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ARULMIGU KALASALINGAM COLLEGE OF EDUCATION

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Affiliated to Tamil Nadu Teachers Education University, Chennai)

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CONTENTS

A STUDY ON ACHIEVEMENT IN CHEMISTRY AND SCIENCE INTEREST AMONG HIGHER SECONDARY STUDENTS IN PONDICHERRY REGION

[1]Dr. S. Anuruba

Abstract

The present study is an attempt to find out the Achievement in Chemistry and Science Interest among higher secondary students in Pondicherry region. Simple random sampling technique has been used in the selection of the sample. As many as 600 higher secondary students were selected for this purpose and Achievement test in Chemistry and Science Interest test were distributed to them and their responses were collected and computed according to the objectives framed. Results found that majority of the higher secondary students showed negative and non-significant relationship of Achievement in Chemistry and Science Interest and the same trend has been seen in respect of the sub-samples too.

Keywords: Achievement in Chemistry, Scientific Interest, higher secondary students.

Introduction

Achievement is a task oriented behaviour that allows the individual's performance to be evaluated according to some internally or externally imposed criterion that involves the individual in competing with others or otherwise some standard of excellence-(Smith). Interest is a tendency to become absorbed in an experience and to continue it. Downie defines interest as motivators of learning. Like-wise without good Science Interest an individual does not achieve much in Science.

Objectives of the Study

1. To find out the significant relationship between Achievement in Chemistry and Science Interest among Higher Secondary Students.
2. To find out the significant difference between Achievement in Chemistry and Science Interest among Higher Secondary Students with respect to their sub-samples.

Hypotheses of the Study

1. There is no significant difference between Achievement in Chemistry and Science Interest among Higher Secondary Students.
2. There is no significant difference between the Achievement in Chemistry and Science Interest among Higher Secondary Students with respect to their sub-samples.

Methodology

In the present study Normative Survey Method has been used, since it deals with present condition.

Sampling Technique Used in this Study

Simple Random Sampling Technique has been used in this study. Among the various regions in the Union Territory of Pondicherry, only Pondicherry region has been fixed as the field for this study.

Tool

(i) An achievement test in Chemistry for XI standard students was constructed and standardized by the researcher.

(ii) Science Interest test by L. N. Dubey & Archana Dubey (2005).

Statistical Techniques Used in this Study

In the present study Correlation Analysis has been used.

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Data Analysis and findings

Table No. 1 Correlation Co - efficient between the scores of Achievement in Chemistry and Science Interest of higher secondary students:

Variables	N	Correlation Co-efficient ('r')	Level of Significance
Achievement in Chemistry	600	-0.043	NS
Science Interest	600		

From the Table No.1, the correlation coefficient is -0.043 found between Achievement in Chemistry and Science Interest among Higher Secondary students, which is not significant at 0.05 level for 599 df. It is concluded that there is negative and non- significant relationship between Achievement in Chemistry and Science Interest among Higher Secondary students.

Table No. 2 Coefficient of correlation between Achievement in Chemistry and Science Interest of students with regard to sub - samples

S.No	Sub Sample	Number	r	Table value	Level of significance
1	**Gender**				
	Male	291	0.002	0.19	Not Significant at 0.05 level
	Female	309	0.002	0.06	Not Significant at 0.05 level
2	**Type of Management**				
	Government	301	0.068	0.05	Not Significant at 0.05 level
	Private	299	0.091	0.04	Significant at 0.01 level
3	**Nature of school**				
	Boys School	90	0.005	1.20	Not Significant at 0.05 level
	Girls School	90	0.012	0.49	Not Significant at 0.05 level
	Co-Education School	420	0.005	0.08	Not Significant at 0.05 level
4	**Location of School**				
	Urban	302	0.044	5.30	Significant at 0.01 level
	Rural	298	0.053	0.76	Not Significant at 0.05 level
5	**Type of Family**				
	Nuclear	335	0.000	0.20	Not Significant at 0.05 level
	Joint	265	0.002	0.69	Not Significant at 0.05 level
6	**Father's Education**				
	Illiterate	215	0.031	8.60	Significant at 0.01 level
	Matriculate	216	0.086	12.49	Significant at 0.01 level
	Degree	118	0.125	0.03	Not Significant at 0.05 level
	Professional Degree	51	0.059	6.79	Not Significant at 0.05 level
7	**Mother's Education**				
	Illiterate	285	0.053	3.89	Significant at 0.01 level
	Matriculate	212	0.039	1.59	Not Significant at 0.05 level
	Degree	82	0.016	0.01	Not Significant at 0.05 level
	Professional Degree	21	0.001	5.90	Significant at 0.01 level
8	**Community**				
	FC	59	0.132	1.10	Not Significant at 0.05 level
	BC	205	0.011	4.89	Significant at 0.01 level
	MBC	210	0.049	3.00	Significant at 0.01 level
	SC	108	0.030	0.09	Not Significant at 0.05 level

	ST	18	0.007	0.03	Not Significant at 0.05 level
9	**Religion**				
	Hindu	519	0.017	0.08	Not Significant at 0.05 level
	Muslim	44	0.000	2.7	Significant at 0.01 level
	Christian	37	0.027	0.09	Not Significant at 0.05 level

By using the Spearman Brown Prophecy formula, the Zero order Correlation has been computed and the values are given in Table No. 2. It may be inferred from the above Table No.2 that there is a positive significant relationship between Achievement in Chemistry and Science Interest among Higher Secondary students. It is concluded from the obtained results that the following sub samples: Type of management (Private), Location of the school (Urban), Fathers Educational Qualification (Illiterate/ Matriculate), Mothers Educational Qualification (Illiterate/ Professional Degree), Community (BC/MBC), Religion (Muslim) are significantly correlated. But the sub samples such as Gender (Male/ Female), Type of management (Government), Nature of school (Boys/ Girls/ Co-Education), Location of the school (Rural), Type of Family (Nuclear/Joint), Fathers Educational Qualification (Degree / Professional Degree), Mothers Educational Qualification (Degree/ Matriculate), Community (FC/SC/ST), Religion (Hindu/ Christian) are not significantly correlated.

Conclusion

From the above analysis, it is concluded that there is a negative and non-significant relationship between Achievement in Chemistry and Science Interest among Higher Secondary students and the same trend has been seen in respect of the sub-samples too.

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A STUDY ON ENVIRONMENTAL ATTITUDE OF PROSPECTIVE TEACHERS

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Abstract

The objectives of the study were to find out the level of environmental attitude of prospective teachers with regard to gender. Survey Method was utilized to collect the data from the respondents through planned questionnaire designed on the basis of the objectives of the study. The population of the present study was comprised of student teachers studying in colleges of Education of Virudhunagr District . A sample size of 300 student teachers from randomly selected 7 colleges of education from Virudhunagr District was selected using simple random sampling method. Environmental attitude Scale (2019) was developed and standardised by the investigators was used for getting the level of environmental attitude of the sample. In this study, various statistical measures such as Mean, Standard Deviation, t-test and were used. The investigator found that the there is significant difference in environmental attitude of prospective teachers with respect to gender.

