between two correlation coefficients.
- 't' test for the significance of difference between two means.

RESULTS AND DISCUSSION

The data collected were analyzed using appropriate statistical techniques and the scores obtained were interpreted for drawing valid conclusions. The findings arrived at on the basis of statistical techniques employed are comprehended as follows:

Table 1
Relationship between Management Skills and Achievement in Business Studies (whole sample & subsample)

Sample	Correlation Coefficient (r)	Level of Significance
Whole	0.0678	0.01 level
Male	0.664	0.01 level
Female	0.640	0.01 level
Rural	0.675	0.01 level
Urban	0.702	0.01 level
Government	0.684	0.01 level
Aided School	0.698	0.01 level

The correlation coefficient (r) between Management Skills and Achievement in business studies for the whole sample and subsamples was found to be substantial or marked. This shows that there is a marked positive correlation between Management Skills and Achievement in Business Studies of Higher Secondary School Commerce Students. Hence the hypothesis formed "There exists a significant relationship between the Management Skills and Achievement in Business Studies of Higher Secondary School Commerce Students" is accepted.

Table 2
Comparison of relationship between Management Skills and Achievement in Business Studies with respect to gender, locale and type of management School.

Sample	r value	z value	Critical Ratio	Level of Significance
Male	0.66	0.79	0.29	Not Significant
Female	0.64	0.76		
Rural	0.67	0.81		
Urban	0.70	0.87	0.59	Not Significant
Government	0.68	0.83	0.19	Not Significant
Aided	0.69	0.85		

From Table. 2 it is evident that the critical ratio obtained for the subsamples was not significant at 0.01 level. This means that the difference in the relationship between the variables for the subsamples is not significant. Hence the hypothesis, "There exists a significant difference in the relationship of Management

Skills and Business Studies of Higher Secondary Commerce students between the comparable pairs of subsamples based on gender, locale and type of school" is rejected.

Table 3
Mean Scores of Achievement in Business Studies for the three levels of Management Skill Group

Groups	Sample Size	Mean	SD	C.R.	Level of Significance
High Management Skill Group	67	73	10	4.90	0.01
Average Management Skill Group	263	66	12		
Low Management Skill Group	70	60	11	5.97	0.01
Average Management Skill Group	263	66	12		
High Management Skill Group	67	73	10	9.30	0.01
Low Management Skill Group	70	60	11		

From Table.3 it is observed that the critical ratio obtained for the three levels of Management Skill group was significant at 0.01 level. This means that the three Management Skill groups differ in their Achievement in Business Studies. Hence the hypothesis "There exists a significant difference in the mean scores of Achievement in Business Studies of the three Management Skill Groups" is accepted.

CONCLUSION

The results of the study revealed that there is a significant relationship between Management Skills and Achievement in business Studies. These findings will help the teachers and administrators to take better decisions and actions regarding the management skill development strategies promoting student achievement. The study and its findings may challenge curriculum planners to continue to create

better curriculum emphasizing managerial skill development. The governmental, non-governmental and other agencies can consider the findings of the study in planning and implementing programs for the Management Skill development of students belonging to rural areas.

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Awareness on Learning Disabilities of Students Among Primary Schoolteachers

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ABSTRACT

The study was intended to investigate the awareness on learning disabilities among primary schoolteachers. The sample for the present study comprised 300 primary schoolteachers drawn from different schools. The tool used in the present study is the Learning Disability Awareness Test (LDAT) prepared by the investigators. The tool consists of three dimensions – Dyslexia awareness (awareness regarding reading disabilities), Dysgraphia awareness (awareness regarding writing disabilities) and Dyscalculia awareness (awareness regarding arithmetic disabilities). The data were analysed using t-test and ANOVA. The findings of the study revealed that the background variable Gender had significant difference with regard to awareness among primary schoolteachers on learning disabilities, but the background variables such as type of management, location of residence and educational qualification had no significant difference with regard to awareness among primary schoolteachers on learning disabilities. The investigators conclude that primary schoolteachers need to be more aware about the learning disabilities that hamper the academic performance of their students.

INTRODUCTION

All pupils are unique individuals with different patterns of strengths and weaknesses. They may have multifarious abilities or disabilities in different areas of learning. They differ considerably in their

cognitive abilities. Some children learn quickly while others may struggle even to master basic concepts and academic skills. Some may excel in one area but may perform poorly in some other area of learning. They also show a variety of emotional characteristics. Some appear to be more confident about their abilities while others may lack self-confidence because of their weaknesses in learning. This may be due to the presence of a learning disability which hinders the abilities of children in their performance in academics.

Learning disability is a challenging area of special education which is always associated with academic performance. Among students with disabilities, learning-disabled is the largest group currently being identified and provided special education services. Students with learning disabilities may be identified at any age, but most of them are first noticed in early elementary school grades (Ysseldyke & Algozzine, 2006).

Even though a learning disability may occur with other handicapping conditions or environmental influences, it is not the direct result of these conditions or influences. A specific learning disability is marked by significant difficulties in the acquisition of basic skills in reading, written language or mathematics. These difficulties occur despite adequate instruction and normal intelligence. A specific learning disability is due to a dysfunction in the way the student processes and receives information (Hannell, 2006).

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Learning-disabled children are ignored in the classroom due to lack of skills and may be often considered to be lazy, inattentive or stupid by their teachers. There is a great difference between their expected performance and their actual performance since there is a great discrepancy between their ability and achievement. Children with learning disabilities may be very slow and lag far behind when compared to other children of their age. This isn't because the child is stupid, lazy or careless. The child just learns differently (Chadha, 2006).

The difficulties that children face in the learning process have begun to attract serious attention. It has become a real educational handicap and a widespread issue in today's society. It is a great challenge on the part of teachers and trained specialists to deal with those children with learning disorders by using innovative teaching strategies.

NEED AND SIGNIFICANCE OF THE STUDY

The destiny of a nation lies in the hands of teachers. They play an important role in the progress of a nation. Teachers are the moulders of tomorrow's citizens. They should have a clear picture of each and every child in his/her classroom with varying abilities or disabilities. Children with learning disabilities can be found in most schools. They need to be specially helped to confront their difficulties through different attitudes and teaching methods. This study will be of relevance to teachers in different educational environments dealing with children facing difficulties in learning.

The awareness about learning problems of such children is essential for all schoolteachers. This study will be highly beneficial in the current educational scenario as it helps teachers to seek knowledge about learning disabilities and to ensure the right treatment or instruction for the learning-disabled to cope with their problems. If schoolteachers gain the insight into the difficulties their pupils face and help them bring out their best, these children can be enabled to integrate into the rest of society and achieve positions of eminence.

A learning disability is found across all ages and in all socio-economic classes. Learning disabilities may affect individuals differently at different stages of life – early childhood, elementary school years, adolescence and adulthood. Students with learning disabilities may be identified at any age, but most of them are first noticed in early elementary school grades. If the problems go undetected, they may persist on to higher stages of education which leads to failure in achievement. So they need to be identified in the earlier stages of learning and hence the teachers at the primary school level need to have awareness regarding the problems faced by such children.

Awareness of the difficulties that learning-disabled children face can enable teachers to open their eyes more to the ways of helping them. The investigators felt that it is necessary to find out teachers' knowledge regarding these problems of students and to know how far they are aware of learning handicaps of children. Therefore a study on awareness of primary schoolteachers on learning disabilities of students is found to be significant.

OBJECTIVES OF THE STUDY

The following are the objectives of the present study.