Introduction

Environmental education has a long history linked with human's growing interaction with the natural environment and developing appropriate attitude towards the same. The main objective of environmental education is to develop knowledge based awareness that will lead to cultivation of responsible attitude to environment, without losing sight of value system of society and individual. From the above objective, it becomes very clear that environmental knowledge and awareness would be of no meaning without cultivation of right attitude towards environment, so, attitude is a pre-requisite for fostering valuing approach and responsible action which is the ultimate goal of environmental education. In this context,

Rachel Carson (1993) has said that in our rush to "save the earth", we may tend to bypass a fundamental ingredient which many of us consider basic to any program for young children, developing a love for and appreciation of the earth.

Environmental attitudes are conceptualized in terms of attitude theory as being composed of beliefs and affect toward an object. The environment as an object is difficult to define and this has implications for the study of general environmental attitudes. Attitudes are based on values, have horizontal and vertical structure and tend from general to specific. Environmental attitude have been defined as a psychological tendency expressed by evaluating the natural environment with some degree of favour or disfavour (Milfont, 2007b). There are an extraordinary number of environmental attitude measures (Dunlap and Jones, 2002), which lead Stern (1992) to describe this as an ''anarchy of measurement''. The collective evidence from environmental psychology and landscape research has pointed to individual attitude as an influential factor in shaping land use transformation (Jacobson and Marynowski, 1997; Luzar and Diagne, 1999; Erickson others, 2002). Attitude is conceptualized in many ways from it being a state of readiness for mental and physical activity, to the inclination for an individual to evaluate objects or aspects in a favorable or unfavorable manner (Dawes, 1972). In most theories of attitudes, two components are noted, an emotional dimension involving feelings and a cognitive aspect which refers to dispassionate facts and beliefs. An attitude is something else beyond simple facts that may be judged against other data, It has an evaluation component. This may be very deep at an emotional level, where it is called affect.

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Attitude is a complex construct with cognitive (knowledge), affective (feelings) and conative (behavioural) components (Walmsley and Lewis, 1984). As such attitude is formed and affected by socio-economic, cultural and biophysical interactions. Attitude is also a powerful predictor of behaviour and thus an important tool in determining human response to policies and planning decisions (Kaiser others, 1999; Tuan, 1990). Also, attitudes at the local scale can impact aggregated level observations as individuals are behaviourally and psychologically distinct because of genetic and environmental influences. Environmental attitudes are fundamentally important, widely discussed, frequently measured, and poorly understood. In spite of more than 40 years of systematic inquiry into the nature of attitudes by social psychologists, little of this theory has found its way into research on environmental attitudes. In some ways it is too easy to gather data on environmental attitudes. Anyone with access to a mimeograph machine and a population of willing respondents can (and probably will) conduct an "attitude survey". An attitude is a hypothetical construct about a mental state which is inferred from verbal reports and behavioural observation. As a concept, attitude takes its reality from our own introspection. We believe in attitudes and find them useful for understanding the behaviour of others. We know them to be powerful because changes in social structure, such as a law which requires an environmental impact statement, or stabilities, such as the continued reliance on the single person auto mobile, often seem to be influenced by public attitudes.

Need and Significance of the Study

Our environment determines our lifestyle. Development in contemporary civilization also depends upon the environment. The younger generation, especially students of higher education who are supposed to be the future leaders and decision makers may opt for changes in their life styles. Indications are prominent in this context around us from which one can easily realize the trend of changes. These changes will certainly be some determining factors in the renewal of development, especially with respect to products as well as demands of all types of industry, agriculture and thereby the economy. Higher educational institutions are in general, and the faculty members absorbed therein specific, have major responsibilities in shaping the above-mentioned changes, both directly and indirectly. Students at higher educational institutions should be well equipped in this mission so that they can encounter the problems of environment in one hand, and on other hand, can impart consciousness about environment among the masses that comprise their environment and society.

Without a thorough understanding of man and his environment, the biological, ecological, social and economic changes on earth cannot be controlled. Therefore, the foundation of environmental concepts is of immense value in the functional unity of biosphere. It is only through the development of environmental study Programmes as a lifelong process, environmental attitude can be imparted. Environment includes all living and non-living objects. We live in the environment and use the environmental resources like air, land and water to meet our needs. Development also means meeting the needs of the people. While meeting the ever-growing needs, we put pressure on the environment. When the pressure exceeds the carrying capacity of the environment to repair or replace itself, a serious problem of environmental degradation happens. If we use any environmental resource such as ground water beyond its limit of replacement, we may lose it forever. Therefore, there is a need to create 'knowledge' about Environmental protection. Environmental awareness is a basic towards the inculcation of proper environmental attitudes.

In the context of Tamil Nadu in India, the literacy rate is increasing over many years. It led to the establishment of many number of colleges all over Tamil Nadu. Besides, the students studying in colleges should have social dimensions; the environmental attitude and practice are given more importance in these days especially among the college students. Social workers can sensitize the people about the importance of environmental knowledge and attitude for sustainable environment. This can be done by creating awareness among the students through different media and create different paths and encourage them for safe practices.

In the past two decades, Environment has attracted the attention of school and college students in India. They are becoming increasingly conscious of issues such as famines, droughts, floods, scarcity of fuel, firewood and fodder, pollution of air and water, problems of hazardous chemicals and radiation, depletion of natural resources, extinction of wildlife and dangers to flora and fauna. Since, Tamil Nadu incorporated environmental education as part of their curriculum and it's mandatory for all the students irrespective of their curriculum. Therefore, it is important to know the knowledge of environmental awareness and attitude among the future generation and their present practice towards environmental protection which leads to sustainable development. Therefore environmental attitude is essential, and to meet the needs. In order to have insightful knowledge on B.Ed college students' environmental attitude, this study has been undertaken. Therefore the investigator feels that there is a need for the present study.

Objectives of the study

- To find out the level of environmental attitude of prospective teachers students
- To find out the level of environmental attitude of prospective teachers with regard to gender
- To find out whether there is any significant difference in environmental attitude of prospective teachers with regard to gender

Hypothesis of the Study

1. The level of environmental attitude of prospective teachers is average
2. The level of environmental attitude of prospective teachers students with regard to gender is average
3. There is no significant difference in environmental attitude of prospective teachers with regard to gender

Methodology

Survey Method was utilized to collect the data from the respondents through planned questionnaire designed on the basis of the objectives of the study. The population for the present study comprises all the students studying in the colleges of education located in Virudhunagar district. In the present study, the investigator used simple random sampling technique for selecting the sample. The investigator has randomly selected seven colleges of education from Virudhunagar distract affiliated to TamilNadu Teacher's Education University. From these colleges of education, 300 students were selected. Environmental attitude Scale (2019) was prepared and validates by the investigators was used for getting the level of environmental attitude of the sample. In this study, various statistical measures such as Mean, Standard Deviation, t-test and Scheffe test were used.

Analysis of the Study

1. To find out the level of environmental attitude of prospective teachers

Table 1.1 Level of environmental attitude of student teachers

Low		Moderate		High	
Count	**%**	**Count**	**%**	**No.**	**%**
40	13.3	214	71.3	46	15.3

It is inferred from the above table that, 13.3% of the prospective teachers have low, 71.3% of them have moderate and 15.3% of them have high level of their environmental attitude.

2. To find out the level of environmental attitude of prospective teachers with respect to gender

Table 1.2 Level of environmental attitude of prospective teachers with reference to gender

Gender	***Low***		***Moderate***		***High***	
	No.	***%***	***No.***	***%***	***No.***	***%***
Male	19	17.9	72	67.9	15	14.2
Female	21	10.8	142	73.2	31	16.0

It is inferred from the above table that, 17.9% of the male prospective teachers have low, 67.9% of them have moderate and 14.2% of them have high level of Environmental attitude . 10.8% of the female prospective teachers have low, 73.2% of them have moderate and 16.0% of them have high level of environmental attitude.

3. There is no significant difference in environmental attitude of prospective teachers with respect to gender

Table 1.3 Difference in environmental attitude of prospective teacherswith respect to gender

Gender	*N*	*Mean*	*SD*	*Calculated 't' value*	*Remarks at 5% level*
Male	106	1.26882	15.34846	2.10	**S**
Female	194	1.28902	15.09382		

(At 5% level of significance, for df 298, the table value of 't' is1.96)

It is inferred from above table that the calculated 't' value (2.10) is greater than the table value (1.96) for df (298) at 5% level of significance. Hence the null hypothesis is rejected. It shows that there is significant difference in environmental attitude of prospective teachers with respect to gender.

Findings of the Study

1. 13.3% of the prospective teachers have low, 71.3% of them have moderate and 15.3% of them have high level of their environmental attitude.
2. 17.9% of the male prospective teachers have low, 67.9% of them have moderate and 14.2% of them have high level of Environmental attitude .
3. 10.8% of the female prospective teachers have low, 73.2% of them have moderate and 16.0% of them have high level of environmental attitude.
4. there is significant difference in environmental attitude of prospective teachers with respect to gender.

Interpretation of the Study

The 't' test result shows that there is significant difference in environmental attitude of prospective teachers with respect to gender. Comparing the mean female prospective teachers have better environmental attitude than the male prospective teachers. It is inferred from the present study that the female have more environmental attitude (1.28902) than Male (1.26882) prospective teachers is found in similar with the findings of **Taskin, Ozgur (2009)** who conducted a study on "The Environmental Attitudes of Turkish Senior High School Students in the Context of Postmaterialism" and found that female students have more pro-environmental attitudes than the others.; and **Ozkan, Recep (2013)** carried a study on "Indicating the Attitudes of High School Students to Environment" and found that attitudes of female students were higher in positive way than male students.

Recommendations of the Study

The following are the important recommendations that helpful to the governmental organizations and the respective authorities to develop appropriate strategies, modules and outreach programme without come actions starting from the school education level to university level like higher education system level to improve environmental attitude.

- Teachers are potential change agents and are capable of generating a workforce of enlightened, skilled and motivated learners. They can empower the citizens with the ability to protecting the environment using formal and non-formal channels of education. It is essential that teachers themselves need to be trained and equipped with the requisite knowledge skills and values to effect such a change. It must be ensured at their pre-service training programmes.
- The statutory body like NCTE must implement and incorporate environmental education as a mandatory or compulsory subject in the B.Ed. core curriculum rather than optional or elective subject so that future teachers can get more information regarding environmental aspects and its impacts on human society. This will help them to instill their students environmental sensibilities.

- The pre-service training should include interactive teaching pedagogies to enhance active teaching and learning of environmental education with environmentalists and researchers.
- The curriculum of environmental concepts should be revised frequently when compare to other disciplines that must be equivalent to latest developments thereby updating information with latest research outcomes and real fact of environmental deteriorations.
- The curriculum for teacher training should focus on developing scientific attitudinal research irrespective of stream of affiliation of prospective teachers along with opening a field of research, co-psychology, for further research.
- Institutional and group research activities in the field of environmental education may be enhanced among the student teachers at the course of study and give academic weightages to practical filed work rather than giving importance to theory based examination.
- Collaborative ventures may be created between the teachers and community through the agencies of schools, colleges, universities and other institutions. Such collaborations should include campaigns on environment awareness, tree plantations, and waste management or also in developing instructional materials.
- The curriculum of secondary level pre-service teacher education programme (B.Ed) should be amended and should be based on knowledge of environment, attitude and values towards the environment.

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DIMENSIONWISE ANALYSIS OF RISK TAKING BEHAVIOUR AMONG COLLEGE STUDENTS

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Abstract

The objective of the study is to find out the level of risk taking behaviour among college students with regard to course of study and year of study. The investigator adopted normative survey method for the collection of data. The sample consists of 500 arts and science college students randomly selected from 5 colleges from Virudhunagar District. In the present study, the investigator and guide developed risk taking behavior questionnaire for college students. The questionnaire constructed under the two dimensions such as Psychological Risks and Physical Risks. Every dimension has 10 items. The findings of the result showed that (i) arts and science students have average level of risk taking behaviour. (ii) there is a significant difference in their course of study and year of study among college students.

Introduction

The era of 21st century is the age of struggles of mental, social and personality development or the age of competition. Every human being is busy to utilize his entire resources to place himself in a leading position. This competitive spirit bounds him to take the "Risk". To take risk, in several environmental situations, is an interesting phenomenon of human life. The term 'risk' means a dangerous element or factor, where an individual is put in willingly/ unwillingly in that situation. To take risk, in several environmental situations, is an interesting phenomenon of human life. Risk – taking behaviour has its own importance in the life where on one hand, it prepares a person to face the dangerous situations, and on the other hand it helps in the canalizations of abundant body energy in different creative ways.

The term "Risk" has become now a very common and prominent term, means a dangerous element or factor where an individual is put in willingly, unwillingly in that situation. Those who are ready to face the challenges of life and dare to overcome these situations successfully, may be called as "Risk – Takers" and this firm determination of such extraordinary people is called "Risk – Taking Tendency" and those who are not ready for the situation and dare not to face the challenges may be termed as "Non Risk – Takers" and this kind of attitude in which they try to escape the situations is mentioned as "Non Risk – Taking Tendency". Generally, a "Risk – Taker" is an individual who takes an act in his hands involving danger to his life, social prestige or economic set-up.

Need and Significance of the Study

Ever since his existence man had to face dangers and threats associated with his daily life in order to survive. Everyday they had to come across many threats and dangers but still they take risk to come out of this. For example man had to face dangers and struggle to satisfy his basic needs like food, water, shelter, etc. Whatever dangers and threats may come but still individual tries his best and take risk to attain those things which satisfy his basic needs or requirements. In the same way there are physical dangers also like dreadful and incurable diseases causing death. But now technological society has altered man's life style considerably so that the physical diseases associated with survival are greatly reduced. The people who take risk to face and control these social and physical dangers and those who took the challenges only survived.

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The 21st Century is the age of science and technology in which modern social activities are aimed at materialistic achievements in other words this is the age of anxiety and competition. In the modern materialistic world, everyone is indulged in the races of making money, gaining popularity, prestige power and prominent places in the society and obtain his objectives by hook and crook. This era is full of desires, needs, fantasies, wants and urges. Everyone wants to utilize his entire resources to establish his superior position in the society one way or the other. The competitive life pattern forces the human being to dare for such activities which in the stage of failure may cause the harm not only to his energy, power, and prestige but to his life ultimately. In other wards, smooth living has become a thing of the past. This brings us to problem of risk and risk taking tendencies in the present social living. Risk – taking behaviour has its own importance in the life. Where on one hand, it prepares a person to face the dangerous situations on the other hand it helps in the canalization of abundant body energy in different creative ways. Especially in the age of college life. In this stage risk can be observed or identified in many forms. If we study comparatively we will find that college students and young man are significantly higher in confidence and taking risk than children and old man, and tend towards risky jobs, motivated by their needs and young age, in which they get success many times but also face failures because of the lack of experience and proper guidance. The age of college student, viewed as a period of "Storm and Stress", Risk-taking involves a person's knowledge of it, as the subjective experience of risk is essential for any emotional, psychological or cognitive change in behaviour. Especially in the education, risk taking is a quality needed for teachers and academicians to introduce new strategies in education. This risk taking behavior may help the teachers in many of the classroom situations. The college students are the future citizens and their risk taking behaviour is considerable one. Therefore the investigator intends to study the risk taking behavior of college students.