- 1) To study the significant difference, if any, in the awareness on learning disabilities of students among primary schoolteachers due to variation in Gender with regard to the dimensions – i) Dyslexia awareness, ii) Dysgraphia awareness and iii) Dyscalculia awareness.
- 2) To study the significant difference, if any, in the awareness on learning disabilities of students among primary schoolteachers due to variation in type of management with regard to the dimensions-i) Dyslexia awareness, ii) Dysgraphia awareness and iii) Dyscalculia awareness.
- 3) To study the significant difference, if any, in the awareness on learning disabilities of students among primary schoolteachers due to variation in location of residence with regard to the dimensions – i) Dyslexia awareness, ii)

Dysgraphia awareness and iii) Dyscalculia awareness.

- 4) To study the significant difference, if any, in the awareness on learning disabilities of students among primary schoolteachers due to variation in educational qualification with regard to the dimensions – i) Dyslexia awareness, ii) Dysgraphia awareness and iii) Dyscalculia awareness.

METHOD

The investigators adopted the survey method of research for conducting the study.

TOOL

The tool used in the present study is the Learning Disability Awareness Test (LDAT) prepared by the investigators. The tool was constructed and validated by the investigators.

The tool consists of three dimensions:

RESULTS AND DISCUSSION

- i) Dyslexia awareness (awareness regarding reading disabilities)
- ii) Dysgraphia awareness (awareness regarding writing disabilities)
- iii) Dyscalculia awareness (awareness regarding arithmetic disabilities).

A total of 10 questions were prepared by the investigators on each of the above dimensions to test the awareness on learning disabilities of students among the primary school teachers.

SAMPLE

The sample for the present study comprised 300 primary schoolteachers drawn from different schools in Kanyakumari district.

STATISTICAL TECHNIQUES EMPLOYED

The statistical techniques used for analyzing the data were t test and ANOVA.

Table 1
Difference between male and female primary schoolteachers in their awareness on learning disabilities

Dimensions	Gender	Mean	SD	N	Calculated 't' Value	Level of significance
Dyslexia Awareness	Male	5.93	0.50	136	3.24	0.01
	Female	6.12	0.46	164		
Dysgraphia Awareness	Male	5.28	0.50	136	3.30	0.01
	Female	5.49	0.63	164		
Dyscalculia Awareness	Male	5.41	0.61	136	3.54	0.01
	Female	5.67	0.65	164		
Total	Male	16.69	1.32	136	4.02	0.01
	Female	17.30	1.31	164		

It is inferred from the above table that the calculated t-value is greater than the table value at 1% level of significance for the dimensions Dyslexia awareness, Dysgraphia awareness and Dyscalculia awareness

and in total. It shows that there is significant difference between male and female primary schoolteachers in their awareness on learning disabilities of students.

Table 2
Difference between primary schoolteachers of aided and private schools in their awareness on learning disabilities of students

Dimensions	Type of Management	Mean	S.D	N	Calculated 't' Value	Remark
Dyslexia Awareness	Aided	6.04	0.47	122	0.23	Not Significant
	Private	6.03	0.50	178		
Dysgraphia Awareness	Aided	5.34	0.55	122	1.31	Not Significant
	Private	5.43	0.60	178		
Dyscalculia Awareness	Aided	5.55	0.65	122	0.09	Not Significant
	Private	5.56	0.64	178		
Total	Aided	17.02	1.34	122	0.02	Not Significant
	Private	17.02	1.34	178		

It is inferred from the above table that the calculated t-value is less than the table value at 1% level of significance for the dimensions Dyslexia awareness, Dysgraphia awareness and Dyscalculia awareness and in total. It shows that there is no significant difference between primary schoolteachers of aided and private schools in their awareness on learning disabilities of students

Table 3
Difference between primary schoolteachers of rural and urban locality in their awareness on learning disabilities of students

Dimensions	Location of Residence	Mean	S.D	N	Calculated 't' Value	Remark
Dyslexia Awareness	Rural	5.98	0.51	50	0.82	Not Significant
	Urban	6.04	0.48	250		
Dysgraphia Awareness	Rural	5.38	0.66	50	0.20	Not Significant
	Urban	5.40	0.57	250		
Dyscalculia Awareness	Rural	5.40	0.53	50	0.14	Not Significant
	Urban	5.58	0.67	250		
Total	Rural	16.62	1.26	50	0.46	Not Significant
	Urban	17.11	1.35	250		

It is inferred from the above table that the calculated t-value is less than the table value at 1% level of significance for the dimensions Dyslexia awareness, Dysgraphia awareness and Dyscalculia awareness. It shows that there is no significant difference between primary schoolteachers of rural and urban locality in their awareness on learning disabilities of students.

Table 4
Difference between primary schoolteachers with educational qualification UG and PG in their awareness on learning disabilities of students

Dimensions	Educational Qualification	Mean	S.D	N	Calculated 't' Value	Remark
Dyslexia Awareness	UG	5.54	0.51	122	0.87	Not Significant
	PG	5.67	0.48	178		
Dysgraphia Awareness	UG	5.34	0.55	122	1.32	Not Significant
	PG	5.43	0.60	178		
Dyscalculia Awareness	UG	5.55	0.65	122	0.09	Not Significant
	PG	5.56	0.64	178		
Total	UG	17.03	1.33	122	0.02	Not Significant
	PG	17.03	1.33	178		

It is inferred from the above table that the calculated t-value is less than the table value at 1% level of significance for the dimensions Dyslexia awareness, Dysgraphia awareness and Dyscalculia awareness. It shows that there is no significant difference between primary school teachers with educational qualification UG and PG in their awareness on learning disabilities.

FINDINGS

- 1) There is significant difference between male and female primary schoolteachers in their awareness on learning disabilities of students.
- 2) There is no significant difference between primary schoolteachers of aided and private schools in their awareness on learning disabilities of students.
- 3) There is no significant difference between primary schoolteachers of rural and urban locality in their awareness on learning disabilities of students.
- 4) There is no significant difference among primary schoolteachers with educational qualification UG, PG and above PG in their awareness on learning disabilities of students.

CONCLUSION

The findings of the study revealed that the background variable Gender had significant

difference with regard to awareness on learning disabilities of students among primary schoolteachers. The background variables such as type of management, location of residence, educational qualification had no significant difference with regard to on learning disabilities of students among primary schoolteachers.

Schoolteachers need to be more aware of the learning handicaps in children to open their eyes more to the ways of helping them. As a teacher learns about the difficulties faced by each student in learning the school subjects, he/she can adopt the right kind of instruction to cater to their specific needs. The task of teaching children with learning disabilities is indeed challenging and by becoming aware of the strategies that can mitigate the difficulties, instructors can grow in confidence in accomplishing this complex task.

Teachers have a great role to play in moulding the mindset of children with learning disabilities in such a way as to enable them to convert their

challenges into opportunities for their intellectual and emotional development. They need to provide their students with positive role models and consistently treat individual differences and needs with patient acceptance and special effort. Teachers should create a conducive learning atmosphere for students to develop a positive attitude towards the subjects of study. It is also recommended for teachers to learn how to control their feelings when they deal with weak learners. The investigators finally conclude that primary schoolteachers need to be more aware about the learning disabilities that hamper the academic performance of their students.