Operational Definition of Key Terms

Risk Taking Behaviour

Risk-taking refers to the tendency to engage in behaviours that have the potential to be harmful or dangerous, yet at the same time provide the opportunity for some kind of outcome that can be perceived as positive.

College Students

Students studying in Arts and Science colleges of Virudhunagar district.

Method of Study

For the present study normative survey method has used. The population for the present study was all those students who were studying arts and Science colleges in Virudhunagar District. Sampling was done in order to get college representation, and the student representation. From 5 arts and science colleges 500 students were drawn using simple random sampling technique. In the present study, the investigator and guide developed risk taking behavior questionnaire for college students. The questionnaire constructed under the two dimensions such as Psychological Risks and Physical Risks. Every dimension has 10 items. Totally the tool has 20 items. Each item has five responses. There are: Very much, Much, Moderate, Less and Very Less. All the items are positive in nature. Thus the maximum scoring possible in the scale is 100 and the minimum scoring is 20.

Objectives of the study

1. To find out the level of risk taking behaviour among college students with respect to course of study.
2. To find out the level of risk taking behaviour among college students with respect to year of study.

Hypotheses of the study

1. There is no significant difference between arts and science group students in their risk taking behaviour.
2. There is no significant difference between first year, second year and third year college students in their risk taking behaviour.

3. **Percentage Analysis**

Objective –1

To find out the level of risk taking behaviour among college students with respect to course of study.

Table- 1.1 Level of risk taking behaviour among college students with respect to course of study

Dimensions /Variable	Course of study	Low		Average		High	
		N	%	N	%	N	%
Psychological Risks	**Arts**	57	23.8	117	48.8	70	29.2
	Science	88	33.9	151	58.1	45	17.3
Physical Risks	**Arts**	64	26.7	94	39.2	84	35
	Science	59	22.7	154	59.2	69	26.5
Risk taking behaviour in total	**Arts**	97	40.1	108	45	39	16.2
	Science	86	33.1	147	56.5	27	10.4

From the table 1,1 it is observed that large percentage of arts students have average level of Psychological Risks (48.8%), Physical Risks (39.2%) and Risk taking behaviour in total (45%). Also it is observed that large percentage of science students have average level of Psychological Risks (58.1%), Physical Risks (59.2%) and Risk taking behaviour in total (56.5%).

Objective – 2

To find out the level of risk taking behaviour among college students with respect to year of study.

Table- 1.2 Level of risk taking behaviour among college students with respect to year of study

Dimensions /Variable	Year of study	Low		Average		High	
		N	%	N	%	N	%
Psychological Risks	**I st year**	21	16.2	83	63.8	26	20
	II nd year	31	18.2	98	57.6	41	24.1
	III rd year	24	15	102	63.8	34	21.2
Physical Risks	**I st year**	41	31.5	76	58.5	43	33.1
	II nd year	58	34.1	84	49.4	28	16.5
	III rd year	53	33.1	77	48.1	30	18.8
Risk taking behaviour in total	**I st year**	19	14.6	80	61.5	31	23.8
	II nd year	57	33.5	69	40.6	44	25.9
	III rd year	50	31.2	71	44.4	39	24.4

From the table 1.2 it is observed that large percentage of I st year college students have average level of Psychological Risks (63.8%), Physical Risks (58.5%) and Risk taking behaviour in total (61.5%). It is observed that large percentage of II nd year college students have average level of Psychological Risks (57.6%), Physical Risks (49.4%) and Risk taking behaviour in total (40.6%). It is observed that large percentage of III rd year college students have average level of Psychological Risks (63.8%), Physical Risks (48.1%) and Risk taking behaviour in total (44.4%).

Differential Analysis

Null Hypothesis: 1

There is no significant difference between arts and science group students in their risk taking behaviour.

Table- 1.3 Significant difference between arts and science group students in their risk taking behaviour

Dimensions/Variable	Course of Study	N	Mean	SD	Calculated 't' Value	Remarks at 5% level
Psychological Risks	Arts	240	16.8731	5.26932	0.56	**NS**
	Science	260	16.5181	5.61893		
Physical Risks	Arts	240	14.8209	5.20244	1.33	**NS**
	Science	260	14.0181	5.16571		
Risk taking behaviour in total	Arts	240	63.1045	12.27582	2.11	**S**
	Science	260	61.4337	11.72895		

(The table value of 't' at 5% level of significance is 1.97)

From the above table it is inferred that the calculated 't' values are less than the table value for Psychological Risks and Physical Risks. Thus there is no significant difference between arts and science group students in their Risk taking behaviour. Hence the null hypothesis is accepted.

The calculated 't' values are greater than the table value for Risk taking behaviour in total. Thus there is a significant difference between arts and science group students in their Risk taking behaviour. Hence the null hypothesis is rejected.

Null Hypothesis: 3

There is no significant difference between first year, second year and third year college students in their risk taking behaviour.

Table- 1.4 Significant difference between first year, second year and third year college students in their risk taking behaviour

Dimensions /Variable	Year of Study	DF	Sum of square	Means square	Calculated 'F' Value	Remarks at 5% level
Psychological Risks	Between groups	2	16.850	8.425	0.28	**NS**
	With in groups	297	8894.787	29.949		
Physical Risks	Between groups	2	103.119	51.559	1.93	**NS**
	With in groups	297	7947.318	26.759		
Risk taking behaviour in total	Between groups	2	122.396	61.198	6.42	**S**
	With in groups	297	42825.884	144.195		

(The table value of 't' at 5% level of significance is 5.991)

From the above table it is inferred that the calculated 't' values are less than the table value for Psychological Risks and Physical Risks. Thus there is no significant difference between first year, second year and third year college students in their Risk taking behaviour. Hence the null hypothesis is accepted.

The calculated 't' values are greater than the table value for Risk taking behaviour in total. Thus there is a significant difference between first year, second year and third year college students in their Risk taking behaviour. Hence the null hypothesis is rejected.

Result and Discussion

There is a significant difference between arts and science group students in their total Risk taking behaviour. This may be due to the reason that practically Science students take many risk according to their study. But in the case of arts students they lead their life joyfully and freely.

There is a significant difference between first year, second year and third year college students in their total Risk taking behaviour. This may be due to the reason that third year students are compelled to settle his life on completion of their course of study. For that reason they take risk in their life. But first year and second year students think that there is enough time to settle their life they take their course of study easily.

Conclusion

It is well known fact that risk in life is very essential. To attain a desirable objective each person has to face risk to some extent. Risk taking behaviour is a part and parcel of life, but it should be kept in mind that excess of everything is bad. So, risk taking among persons should be developed to a certain limit and it should be associated with proper guidance.

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LEARNING DIFFICULTIES ENCOUNTERED BY STUDENTS IN PHYSICS CONCEPTS – A MEDIUM OF INSTRUCTION ANALYSIS

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Abstract

The main objective of study is to find out the whether there is any significant difference in learning difficulties encountered by students in physics concepts to medium of instruction . Descriptive survey method was used in the present study. The present study covers higher secondary students in Srivilliputtr Taluk . The total sample selected for this study is 300 and these samples were selected from 6 higher secondary schools by means of simple random sampling technique. Learning difficulties in physics concepts was prepared and validated by investigator and guide (2019) The findings of the study were;i) 14.3% of the higher secondary students have low, 66.0% of them have average and 19.7% of them have high level of learning difficulties encountered in physics concept. ii)Among all the Tamil medium higher secondary students 16.0% of them have low level, 66.7% of them have moderate level and 17.3% of them have high level of learning difficulties encountered by students in Physics concept. iii)Among all the English medium higher secondary students 9.3% of them have low level, 64.0% of them have moderate level and 26.7% of them have high level of learning difficulties encountered by students in Physics concept. iii)There is significant difference in learning difficulties encountered by higher secondary students in Physics concepts.

Introduction

Some students will fail to learn Physics because the subject matter material may be at a level that does not match the developmental learning stage of the student or the student may hold on to tenacious alternative conceptions (sometimes referred to as misconceptions) that were not identified prior to instruction and considered during the stages of instruction. Curriculum, instruction, and assessment are significantly improved when teachers are aware of the developmental considerations and the research findings on commonly held alternative conceptions. A learning difficulty may be said to exist in any situation where a student fails to grasp a concept or idea as the result of one or more of the following factors:

1. The inadequacy of ideas or knowledge in relation to the concept to be acquired.
2. The demand and complexity of a learning task in terms of information processing, compared with the student's information-handling capacity.
3. Communication problems arising from language use, e.g. in relation to technical terms or to general terms with context specific specialized meanings, or the complexity of sentence structure and syntax used by the teacher (compared with the student's own language capacity).
4. A mismatch between instructional approaches used by the teacher and the student's preferred learning mode (learning style).

No claim is made for this definition to be comprehensive, and there may well be other points that could and should be added to it. What the definition does attempt, however, is to draw attention to arrange of causes of learning difficulties which can possibly be remedied through appropriate pedagogical interventions or curricular strategies.

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Other reasons may also prevail and be responsible for students' failure to learn,e.g. lack of interest, an inadequacy of effort or a lack of attention. Practicing teachers are well aware of the importance of these factors- indeed, they frequently invoke them in order to 'explain' lack of performance and low achievement on their students‟ part.

It is important for Physics teachers and educators to recognize and respond to these various excuses of students learning difficulties. Doing this will not only reduce these difficulties, but also make teaching more effective.

Significance of the Study

Science education places a prominent place in curriculum both at school and university stages of education in India. Science as a subject has two important virtues. That is the study of science imparts training in “Scientific methods” and develops “Scientific attitude” in the learner. These qualities can be cultivated only through Physics subject which can qualify the learners to live as truly efficient citizens in a scientific society. Physics lies at the heart of all sciences. Almost any piece of modern scientific instrumentation is based on principles of optics, electronics or nuclear Physics and such apparatus usually has its origin in basic work done by Physicists. Physics is one of the basic science subjects which must be learnt to understand the large variety of events taking place around us not only within our planet but beyond. Students are unlikely to grasp the Physics concepts because which combines with Mathematics. Studying of Physics should help student’s skill, communication skill and experiment skill with technical knowledge. In day to day life the problem solving skill is used for the home electric bill calculation and if any sort connections in the electric circuits can be rectified by the Physics technical knowledge. Also Physics develops the ability to synthesize and analyze large quantities of data and present their analysis in an easily understandable form. When facing a particular problem Physics student taught to systematically identify all factors contributing to the problem and work out how these factors interact in order to solve the problem. These are valuable skills developed by studying physics can be applied in a range of careers. Therefore they encounter a lot of difficulties in learning Physics. Conducting this kind of study in the present context may help students to locate their difficulties in learning Physics and at the same time they will also come to know the technique how to understand Physics without difficulties. Though the study is useful for the teachers to help and to plan their teaching method according to the learners difficult but this study very useful for the students to overcome the difficulties in learning Physics and they realize how Physics is useful to our society. So in these ways the study on Physics difficulties encountered by the students have its own significance.

Objective of the Study

1. To find out the level of learning difficulties encountered by students in physics concepts
2. To find out whether there is any significant difference in learning difficulties encountered by students in physics concepts to medium of instruction

Null Hypotheses

1. The level of learning difficulties encountered by students in physics concepts is average
2. The level of learning difficulties encountered by students in physics concepts with respect to medium of instruction is average
3. There is no significant difference in learning difficulties encountered by students in physics concepts with respect to medium of instruction

Population and Sample

Descriptive survey method was used in the present study. The present study covers higher secondary students in Srivilliputtr Taluk . The total sample selected for this study is 300 and these samples were selected from 6 higher secondary schools by means of simple random sampling technique.

Tools Used

Three point Learning difficulties in physics concepts scale prepared and validated by investigator and guide (2019).

Analysis of Data

1. The level of learning difficulties encountered by higher secondary students in physics concepts is average

Table 1.1 The level of learning difficulties encountered by students in physics concepts

Low		*Average*		*High*	
Count	***%***	***Count***	***%***	***Count***	***%***
43	14.3	198	66.0	59	19.7

It is inferred from the above table that, 14.3% of the higher secondary students have low, 66.0% of them have average and 19.7% of them have high level of learning difficulties encountered in physics concept

2. The level of learning difficulties encountered by higher secondary students in physics concepts with respect to medium of instruction is average

Table 1.1 Learning difficulties encountered by students in physics concepts with respect to medium of instruction is average

Variables	**Sub-variables**	**Low**		**Moderate**		**High**	
		Count	**%**	**Count**	**%**	**Count**	**%**
Medium of instruction	Tamil	36	16.0	150	66.7	39	17.3
	English	7	9.3	48	64.0	20	26.7

It is inferred from above table that the among all the Tamil medium higher secondary students 16.0% of them have low level, 66.7% of them have moderate level and 17.3% of them have high level of learning difficulties encountered by students in Physics concept. Among all the English medium higher secondary students 9.3% of them have low level, 64.0% of them have moderate level and 26.7% of them have high level of learning difficulties encountered by students in Physics concept.

3. There is no significant difference in learning difficulties encountered by higher secondary students in physics concepts with respect to medium of instruction

Table 1.2 Significant difference in learning difficulties encountered by students in physics concepts with respect to medium of instruction

Variable	**Medium of instruction**	**N**	**Mean**	**SD**	**'t' Value**	**Remarks**
Learning difficulties in Physics concepts	Tamil	225	86.87	4.529	.2.908	**S**
	English	75	88.48	4.015		

It is inferred from the above table that the calculated values (2.908) is greater than the table value (**1.96**) for df (298) at 5% level of significance. Hence the null hypothesis is rejected. It shows that there is significant difference in learning difficulties encountered by higher secondary students in Physics concepts.