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Professional Commitment of Secondary Schoolteachers in Relation to their Job Satisfaction

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ABSTRACT

The effectiveness and stability of the school is mostly based on the professional commitment and job satisfaction of teachers working there. It is assumed that a healthy school organization provides satisfaction to the teachers and their satisfaction leads to better commitment towards the profession. In the present study an attempt is made to find the relationship between professional commitment and job satisfaction of secondary schoolteachers. Normative Survey method was adopted for the study. Data were collected from 400 secondary school teachers from Thiruvananthapuram and Kollam districts. The results showed that the professional commitment and job satisfaction of secondary school teachers are positively and significantly correlated with each other.

to-day activities. For effective teaching, besides required knowledge and skills, the teacher should have a favourable attitude towards the teaching profession and commitment to the job which can contribute to job satisfaction.

The profession of teaching is unique in a number of ways. Its very nature involves a complex and rich combination of working relation with not only the organization, but also with a number of other stakeholders including the parents, students and colleagues. For a teacher to be considered as professional, he must commit himself to some basic norms of the profession. The task of the teacher in education involves the provision of a broad context of knowledge, the creation of a learning environment and constantly monitoring and reflecting on the processes of teaching, student understanding and seeking to improve them (Saunders, 2005). Thus a teacher as a professional should have both professional competence—ability to do and professional commitment—the will to do (Association of American Educators, 2003).

INTRODUCTION

The effectiveness of education is very much dependent on the effectiveness of its teachers. A teacher holds an important, critical and direct role in making the formal education system effective and brings out quality products from the system. Recognizing the importance of teacher, the National Policy on Education (1986) has rightly remarked "No system of education can rise above the level of its teachers." Though the teacher occupies an important place in the development of the nation, a lot of responsibilities lies with him to execute in his day-

Job satisfaction is a positive emotional state that occurs when a person's job seems to fulfill important job values provided these values are compatible with ones needs (Happock, 1945). It reflects the individuals emotional reaction to the job itself. For job satisfaction there should be a good fit between the perception of how much the job provides and how much one aspires (Locke, 1986). It is the

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resultant attitude of an employee because of a perfect relationship between the perceptions of how well the job fulfills the various needs and expectations of the individual and the extent to which their needs are actually fulfilled. Any discrepancy between aspirations and perceptions accounts for dissatisfaction. There is no doubt that teachers will do much harm than good, because they will neither work whole-heartedly nor will they try to contribute anything to education.

Job satisfaction of teachers is necessary for teaching success and overall advancement of education. Anand (2006) has rightly observed, "the total commitment to the teaching profession and enjoying being in it, enhances teacher effectiveness." The effectiveness and stability of the school is mostly based on the professional commitment and job satisfaction of teachers working in it. It is assumed that a healthy school organization provides satisfaction to the teachers which in turn leads to better commitment towards the profession. It is widely recognized that teachers' job satisfaction and professional commitment are very important to fulfill the educational objectives and national goals. So it is very relevant to conduct a study on the professional commitment of secondary schoolteachers in relation to their job satisfaction.

OBJECTIVES OF THE STUDY

1. To assess the level of Professional Commitment of Secondary Schoolteachers.
2. To assess the level of Job Satisfaction of Secondary Schoolteachers.
3. To find out the relationship between Professional Commitment and Job Satisfaction of Secondary Schoolteachers for the whole sample and relevant subsamples based on gender, locale and type of management.

HYPOTHESES

1. Majority of the Secondary Schoolteachers have a high level of Professional Commitment.
2. Majority of the Secondary Schoolteachers have a high level of Job Satisfaction.

3. There exists a significant relationship between Professional Commitment and Job Satisfaction of Secondary Schoolteachers for the whole sample and relevant subsamples based on gender, locale and type of management.

METHOD

Normative Survey method was adopted for the study.

SAMPLE

The sample for the present study constituted a representative group of 400 Secondary School-Teachers selected on the basis of 'stratified random sampling technique' giving due representation to factors like gender locale and type of management.

TOOLS

- i) Questionnaire for Teachers : Covering general background and professional aspects of Secondary Schoolteachers.
- ii) Professional Commitment Scale developed by Vijayalekshmi and Deepthi (2012) was used to assess the Professional Commitment of Secondary Schoolteachers.
- iii) Job Satisfaction Scale developed by Sudheesh and Kumar (2008) was used to assess the Job Satisfaction of Teachers.

STATISTICAL TECHNIQUES EMPLOYED

- (a) Statistical indices like percentages, mean and standard deviation.
- (b) Pearson's Product Moment Coefficient of Correlation (r)

RESULTS AND DISCUSSION

The data collected were analyzed using appropriate statistical techniques and the scores obtained were interpreted for drawing valid conclusions. The findings arrived at on the basis of statistical techniques employed are comprehended as follows:

Table 1
Level of Professional Commitment of Secondary Schoolteachers

Sl. No.	Level of Professional Commitment	Number	Percentage
1	High level of Professional Commitment (Above m+s)	134	33.50
2	Moderate level of Professional Commitment (Between m+s and m-s)	175	43.75
3	Low level of Professional Commitment (Below m-s)	91	22.75
	Total	400	100

Table 1 shows that only 33.5% of the Secondary Schoolteachers have high 'level' of Professional Commitment, whereas the remaining proportion of Secondary Schoolteachers have either 'moderate' (43.75%) or 'low' (22.75%) level of Professional Commitment. In effect majority (66.50%) of Secondary Schoolteachers did not have a high level of Professional Commitment. Hence the hypothesis "Majority of the Secondary Schoolteachers have a high level of Professional Commitment" is rejected.

Table 2
Job Satisfaction of Secondary Schoolteachers

Sl. No.	Level of Job Satisfaction	Number	Percentage
1	High Level of Job Satisfaction	105	26.25
2	Moderate level of Job Satisfaction	230	57.50
3	Low level of Job Satisfaction	65	16.25
	Total	400	100

Table 2 shows that only 26.25% of the Secondary Schoolteachers have a high level of Job Satisfaction, whereas the remaining proportion of teachers have either 'moderate' (57.50%) or 'low' (16.25%) level of Job Satisfaction. In effect majority (73.75%) of the Secondary Schoolteachers do not have an adequate level of Job Satisfaction. Hence the hypothesis "Majority of the Secondary Schoolteachers have a high level of Job Satisfaction" is rejected.

Table 3
Relationship between Professional Commitment and Job Satisfaction
(Whole sample & Subsamples)

Sample	Correlative Coefficient (r)	Level of Significance
Whole	0.641	0.01 Level
Male	0.687	0.01 Level
Female	0.551	0.01 Level
Rural	0.733	0.01 Level
Urban	0.648	0.01 Level
Govt.	0.677	0.01 Level
Private Aided	0.806	0.01 Level

The coefficient of correlation (r) between Professional Commitment and Job Satisfaction of Secondary Schoolteachers for the whole sample as well as the sub samples based on gender, locale and type of management was positive and significant. Since the values of ' r ' for the male teachers, female teachers, urban teachers and govt. schoolteachers lie between ± 0.40 and ± 0.70 , the variables exhibit a substantial positive relationship in these groups. Whereas the variables show a high positive relationship in the case of Rural and Private-Aided Schoolteachers as the value ' r ' falls between ± 0.70 and ± 1.00 . The positive correlation between the variables shows that increase in Professional Commitment will be attended by a corresponding increase in Job Satisfaction of Secondary School teachers. Hence the hypothesis "there exists a significant relationship between Professional Commitment and Job Satisfaction of Secondary schoolteachers for the whole sample and relevant subsamples based on gender, locale and type of management" is accepted.

CONCLUSION

The results of the present study have revealed that teacher commitment has a strong impact on the Job Satisfaction of Teachers. The administrators, policy makers and authorities concerned with Secondary Education should take necessary steps to formulate innovative and properly planned strategies to attract, develop and retain the right individuals as teachers in secondary school level. In the light of the present study Adequate steps should be taken by policy makers to enrich the Job Satisfaction of teachers by introducing a package to bring over all improvement in the standard of Secondary Education with higher incentives, better pay scales, improved service conditions and schemes for career advancement.

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A Comparative Study of Value Preference of Secondary Level Teacher Trainees and Teachers in Thiruvananthapuram District

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ABSTRACT

Inculcation of values is important for the personal, social and national development. Values are to be fostered through education. Through the present study the investigators try to find out whether there is significant difference in value preference of secondary level Teacher Trainees and teachers. The objectives of the present study are to develop a tool to assess the value preference of secondary level teacher trainees and teachers and to find out whether there is significant difference in the value of preference of secondary level teachers and student teachers. Through normative survey method the investigators collected the data and with the help of appropriate statistical methods the collected data were analysed and interpreted. The Secondary school teachers and Student teachers are similar in their aesthetic political and moral values and there is significant difference in their human and social values.

INTRODUCTION

The ultimate purpose of all educational research is the discovery of procedures, rules and principles relating to the various aspects of education. Educational systems have a significant role in inculcating values and norms of society in its members. In ancient times value education was imparted through religious institutions in a spiritual way. Eminent educationists, great thinkers and philosophers are of the opinion that the supreme

end of all education should be character building. Value system plays an important role in shaping the personality of an individual. It enables the person to achieve certain definite life goals. It is also beneficial not only to him but also to the society and the country in general.

Values may be operationally conceived as those guiding principles of life which are conducive to ones physical and mental health as well as to social welfare and adjustments and which are in tune with ones culture.

Inculcation of values provide personal development, social development and national development. It needs transformation, modernization, reorientation and re-engineering of our present education system. The same thing was reflected in the report entitled basic National Education proposed under the chairmanship of Zakir Husain which highlighted the need for total transformation of the education system through inculcation of human values. The committee recommended "Replacement of the present system of education by a more contractive and human system, which will be better integrated with the needs and ideals of national life and better able to meet its present demands."

Values are to be fostered through education. The values should have a useful and non-sectarian appeal and should promote the unity and integrity of the people. Realising the importance of value education

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significant suggestions as regards to the human values in the education programmes for young persons in universities and schools were made by the committee set up under the chairmanship of Sampurnanad (1961). Teacher education at pre-service level should focus on preparing teachers with adequate skills to develop proper value system among children. The values are inherent in the school subjects for example science aims to develop values like neatness, cleanliness, the systematic approach, the rational approach etc. Social studies aims at developing socialism, secularism, nationalism, equality, social justice etc. The teachers should understand the values inherent in the subjects and try to highlight those values while teaching. So during teacher training the values should be integrated with the methodology of teaching and practice teaching. The working group on modernization of pre-service teacher curriculum (1987) also recommended that methodology of values development should be included under general methods of teaching.

Any human activity through idea, feeling, sentiment or emotion which could promote self-development of the individual in all its dimensions could be said to constitute a value. The other complimentary function of a value is that it should also contribute to the welfare of the larger social unit such as the family, the community and the nation of which the individual is a member.

VALUES

Values are important in any organization. People's behaviour and actions are decided by their value preferences and value system. Present education demands higher order of value education as enlargement of frontiers of knowledge is accelerating the society towards crisis and disorder instead of developing higher social order. The Fifth Survey of Educational Research conducted by NCERT (1997) identified values as one of the important areas of research and the survey cited thirty-one studies under moral, art and aesthetic education during the period (1988-1992) and fifty-one studies under different areas of study. The first

and foremost aim of education is the liberation of an individual from the bondage of evil, which arises out of ignorance. Education enables one to adjust with the society. It also helps the socialization of the individual. So education must aim at the inculcation of essential values. The role of a teacher in the changing scenario is becoming very challenging. In the earlier times teachers were the only source of information and commanded respect. Anyone desirous of gaining knowledge had to bow to him.

Concern for value education has also been increasing in recent years as a result of a crisis of values that our society is currently experiencing. The issue has been projected as one of the national priorities in the nation's education. The National Education Policy 1986 declares that the growing concern over the erosion of essential values and increasing cynicism in society has brought into focus the need for readjustment in the curriculum in order to make the education an effective tool for the cultivation of social and moral values.

NEED AND SIGNIFICANCE OF THE STUDY

Today, people especially the younger generation facing value conflicts and dilemmas are confused about their values and value systems. In the present study there are five core values of classification such as humanistic, social, aesthetic, political and moral values.

The first and foremost aim of education is the liberation of an individual from the bondage of evil, which arises out of ignorance. Teachers are the motivating agents to inculcate values in children. The duty of a teacher is the physical, mental and social well-being of the child. The character of an individual mainly depends upon the fundamental values which he believes. The teacher is the media to get this fundamental aspect to child. So the value preference of a teacher is very important for the character formation of the child.

Through the present study the investigators try to find out whether there is significant difference in

value preference of secondary level Teacher Trainees and teachers.

OBJECTIVES OF THE STUDY

1. To develop a tool to assess the value preference of secondary level teacher trainees and teachers.
2. To find out whether there is significant difference in the value preference of secondary level teachers and student teachers.

HYPOTHESIS

There is significant difference between the secondary level Teacher Trainees and Teachers in their value preference.

METHOD

The investigators adopted, Normative Survey method for conducting the study.

SAMPLE

The sample for the present study consisted of 150 secondary schoolteachers and 150 student teachers.

RESULTS AND DISCUSSION

Table 1
Human Value preference of secondary level teachers and student teachers.

Value	Group	Number	Mean	Standard deviation	t value	Remarks
Human value	Student teacher	150	56.6200	6.92091	2.88	Significant
Human value	Secondary school teacher	150	58.6200	8.60987		

From the above table it is clear that there is significant difference in the Human value preference of Secondary school teachers and Student teachers ($t=2.88, p 0.01$) This means that Secondary school teachers and Student teachers are not similar in their Human value preference

Table 2
Social Value Preference of Secondary Level teachers and Studentteachers

Value	Group	Number	Mean	Standard deviation	t value	Remarks
Social value	Student teacher	150	60.8400	6.50666	2.14	Significant
Social value	Secondary school teacher	150	62.6600	8.16263		

From the above table it is clear that there is significant difference in the Social value preference of secondary school teachers and student teachers ($t=2.14, p 0.05$) This means that secondary school teachers and Student teacher are not similar in their social value preference

Table 3
Political Value Preference of Secondary Level teachers and Studentteachers

Value	Group	Number	Mean	Standard deviation	t value	Remarks
Political value	Student teacher	150	51.5600	7.41437	.083	Not Significant
Political value	Secondary school teacher	150	50.9200	5.94891		

From the above table it is clear that there is no significant difference in the Political value preference of secondary school teachers and student teachers ($t= 0.83$). This means that secondary schoolteachers and studentteachers are similar in their Political Value preference

Table 4
Moral Value Preference of Secondary Level teachers and Studentteachers

Value	Group	Number	Mean	Standard deviation	t value	Remarks
Moral value	Student teacher	150	43.9200	9.53307	1.59	Not Significant
moral value	Secondary school teacher	150	42.0000	11.30540		

From the above table it is clear that there is no significant difference in the Moral value preference of secondary school teachers and student teachers ($t=1.59$). This means that secondary schoolteachers and student teachers are similar in their Moral value preference

Table 5
Aesthetic Value Preference of Secondary Level teachers and Studentteachers

Value	Group	Number	Mean	Standard deviation	t value	Remarks
Aesthetic value	Student teacher	150	57.6400	7.89977	1.83	Not Significant
Aesthetic value	Secondary school teacher	150	55.8000	9.47196		

From the above table it is clear that there is no significance difference in the moral value preference of secondary school teachers and student teachers ($t=1.83$). This means that secondary schoolteachers and student teachers are similar in their, aesthetic value preference

CONCLUSION

Education is a powerful instrument for changing the individual. The teacher occupies a key position in any education programme. The teacher is the role model of the students. Therefore value preference of teachers have significant role in the behavioural modification of the students. In the present educational era students show a tendency to deviate from the social norms. The teachers have an important role in shaping the personality of students and in this regard teachers themselves should be good role models for inculcating values by having good value system on them.