Major Firings

1. 14.3% of the higher secondary students have low, 66.0% of them have average and 19.7% of them have high level of learning difficulties encountered in physics concept.
2. Among all the Tamil medium higher secondary students 16.0% of them have low level, 66.7% of them have moderate level and 17.3% of them have high level of learning difficulties encountered by students in Physics concept.

3. Among all the English medium higher secondary students 9.3% of them have low level, 64.0% of them have moderate level and 26.7% of them have high level of learning difficulties encountered by students in Physics concept.
4. There is significant difference in learning difficulties encountered by higher secondary students in Physics concepts.

Interpretations

The 't' test reveals that there is a significant difference in difficulties of higher secondary school students in Learning physics concept with respect to medium of instruction. This may be due to the fact that the Tamil medium students somewhat feels easy to understand the Physics concepts because they are learn physics subject through their own mother tongue. Therefore English medium and Tamil medium school students differ in their difficulties of learning.

1. Laboratories should be furnished for Practical work.
2. Every year seminars should be conducted regularly in the schools.
3. Teachers should be arranged Physics related group activities for the understanding the Physics concepts.
4. The school management should encourage the teachers must participate in the In-service training programme.
5. Then and there science exhibitions should be conducted among the schools.
6. Science awareness programme particularly Physics related activities should be conducted in the schools.
7. Schools should provide to the students the video of a Physics experiments or series of Physics experiment.
8. Teachers and students should have cordial relationship among them.

Suggestions for Further Study

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

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A STUDY ON LEARNING STYLES OF HIGHER SECONDARY STUDENTS – A GENDER WISE ANALYSIS

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Abstract

The main objective of study is to find out the whether there is any significant learning styles of higher secondary students with respect to gender . Descriptive survey method was used in the present study. The present study covers higher secondary students in Srivilliputtr Taluk . The total sample selected for this study is 300 and these samples were selected from 6 higher secondary schools by means of simple random sampling technique. Learning style Scale was prepared and validated by investigator and guide (2019) The findings of the study were; i) 13.0% of the stuents have low, 75.0% of them have average and 12.0% of them have high level of learning style of higher secondary students. ii) 17.4% of the male students have low, 71.1% of them have moderate and 11.4% of them have high level of high level of learning style of higher secondary students. 8.6% of the female students have low, 78.8% of them have moderate and 12.6% of them have high level of high level of learning style of higher secondary students. iii) There is significant difference in learning style of higher secondary students with respect to gender.

Introduction

Educators have for many years, noticed that some students prefer certain methods of learning than others. Learning styles form a student‘s unique learning preference and help instructors in the planning of a learning/teaching environment. In the field of science education, learning styles play a vital role in deciding the failure or success of an individual. Success in science requires a multisensory approach and a dedicated effort. It is not about cramming and attempting the answers. Science is quantitative and learning science requires special skills. Conceptual problems and reasoning based questions require higher order abilities for a successful attempt. Thus, particular learning styles will prove beneficial in science achievement. Learning style is both a characteristic which indicates how a student learns and likes to learn, as well as instructional strategy informing the cognition, context, and content of learning. Previous studies have reported that students‘ learning performance could be improved if proper learning style dimensions could be taken into consideration when developing any learning or instructional process (Graf, Liu, & Kinshuk, 2010). The role of learning styles in education of school children is of utmost importance. A number of claims have been made by the advocates of learning style. In the following paragraphs, various roles of learning in education have been pointed out in the words of leading personalities in the concerned field. Dembo (1977) held that certain learning styles may be of even more important than intelligence in affecting classroom learning. The identification of these styles should be of particular importance for educators, as those variables in classification of students may help teacher to optimize the match between teaching and type of students. Gribbs (1981) asserts that “a thorough understanding of students’ learning style can help counselors to develop strategies, techniques and programmes that are responsive to unique learning needs.” Keefe (1982) states that “the key of effective schooling is to understand the range of student learning style and to design instructions and material that respond directly to individual’s learning needs.” Dunn (1978) asserted that “there is no reason in the world not to diagnose the learning styles of every student and provide guidelines and alternatives for teaching them through their individual strengths.” Judith Reiff (1992) has given the following points for the importance of learning styles: 1. A better understanding of self learning style can help teachers.

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Significance of the Study

The style is the most pervasive phenomena of the contemporary society. Different writers have used this term in a variety of contexts. However in the field of psychology, it has been used in the context of personality, cognition, communication, motivation, perception, teaching, learning, leadership, decision making and problem solving etc. Thus the concept of style has been most often used to indicate an individual's quality or behaviour sustained over the time. It represents a distinct notion of coherent similarity in a variety of context. Life is a sequence of act of learning of feelings, ideas, attitudes etc. Learning is nothing but a permanent change in behaviour that occurs as result of experience in the environment. Each learner's personality is unique in one's approach to a variety of learning tasks and one's chosen way of taking a particular task is also unique. Learning depends upon the individual's learning style. In other words, the way which a child is best able to learn visually, orally, by motor activities or a combination of these depends on the child's learning style. Learning style have important bearing for classroom teacher, curriculum designer, educational technologist, guidance and counseling workers and even educational administrators. In this study the researcher concentrates three types of learning styles: visual, Aural and Kinaesthetic: as measured by learning style Inventory. In view of the above concept learning style of higher secondary students in Srivilliputhur Taluk, Virudhunagar district is taken for the present study.

Objective of the Study

1. To find out the level of learning style of higher secondary students
2. To find out the level of learning style of higher secondary students with respect to gender
3. To find out whether there is any significant difference in learning styles of higher secondary students with gender

Null Hypotheses

1. The level of learning style of higher secondary students is average
2. The level of learning style of higher secondary students with respect to gender is average
3. There is no significant difference in learning styles of higher secondary students with gender

Population and Sample

Descriptive survey method was used in the present study. The present study covers higher secondary students in Srivilliputtr Taluk . The total sample selected for this study is 300 and these samples were selected from 6 higher secondary schools by means of simple random sampling technique.

Tools Used

A three point learning style scale prepared and validated by investigator and guide (2017) was adopted. The tool was highly reliable for the investigation and it contains 42 items representing the students' attitude towards learning style . Personal data sheet for recording the students' name, Gender was prepared by the investigator.

Analysis of Data

1. To find out the level of learning style of higher secondary students

Table 1.1 The learning style of higher secondary students

Low		***Average***		***High***	
Count	***%***	***Count***	***%***	***Count***	***%***
39	13.0	225	75.0	36	12.0

It is inferred from the above table that 13.0% of the students have low, 75.0% of them have average and 12.0% of them have high level of learning style of higher secondary students.

2. To find out the level of learning style of higher secondary students with respect to gender

Table 1.2 Learning style of higher secondary students with respect to gender

Gender	Low		Moderate		High	
	Count	%	Count	%	Count	%
Male	26	17.4	106	71.1	17	11.4
Female	13	8.6	119	78.8	19	12.6

It is inferred from the above table that, 17.4% of the male students have low, 71.1% of them have moderate and 11.4% of them have high level of high level of learning style of higher secondary students. 8.6% of the female students have low, 78.8% of them have moderate and 12.6% of them have high level of high level of learning style of higher secondary students.