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Student Activism among Higher Secondary Students

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ABSTRACT

This Study attempted to gauge the level of activism in higher secondary students. In today's world of change, activism plays an important role in safeguarding the interests of self and society thus protecting the fine fabric of balanced and harmonious living in the world. The importance of student activism to protect the human values and environment has been showcased recently in Delhi, in which students and youth were front runners demanding justice and bringing the administrative authorities to act against crimes towards women.

Youth population contributing to one-third of our Indian society, becomes imperative to empower the student community to be "Proactive-Catalyst" in bringing changes to internal and external environment for harmonious growth world around.

Thus a study of student activism among higher secondary students was carried out in and around Kanyakumari district. The result shows that the majority of higher secondary students have moderate level of activism.

INTRODUCTION

Activism consists of efforts to promote, impede, or direct social, political, economical, or environmental change. Activism can take wider forms from writing letters to newspapers or politicians, political campaigning, economic activism such as boycotts or preferentially patronizing businesses, rallies, street marches, strikes, sit-ins, and hunger strikes

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Research is beginning to explore how activist groups are using social media to facilitate civic engagement and collective action and has seen that the electronic media, internet has played its active role in bringing together activists who tend to join groups which address common objectives and goals.

Students around the world have been at the fore front of movements to promote democracy and human rights. Student movements have ended in wars, and student activism has often served as the conscience of nation, reminding people in times of turmoil for finding ideals of their countries and the aspiration of all people for justice, dignity and equality.

In this critical period in world history, we need more people –especially youth –to take up the challenge of becoming activist educators. Activism must be both transforming and self-transforming simultaneously.

The philosophy of activism has given rise to a phenomenon which makes the students not only take active part in all the different dimensions and functioning of the institution but also prompt an individual to seek redresses against any injustice done either by the authorities or by the government. Therefore the concept of activism is generating more and more of conceptual conflicts and also psychological unrest in addition to mobilizing the emotional forces among the youth of today. In studies carried out in this area, Austin, panos and greager(1967) found that activists were more

aggressive, outgoing and more inclined to perceive themselves as being characterized by leadership ability, speaking ability, self-confidence, social and political liberalism and originality.

Ramesh Chandra and Geetha Khanduri (2013) conducted a study on "graduate college student activism in relationship preferences" to find out the high and low activists on their leadership preferences with respect to locale. High activists are found significantly higher on their leadership performance in comparison to low activists in all locations. Urban high activists are characterized with more involvement on student groups.

Youth force has a lot of potentiality for constructive purposes and it would be very good source for rural development, social work activities and welfare programmes. The immediate necessity which has a social relevance, as also an educational significance is to make youth themselves become aware of their own potential energy. Also to provide a direction through constructive and profitable programs. It becomes imperative for educating the students about their rights and freedom to be taught as per the human rights, social, and local laws.

STATISTICAL TECHNIQUES

Mean, Standard Deviation, t-Test.

ANALYSIS AND INTERPRETATION

OBJECTIVES

1. To find out the level of student activism among higher secondary students.
2. To find out whether there is significant difference between boys and girls in student activism.
3. To find out whether there is significant difference in students from nuclear and joint families in student activism.

HYPOTHESIS

1. The level of student activism among higher secondary students is moderate.
2. There is no significant difference in the mean scores of student activism among boys and girls.
3. There is no significant difference in the mean scores of student activism among students from nuclear and joint families.

METHODOLOGY

SAMPLE:

The investigator selected 200 students of from Standard XI and XII from different schools in Kanyakumari district.

A scale for student activism was administered to understand the significant levels among the students of different genre.

Table 1

Percentage distribution of different levels of student activism

Student Activism	Count	Percentage
Low	36	18.00
Medium	128	64.00
High	36	18.00
Total	200	100.00

Table 1 shows the level of student activism among higher secondary students is moderate.

Table 2
Comparison of mean scores in student activism based on sex

Gender	Mean	SD	N	t	p	Remark
Male	17.84	2.36	103	2.37	0.019	Sig at 0.05 level
Female	17.08	2.18	97			

Table 2 shows that the obtained 't' value 2.37 is significant at 0.05 level. So there is significant difference in the mean scores in student activism based on sex.

Table 3
Comparison of mean scores in student activism based on type of family

Type of family	Mean	SD	N	t	p	Remark
Nuclear	17.42	2.26	137	0.47	0.636	NS
Joint	17.59	2.40	63			

Table 3 shows that obtained 't' value is not significant. So there is no significant difference in the mean scores in student activism based on the type of family.

FINDINGS:

1. Majority of higher secondary students have moderate level of student activism (64% - Moderate, 18%- High Level, 18%- Low Level).
2. There is significant difference in the mean scores in student activism between boys and girls. So the null hypothesis is not accepted.
3. There is no significant difference in the mean scores in student activism between students from nuclear and joint families. So the Null Hypothesis is accepted.

CONCLUSION:

The level of student activism is more moderate among the higher secondary students. It is imperative to enhance knowledge of students on the existing provision and rights laid down in society in order to

have respectful society and respectful individuals in our country. Student activism empower the student community. It opens new ways of thinking and looking at the world around them which enable them to confront and solve problems in different ways. In this study, it is observed that female students have low level of activism than male students.

In the case of girls, there is more of a marked discontinuity between their political ideas, and political actions because of their conflicts with parental power than for boys. Girls have the power to improve lives. Every school age girl students knows someone affected by extracurricular pressure such as domestic violence, racism, drug, sexually transmitted diseases or environmental damage. There is significant need for students to help each other through activism at school. A little guidance from an adult can go a long way.

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Classroom Culture and Achievement in Mathematics: A Study Among Higher Secondary Students

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ABSTRACT

The present study tries to find out the relationship between Classroom Culture and Achievement in Mathematics of the higher secondary students. The sample consisted of 400 students from various Higher secondary schools in Kanyakumari district. The study revealed that classroom culture and achievement in mathematics are positively correlated with each other.

INTRODUCTION

India's educational and cultural tradition is the most ancient in the world's history. "Learning was sought as a means of salvation or self-realization and as the means to the highest end of life" viz., "Mukhti" or "Emancipation". In the Vedic period, education had an idealistic form, in which spirituality, development of the self, formation of character, development of personality, creation of an aptitude for the development of culture, nation and society were stressed.

It was achieved through an appropriate environment and teaching based on the life, character and ideals of great persons. School environment and teacher-student relations influence the whole educational process in the classroom situation. The need of mathematics is felt right from the early morning by every one of us. One has to get up early at the right time so that one may be able to join his duties at the right time. Study of mathematics does also help in character formation and moral development.

SIGNIFICANCE OF THE STUDY

Today we live in a competitive world, where academic excellence is a must for success in life.

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Achievement refers to what a person has acquired or achieved after the specific training or instruction. It also refers to the academic status of a child in different school subjects at any particular time. Better achievement in mathematics can be enhanced by good study habits, supervised study and development of certain habits of thinking and reasoning. This can be achieved with the help of a mathematics teacher who has an intimate knowledge of the various abilities of the pupils. Class assignment, home assignment and workbook are very effective means of ensuring scholastic achievement of the students.

One of the goals of higher secondary education is to equip the school leavers with the necessary knowledge and skill to participate as adults in social and economic life of the larger society. A very tactful and healthy classroom culture is essential for achievement and character development. The purpose of this study is to see whether there is any relationship among classroom culture and academic achievement. A good classroom culture will help the students to achieve more and also it helps the teachers to create suitable environment to make teaching-learning effective.

OBJECTIVES

1. To study the significant difference in classroom culture of higher secondary students based on their a) sex, b) locale, c) Locale and Sex, d) Type of management, e) Type of management and Sex, f) Income g) Order of birth.
2. To study the significant difference in achievement in mathematics of higher secondary students

based on their a) sex, b) Locale of school, c) Locale and Sex, d) Type of management, e) Types of management and Sex, f) Income g) Order of birth.

- To study the relationship between classroom culture and achievement in mathematics of higher secondary students for total sample and sub samples based on their a) sex, b) Locale of school, c) Locale and Sex, d) Type of management, e) Type of management and Sex, f) Income g) Order of birth.

HYPOTHESES

- There is no significant difference in classroom culture of higher secondary students based on their a) Sex, b) Locale of school, c) Locale and Sex d) Type of management e) Type of management and Sex f) Income g) Order of birth.
- There is no significant difference in achievement in mathematics of higher secondary students based on their a) Sex b) Locale of school c) Locale and Sex d) Type of management e) Type of management and Sex f) Income g) Order of birth.
- There is no significant correlation between classroom culture and achievement in mathematics of higher secondary students for total sample and sub samples based on their a) sex of students b) Locale of school

c) Type of management d) Income e) Order of birth.

METHOD

The investigator selected the normative survey method for the study.

SAMPLE

The sample consisted of 400 Higher Secondary students from various schools of Kanyakumari district selected by random sampling technique.

TOOLS

The classroom culture scale was prepared and validated by the investigator. For Mathematics Achievement, marks obtained in the quarterly and half-Yearly examinations were collected.

STATISTICAL TECHNIQUES

t-test and coefficient of correlation.

RESULTS AND DISCUSSIONS

Hypothesis: 1

There is no significant difference in classroom culture of higher secondary students with respect to a) Sex b) Locale of school c) Locale and Sex d) Type of management e) Type of management and Sex f) Income g) Order of birth.

Table 1
Class room culture of higher secondary students

Sample	Variables	Category	Mean	SD	N	t-value	Remarks	
Higher Secondary Students	Sex	Male	85.8	10.5	219	4.37	S	
		Female	90.2	9.4	181			
	Locality of Schools	Urban	85.6	10.6	177	4.02	S	
		Rural	89.6	9.5	223			
	Locality and Sex	Urban	Male	85.3	10.9	110	0.35	NS
			Female	85.9	10.2	67		
		Rural	Male	86.3	10.1	109		
			Female	92.8	7.9	114		
	Types of Management	Govt.	90.6	10.7	200	5.57	S	
		Private	85.1	8.9	200			
	Types of Management and Sex	Govt.	Male	88.1	12.2	100	3.38	S
			Female	93.1	8.4	100		
		Private	Male	84.0	8.4	119		
			Female	86.7	9.3	81		
	Income	Below 2000	89.1	9.9	278	3.69	S	
		2000 & Above	85.0	10.3	122			
	Order of Birth	First	87.6	10.3	165	0.43	NS	
		Second	87.1	10.5	163			

From Table - 1 for the variable classroom culture, the calculated value of 't' is greater than the table value at 0.01 level. So the null hypothesis is rejected. Hence there exists significant difference between males and females, rural and urban students, rural males and females, government and private school students, males and females of government school students, males and females of private school students, and the students who are from the families with income below 2000 and the students who are from families with income 2000 & above on their classroom culture. And also for

the variable classroom culture, the calculated value of 't' is less than the table value. So the null hypothesis is accepted. Hence there exists no significant difference between urban males and females, first and second born students on their classroom culture.

Hypothesis: 2

There is no significant difference in achievement in mathematics of higher secondary students with respect to a) sex b) Locality of school c) Locality and Sex d) Types of management e) Types of management and Sex f) Income g) Order of birth.

Table 2

Achievement in Mathematics of Higher Secondary students

Sample	Variables	Category	Mean	SD	N	t-value	Remarks	
Higher Secondary Students	Sex	Male	118.4	45.8	219	0.650	NS	
		Female	115.7	37.3	181			
	Locality of Schools	Urban	106.5	43.5	177	4.594	S	
		Rural	125.3	39.4	223			
	Locality and Sex	Urban	Male	102.7	46.8	110	1.78	NS
			Female	113.9	36.3	67		
		Rural	Male	134.2	38.9	109		
			Female	116.8	37.9	114		
	Types of Management	Govt	102.8	40.2	200	7.24	S	
		Private	131.5	39.2	200			
	Types of Management and Sex	Govt	Male	97.9	44.9	100	1.75	NS
			Female	107.8	34.1	100		
		Private	Male	135.6	39.1	119		
			Female	125.5	38.8	81		
	Income	Below 2000	114.6	41.9	278	1.89	NS	
2000 & Above		123.1	42.3	122				
Order of Birth	First	116.3	41.9	165	0.235	NS		
	Second	117.4	42.8	163				

From Table - 2 for the variable achievement in mathematics, the calculated value of 't' is greater than the table value at 0.01 level. So the null hypothesis is rejected. Hence there exists significant difference between rural and urban students, rural males and females, government and private school students on their achievement in mathematics. And also for the variable achievement in mathematics, the calculated value of 't' is less than the table value. So the null hypothesis is accepted. Hence there exists no significant difference between males and females, males and females of government school students, males and females of private school students, and

the students who are from the families with income below 2000 and the students who are from families with income 2000 & above on their achievement in mathematics.

Hypothesis: 3

There is no significant correlation between classroom culture and achievement in mathematics of higher secondary students for total sample and subsamples with respect to a) sex of students b) Locality of school c) Types of management d) Income e) Order of birth.

Table 3
Correlation analysis

Sample	Variables	Category	N	Classroom culture & Achievement	
				r	Remarks
Higher Secondary Students	Sex	Male	219	0.169	S
		Female	181	0.061	NS
	Locality of Schools	Urban	177	0.089	NS
		Rural	223	0.274	S
	Types of Management	Govt	200	0.019	NS
		Private	200	0.089	NS
	Income	Below 2000	278	0.168	S
		2000 & Above	122	0.062	NS
	Order of Birth	First	165	0.135	NS
		Second	163	0.088	NS

NS - Not significant (Null hypothesis accepted)
S - Significant (Null hypothesis rejected)

As it is shown in Table - 3 the correlation coefficient of male students, rural students and the students who are from families with income below 2000 is found to be significant at 0.01 level. So the null hypothesis is rejected. Hence the classroom culture and achievement in mathematics for the male students, rural students and the students who are from families with income below 2000 are positively correlated.