3. There is no significant difference in learning styles of higher secondary students with gender

Table 1.3 Significant difference in learning styles of higher secondary students with gender

Variable	Gender	N	Mean	SD	Calculated 't' Value	Remarks
Learning style	Male	149	93.1141	12.02898	2.732	**S**
	Female	151	96.4238	8.65905		

It is inferred from the above table that the calculated values 2.732) are greater than the table value (**1.96**) for the df of (298) at 5% level of significance. Hence the null hypothesis is rejected. It shows that there is significant difference in learning style of higher secondary students with respect to gender.

Interpretation

The 't' test result shows that there is significant difference learning style of higher secondary students with respect to gender. The mean values of female students are greater than the male students in their learning style and learning style This may be due to the fact where the female students may have get students to pair up and explain concepts to each other and also female students to participate in group discussions. So they have high level of learning style.

Major Findings

1. 13.0% of the students have low, 75.0% of them have average and 12.0% of them have high level of learning style of higher secondary students.
2. 17.4% of the male students have low, 71.1% of them have moderate and 11.4% of them have high level of high level of learning style of higher secondary students.
3. 8.6% of the female students have low, 78.8% of them have moderate and 12.6% of them have high level of high level of learning style of higher secondary students.
4. There is significant difference in learning style of higher secondary students with respect to gender.

Recommendation of the Study

1. Teachers can discover the learning styles of students by assigning them project work individually. Furthermore, special emphasis should be laid on evaluating these project works so as teacher can make out the learning style of individual students and thereby can present the teaching material accordingly. Policymakers should include such activities in the curriculum which fosters the preferred learning styles, thereby ensuring higher academic achievement. Similarly, educators may discourage science students to adopt those learning styles which were not found significantly associated with academic achievement (i.e. global, reflective, verbal, sensing and intuitive learning style.
2. Parents too can guide and assist their wards in choosing and adopting learning strategies according to their learning styles while learning process. In short, we can say that the results of the present study are highly important for English medium students', teachers teaching language subjects, school management and parents alike.
3. Teachers may also cultivate learning styles of library reading, group discussion, and book reading in the minds of students.

4. The head of the school should allotted a time for science club, maths club activities for the student to encourage their learning style.
5. Government should frame the textbook with lots of activities can also promote the students learning style.
6. By allowing the students to mingle with other peer groups and intellectual groups for exposing their ideas to make them interested in learning.

Suggestions for Further Research

Out of the findings of the present study certain issues emerge which can be taken up for investigation for further research studies.

1. The present study is conducted on learning style of higher secondary students in Srivilliputhur taluk. So the study may be replicated to virudhunagar district or some other district.
2. A similar study can be done on secondary school or undergraduate students also.
3. A similar study can be conducted for comparing Tamil medium and English medium school students.
4. The similar study can be taken to study the academic achievement of students in relation to other styles of learning such as auditory, kinesthetic, concrete and abstract learning style
5. In the present study the researcher determine only the learning style of the students. So present study can be replicated to teaching style, academic achievement, particular subjects regarding with learning style.
6. The present study was limited to higher secondary schools. It may be replicated to Engineering, Arts and Science College also.
7. In the present study the researcher used scale technique for data collection. So, in the future research data collection should be gathered through face- to- face interview, focus group discussion and interview through telephone and cellular phone.
8. Studies may be taken up in other dimensions of learning style.

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ACADEMIC VALUES AMONG UG ARTS AND SCIENCE COLLEGE STUDENTS IN VIRUDHUNAGAR DISTRICT

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Abstract

Values guide our behaviors; It as part of our identity, at home, at work, or any other area of our life. They show us how to behave and how not to behave when we are faced with desires or impulses, whether we're alone or with others. They are like a compass that helps us behave consistently, regardless of the situation. Thus, values are the foundation of our behaviors, and make us feel well about our own decisions. When we act by our values, we are not concerned by what others will say. We act according to our convictions, regardless of whether others are observing us or not. When we truly believe that a set of behaviors constitute an essential cornerstone to life, we act accordingly, and don't care what others say about it.

Design: Descriptive, Method : Normative ,Technique : Survey

Sample : A random sample of 300 undergraduate arts and science college from Madurai district with due representation to the select population variables, viz. Gender, Course of study, Residence, Nativity and Father's occupation.

- Academic values among undergraduate arts and science college students from Madurai district is above the average level.
- Academic values among undergraduate arts and science college students from Madurai district dependent upon Course of study only.
- Academic values among undergraduate arts and science college students from Madurai district dependent upon – Gender; Residence; Nativity ; and Father's occupation. Course of study only.

Keywords: Academic values and UG students

Introduction

The Importance of Values is the code we live by in a civil and just society. They are what we use to guide our interactions with others, with our friends and family, in our businesses and professional behaviour. Our values is a reflection of our spirituality; our character. Education plays an important role in shaping our value pattern and moral character. This is true not only for a particular group of people in our society but also to the students. In this contemporary world are innumerable kinds of living beings. Among these living beings, human being is portrayed at the highest order. Hence, a human being is expected to be consistent in thoughts, words and deeds, since no other being is endowed with potential and capacity required for various kinds of thinking like Critical, Creative, Artistic and Scientific as well as reasoning powers that of deductive and inductive on a par with human beings. Further, the phenomenon, 'Supermind' is found uniquely among human beings only. That is the reason behind the expectation of cherishment of virtues and values by human beings. There cannot be two opinions as regards the advancement of Science and Technology in the contemporary society, but along with that also exist a number of social evils and pathologies, cautioning us to reflect over the non-cherishment of virtues and values by most of us. It is in this, context that the fostering of virtues and values among the society cannot be overemphasized. The prerequisite for the accomplishment of the same is the nourishment of Academic Values, which could serve as an efficient means towards the possession of virtues and values. In the contemporary conflict-ridden society, the importance of possession of academic values among the undergraduate arts and science college students in particular cannot be overstated. Hence the need present study.

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Review of Related Studies

Pozzebm (2006) investigated the importance of personality traits and personal values in the rediction of behaviour. The study found that the personality factor Honesty- Humility was strongly correlated with values. In the prediction of behavior both personality and values were able to account for significant and similar kind of variance.

Bajwa (2007) reported that teachers who are in possession of aesthetic, social, democratic, knowledge and health values have sound mental health whereas those equipped with high economic, power and family prestige values have poor mental health. Thus right pattern of Teacher's Personal Values helped them to improve their mental health.

Sandhya (2007) undertook a study on extent of Value Attainment among student teacher and reported that student teachers gave highest priority to aesthetic values, whereas second priority was given to theoretical value while political and economic values were least preferred.

On the other hand, Srihari (2007) undertook an in-depth study to identify the level of values possessed by the prospective teachers. A standardized research tool developed by Shamim Karim called 'Teachers Value Inventory' was used to collect data. The investigator used arithmetic mean, standard deviation and t-value for analysis of data and reported that teachers possess high level of values. Moreover, there was no significant difference in possession of values between science and arts, male and female prospective teachers.

Prasad (2008) made an attempt to examine the value preferences and value system among M.Ed. students. The study revealed that M.Ed. students had given highest preference to the value of 'a world at peace' followed by equality and wisdom among the set of terminal values. Ambition was the most preferred instrumental value among M.Ed. students.

The investigator has reviewed four studies. All these reviews most of the reviews are about values on various stages. Here the present study differs from the above studies in terms of area, population and sample. It is clear from the review of related literature that to the best of the knowledge of the investigator, none has conducted a study on a study on academic values among undergraduate arts and science college students in Madurai district. Hence the investigator has chosen the topic.