FINDINGS

- I. Female students of rural schools have high classroom culture than the male students in rural schools.
- II. Male and Female students of urban schools have more or less same classroom culture.

- III. Females of government & private schools have high classroom culture than the males of government & private schools.
- IV. First and second born students have more or less same classroom culture.
- V. The males have higher achievement in mathematics than the females.
- VI. Classroom culture and achievement in mathematics of higher secondary students are positively correlated.

CONCLUSION

This study reveals that certain factors like sex, locality, type of management, income and birth order affects classroom culture and achievement in mathematics. The result obtained from the study indicates the relationship between classroom culture

and achievement in mathematics which can help the teachers and parents to give proper guidance and counselling to students. This study has brought to light a vivid picture about the role of classroom culture and achievement in mathematics.

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A Study on Soft Skills Management of Prospective Teachers

Dr. S. Sherlin
Rev. Dr. S. Amaladoss Xavier SJ

ABSTRACT

In this study, the investigators made an attempt to find out the soft skills management of prospective teachers in Kanyakumari district. Survey method was adopted for conducting the study. The population for the present study consists of all the prospective teachers studying in Colleges of Education in Kanyakumari district. Using the simple random sampling technique the investigator selected a sample of 900 prospective teachers from various Colleges of Education in Kanyakumari district. The findings of the study revealed that most of the prospective teachers seem to have moderate level of soft skills management in total and their dimensions namely intrapersonal skills, interpersonal skills and problem-solving skills and decision-making skills. There is no significant difference in the soft skills management and its dimensions of prospective teachers with regard to their gender and qualified degree.

INTRODUCTION

Education in its widest sense includes all the influences which act upon an individual during his passage from cradle to the grave. Teaching is an important part of the process of education. Its special function is to impart knowledge, develop understanding and skills. In formal education system, the teacher plays a vital role. A person who wishes to become a teacher must obtain professional

qualifications or credentials from a university or college. The education for the professional qualification of a teacher is commonly known as teacher education (Jangaiah, C 2011). Teacher education enables a teacher to be an effective teacher. An effective teacher is expected to be a person of knowledge, competency and skills. Skills mean practical ability or expertise in a given task. Skills are of two types namely, hard skills and soft skills. Hard skills are the ways an individual executes a work. But, soft skills are behavioural competencies. Few years ago, people were giving importance to hard skills, but nowadays people start realising the importance of soft skills.

Soft skill is a sociological term relating to a person's EQ (Emotional Quotient), the cluster of personality traits, social graces, communication, language, personal habits, friendliness and optimism that characterise relationships with other people. These are personal attributes that enhance an individual's interactions, job performance and career prospects (Bharathi et.al. 2007). Management is an organizational activity, is the act of getting people together to accomplish desired goals and objectives using available resources efficiently and effectively. Soft skills are the affective aspect of human being, and they exist in every one in varying degrees. It includes listening, critical thinking, punctuality and flexibility, and in general those interpersonal skills

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that allow others to approach one with issues. Mere possession of soft skills won't help. For success an individual must be able to know how to handle these soft skills in complex and new situations. The usage of these soft skills in a wise manner is known as soft skills management.

SIGNIFICANCE OF THE STUDY

Teaching is a skill-based profession. Teachers must be skillful, and then only they can perform well in their profession. Teachers must develop their skills in various dimensions to meet the educational needs of the students and maintain interest among the students. In the olden days people considered skills as hard skills, which were the deciding factor for the success of any profession. But, the 21st century brings a new face to the skills i.e., soft skills. Hard skills along with soft skills and vice versa are the predictive factors for the success of any profession. The emergence of soft skills lightens the learners and professionals that there are plenty of skills, which are considered as the essential skills required for learning. The inculcation of essential soft skills produces quality human capital and thus, develops their knowledge, understanding, and values. All elements of soft skills must be acquired by each and every teacher to perform effectively and comprehensively. Soft skills fall under the affective domain, so that its importance is unquestionable. To become successful in teaching a teacher must be able to know how to use the soft skills in new and problematic situations. Soft skills are the recently developing area of subject matter; soft skills management is new to the educational research and thus, the investigators decided to study the soft skills management of prospective teachers, since they are the future teachers.

OBJECTIVES

1. To study the level of soft skills management and its dimensions of prospective teachers.
2. To study whether there is any significant difference in the soft skills management and its

dimensions of prospective teachers with respect to their a) gender and b) qualified degree.

HYPOTHESES

1. The level of soft skills management and its dimensions of prospective teachers is moderate.
2. There is no significant difference in the soft skills management and its dimensions of prospective teachers with respect to their a) gender and b) qualified degree.

METHOD

The investigators used survey method for the present study.

SAMPLE

The investigators selected a sample of 900 prospective teachers from various Colleges of Education in Kanyakumari district using simple random sampling technique.

TOOLS

For the present study the investigators used the followings tools,

- i) Soft Skills Management Tool prepared and validated by the investigator

The tool consists of three dimensions namely, intrapersonal skills management, interpersonal skills management and problem-solving skills management. The validity of the tool was established using the content validity technique. The investigator used test-retest method for establishing the reliability. The reliability was calculated as 0.87.

- ii) Personal Data Sheet.

RESULTS AND DISCUSSION

The results of the analysis are presented in the following tables.

1. The level of soft skills management and its dimensions of prospective teachers is moderate.

Table 1
Level of Soft Skills Management and its Dimensions of Prospective Teachers

Dimensions	Low		Moderate		High	
	N	%	N	%	N	%
Intrapersonal Skills Management	146	16.2	597	66.3	157	17.4
Interpersonal Skills Management	143	15.9	604	67.1	153	17.0
Problem Solving Skills Management	142	15.8	533	59.2	225	25.0
Soft Skills Management	136	15.1	600	66.7	164	18.2

It is inferred from the above table that 17.4%, 17.0%, 25.0%, and 18.2% prospective teachers have high level in the dimensions intrapersonal skills management, interpersonal skills management, problem-solving skills management and soft skills management in total respectively.

2. There is no significant difference in the soft skills management and its dimensions of prospective teachers with respect to their a) gender and b) qualified degree.

Table 2 a.

Difference in Soft Skills Management and its Dimensions of Prospective Teachers with respect to their Gender

Dimensions	Gender	N	Mean	S.D	Calculated 't' Value	p Value	Remarks
Intrapersonal Skills Management	Male	172	49.31	6.49	1.70	0.09	N.S
	Female	728	48.03	9.32			
Interpersonal Skills Management	Male	172	87.59	12.45	0.12	0.91	N.S
	Female	728	87.69	10.87			
Problem Solving Skills Management	Male	172	49.21	5.86	0.65	0.52	N.S
	Female	728	48.91	5.31			
Soft Skills Management	Male	172	186.11	19.91	0.86	0.39	N.S
	Female	728	184.64	20.19			

It is inferred from the above table that there is no significant difference in the dimensions intrapersonal skills management, interpersonal skills management, problem-solving skills management and soft skills management in total respectively, of male and female prospective teachers.

Table 2.b
Difference in Soft Skills Management and its Dimensions of Prospective Teachers with respect to their Qualified Degree

Dimensions	Qualified Degree	N	Mean	S.D	Calculate d 't' Value	p Value	Remarks
Intrapersonal Skills Management	U. G	730	48.10	8.75	1.22	0.22	N.S
	P. G	170	49.03	9.29			
Interpersonal Skills Management	U. G	730	87.43	11.32	1.39	0.16	N.S
	P. G	170	88.75	10.51			
Problem Solving Skills Management	U. G	730	49.02	5.36	0.64	0.52	N.S
	P. G	170	48.73	5.69			
Soft Skills Management	U. G	730	184.56	20.11	1.14	0.25	N.S
	P. G	170	186.51	20.19			

It is inferred from the above table that there is no significant difference in the intrapersonal skills management, interpersonal skills management, problem-solving skills management and soft skills management in total of U.G. and P.G. qualified prospective teachers.

CONCLUSION

Most of the prospective teachers seem to have moderate level of soft skills management in total and their dimensions namely intrapersonal skills management, interpersonal skills management and problem-solving skills management.

The study clearly indicates that, there is no significant difference between the male and female, U.G. and P.G. qualified prospective teachers in their soft skills management and its dimensions intrapersonal skills, interpersonal skills and problem-solving skills management.

Nowadays it is very essential to improve the soft skills management of prospective teachers. By enhancing the level of soft skills and its management one can find happiness and reach success in his/her life. Thus, it is the right time that everyone, especially the prospective teachers, concentrate on understanding the importance of soft skills and try to cultivate soft skills for the betterment of their professional and personal life to a great extent.

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Knowledge Integration: A New Paradigm in Teacher Education

* Dr. S.D. Singh

From the beginning to the end of the session a variety of subjects presented in the curriculum with diversified knowledge are provided within the predetermined length of time of the students. The students irrespective of these diversified knowledge are unable to develop a holistic vision of a range of concepts. Often they are unable to develop an integrated picture of the whole situation as the knowledge attained by them is specific and compartmentalised.

It is a fact that the knowledge which is being imparted to the students in the compartmentalized form and matter should be integrated. Challenges before the teachers lie in integrating knowledge together in a more structured, precise and easily reached form and also in a manner that are functional for solving complicated problems.

Knowledge integration is the process of fitting our ideas, and theories of how the world works together in a coherent structure (Marshall, 2004). Knowledge integration is the job of identifying the innovative process of interacting the prior knowledge with integrating new information. This job is unavoidable as extensive knowledge bases develop incrementally and the segments of knowledge are added separately to an increasing bulk of knowledge. This task is not easy as the new and prior knowledge may interact in a very slight and unpredicted ways.

The learning of knowledge integration is essential for twin reasons - one for realistic concerns of knowledge-based educational systems and the other

for theoretical concerns of understating learning systems. Knowledge integration reveals very important source of learning behaviors that are more opportunistic than traditional learning tasks.

A variety pieces of knowledge are their in the child in the form of documents which he matches with his own knowledge base. After matching the child tries to crosscheck the knowledge and confirms it with group knowledge. Group knowledge is actually the knowledge which is seen among the more learned persons. Further the integration of knowledge can be done from various departments, organisations and disciplines which develops a system that is actually a synthesized form of the integration knowledge (Marshall, 2004)

In Integrated schools explicit attempts are made to connect two or more sets of subject knowledge.

Knowledge integration is the process of synthesizing multiple knowledge representation into a common representation, i.e., knowledge which is peculiar in particular subjects can be made known to the students of other subjects. Knowledge integration has also been studied as the process of incorporating new information into a body of existing knowledge. This process involves determining how the new information and the existing knowledge interact, how existing knowledge should be modified to accommodate the new information, and how the new information should be modified. A learning agent that actively investigates the consequences of new information can detect and exploit a variety of

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learning opportunities; e.g., to resolve knowledge conflicts and to fill knowledge gaps. By exploiting these learning opportunities the learning agent is able to learn beyond the explicit content of the new information.

PERSPECTIVE OF TEACHER PREPARATION:-

All nations have established specialized institutions by which prospective teachers are educated. However these institutions and processes vary in their structure, goals, and organization around the world due to difference among the countries. Teacher education refers to specific short-term training for professional development of teachers. Professional development includes formal experiences (such as completing a programme of individual teacher preparation, attending workshops, professional meetings, mentoring, completing research) and informal experiences (such as reading, publications, viewing television specials related to academic discipline, joining study groups with other teachers).

A NEW PARADIGM IN TEACHER EDUCATION:-

This perspective of teacher education as a long-term process includes regular opportunities and experiences planned systematically to promote growth and development in the profession that has been welcomed by educators everywhere. This new paradigm of teacher education has several characteristics. First of all, it is based on constructivism rather than on a transmission-oriented model. Here teachers are active learners who are engaged in the concrete tasks of teaching, assessment, observation, and reflection. It is also conceived of as a long-term process, as it acknowledges that teachers learn over time. As a result, connected experiences (rather than one-shot presentations) are regarded to be the most effective as they allow teachers to relate prior knowledge with new experiences. Regular follow-up support is perceived as an "indispensable catalyst of the change process" (Schifter, Rusell, and Bastable). With this approach to teacher education and professional development, a teacher is considered as

a reflective practitioner. He is someone who comes into the profession with certain knowledge. Thomas Guskey argues strongly about the importance of paying attention to context so that the "optimal Mix" of professional development processes can be identified and planned. In other words, professional development has to be considered within the framework of social, economic and political trends, and events, Guskey writes: "The uniqueness of the individual setting will always be a critical factor in education. What works in one situation may not work in another.....Because of the enormous variability in educational contexts, there will never be 'one right answer.' Instead, there will be a collection of answers, each specific to a context.

EXPECTATIONS & RESPONSIBILITIES:-

For years, educators and other related professionals have argued whether teacher preparation should emphasize contents knowledge or pedagogical knowledge. Under this new model of teacher professional development, there is great recognition that the work of teachers are complex and thus needs a broad and inclusive perspective. Here there are some expectations as well as responsibilities of teachers that he/she should know in present global age as well as for the future:-

1. Subject-matter knowledge : This includes knowledge of content, Substantive and syntactic structures (equivalent to knowledge on a discipline)
2. General pedagogical knowledge : This includes learning environments, instructional strategies, classroom management; and knowledge of learners and learning.
3. Pedagogical content knowledge : It includes a conceptual map of how to teach a subject, knowledge of instructional strategies and representations, knowledge of students understanding and potential misunderstandings, and knowledge of curriculum and curricular materials.

4. Knowledge of student context : A disposition to find more about students, their families, and their schools
5. Knowledge of strategies, techniques, and tools: This knowledge is to create and sustain a learning environment and the ability to employ students.
6. Knowledge, skills, and dispositions : It is to work with children of diverse cultural, social, and linguistic backgrounds. A multicultural perspective in teacher preparation is crucial for effective programme of teacher education and professional development.
7. Knowledge and attitudes : It is to support political and social justice as realizing social realities make teachers very important agent of social change.
8. Knowledge and skills : This knowledge integrate technology in the curriculum that support professional development.

CONCLUSION

In view of above pedagogical, sociological perspective analysing the present teacher, who is variable of the present social structure and part of

the social milieu, the society has many a lot of expectations. On the other hand, here are a class of such people who enjoy full benefits having no work culture at all. On the other hand, those who stick to consciousness do their duties without taking a deep breathing of rest do not get any encouragement. Due to this social dichotomy, the teacher performance is also dwindling day by day. The term expectation has reciprocal overtones. The teacher has also expectation from the student as well as from society.

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