Terms and Definitions

Academic values - refers to the learners' perceive Knowledge; Thinking; Teaching; Learning

Undergraduate Arts and Science students – refers to the face-to-face learners of three year courses after getting a plus two in Madurai district.

Variables of the Study

Dependent Variables

Academic Values

Independent Variables-

1. Gender : Male / Female
2. Course of study : Arts / Science
3. Residence : Hosteller / Dayscholar
4. Nativity : Urban / Rural
5. Father's occupation : Government / Others

Objectives of the Study

1. To measure the Academic values among undergraduate arts and science college students in Madurai district.
2. To find out whether there is significant difference in Academic values among undergraduate arts and science college students in Madurai district in terms of select independent variables.

Hypothesis of the Study

Each of the population variable involved in this study exerts a significant influence on Academic values among undergraduate arts and science college students in Madurai district.

Methodology in Brief

Design: Descriptive, **Method** : Normative ,**Technique** : Survey

Sample : A random sample of 300 undergraduate arts and science college from Madurai district with due representation to the select population variables, viz. Gender, Course of study, Residence, Nativity and Father's occupation.

Tools Used

1. General Information Sheet structured by the Investigator.
2. Academic Values Inventory constructed and standardized by Krishnan, K.(2010).

Statistical Treatments

't' test for significance of difference between the means of large independent samples.

Results and Discussions

Academic values among arts and science college students

The **empirical average** of undergraduate arts and science college from Madurai district is found to be17.75, while the **theoretical average** is 15 only. This shows that undergraduate arts and science college from Madurai district is found to be above the average level.

Table 1: Results of test of significance of difference between the mean scores of undergraduate arts and science college students from madurai district: independent variables – wise.

Sl.No.	Variable	Sub-Variables	N	M	S.D.	't'-value	Significance at 0.05 level
1.	Gender	Male	188	17.31	8.44	-1.372	Not Significant
		Female	112	18.25	9.67		
2.	Course of study	Arts	127	19.17	8.32	3.019	**Significant**
		Science	173	22.43	10.39		
3.	Residence	Hosteller	186	17.69	8.98	0.880	Not Significant
		Dayscholar	114	16.77	8.67		
4.	Nativity	Urban	122	18.83	8.02	-1-077	Not Significant
		Rural	178	17.67	8.68		
5.	Father's occupation	Government	47	18.19	8.02	0.393	Not Significant
		Private	153	17.67	9.88		

Academic Values and Gender

The calculated 't' value (-1.372) is **lesser than** the table value (1.96) at 0.05 level of significance. This shows that there is **no significant difference** between male and female among undergraduate arts and science college students from Madurai district in terms of in academic values.

Academic Values and Course of Study

The calculated 't' value (3.019) is **higher than** the table value (1.96) at 0.05 level of significance. This shows that there is **a significant difference** between arts course and science course among undergraduate arts and science college students from Madurai district in terms of in academic values. It is also finding that arts students possess higher academic values than science students.

Academic Values and Residence

The calculated 't' value (0.880) is **lesser than** the table value (1.96) at 0.05 level of significance. This shows that there is **no significant difference** between hostel and dayscholar students among undergraduate arts and science college students from Madurai district in terms of in academic values.

Academic Values and Nativity

The calculated 't' value (-1.077) is **lesser than** the table value (1.96) at 0.05 level of significance. This shows that there is **no significant difference** between urban and rural students among undergraduate arts and science college students from Madurai district in terms of in academic values.

Academic Values and Father's Occupation

The calculated 't' value (0.393) is **lesser than** the table value (1.96) at 0.05 level of significance. This shows that there is **no significant difference** between government and others of father's occupation students among undergraduate arts and science college students from Madurai district in terms of in academic values.

Hypotheses Verification

Out of the five independent variables involved in the study, only one variable viz. Course of study exerts a significant influence on academic values among undergraduate arts and science college students. Hence the hypothesis is very minimally accepted.

Conclusions

The major conclusions emerged out of the study are presented below:

- Academic values among undergraduate arts and science college students from Madurai district is above the average level.
- Academic values among undergraduate arts and science college students from Madurai district dependent upon Course of study only.
- Academic values among undergraduate arts and science college students from Madurai district dependent upon – Gender; Residence; Nativity ; and Father's occupation. Course of study only.

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DEVELOPING THE SKILL OF INTEGRATING SCIENCE TEACHING WITH DAY TODAY LIFE ACTIVITIES AMONG PRIMARY SCHOOL TEACHERS

[1]V. Suganya

Abstract

Science education has an important role to play in the all-round cultural and societal development of human kind and for evolving a civilized society. The essence of scientific spirit is to think globally and act locally, since scientific knowledge is universal in nature while the fruit of science have some site specificity. Science is an art which plays a very important role in our day to day life. Science has given numerous useful gifts to mankind. Science always plays an important role in our life, whether we realize it or not. Anything that we do is always involved some parts of science in it. Good science education is true to the child, true to life and true to science.

Science not only inculcates the spirit of curiosity among the students but helps in developing scientific temper. This scientific temper, or scientific attitude is basically characterized by the traits like a healthy scepticism, universalism, freedom from prejudice or bias, objectivity, open mindedness and humility, willingness to suspend judgment without sufficient evidence, rationality, perseverance and positive approach to failure. Normally, a person having scientific attitude, uses the method of science in his/her daily life decision making process, knowingly or unknowingly.

Keywords: Skill of Teaching Science and Primary School Teachers

Introduction

Science in general is used to explain the environmental phenomenon and physical world around us. Science is also equated to technology; technology employs the various principles of science. The relation between 'nature of science' and technology help us in formulating the 'vision of science education'. The quality of learners depends on the quality of teachers. Today science is taught as 'integrated science' from primary education and linked with day to day activities.

According to NCF-2005,a good science education is one that is true to learner, true to life and true to science. Teaching of science, particularly at the elementary level, is an important aspect of present day. Young children have a natural curiosity about their world and how it works. This curiosity has driven them since time immemorial to explore the world around them. The teacher should be given opportunity to explore science in their everyday experiences to the students. Science is dynamic, expanding body of knowledge covering ever new domains of experience. It is an organized system of knowledge which is based on inquiry born out of natural curiosity, logical reasoning and experimentation. The role of a science teacher has evolved in recent years from that of transmitter of knowledge to one of facilitator of knowledge. The teacher is also expected to be a participant in the construction of knowledge and to develop in students an understanding of the nature of science.

Science education is very important to the development of any nation in many areas. Science plays vital role in our day to day life.Science is an integral part of modern life. Science education is one of the most important subjects in school due to its relevance to students' lives and it's universally applicable problem-solving and critical thinking skills it uses and develops. These are lifelong skills that allow students to generate ideas, weigh decisions intelligently. These skills are integral to every aspect of a student's education and life, from school to career. Science education gives the skills and knowledge required for students.

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Learning Science Through Activities

Science is important because it teaches an understanding of natural phenomena. Science aims to stimulate our natural curiosity in finding out why things happen in the way we do. It teaches methods of enquiry and investigation to stimulate creative thought. Studying science is important because it runs on logic, reasons Such as questioning often with "why?" about everything and secondly science teaches about the things going on in and around our surroundings. So if you truly want to know what is going on in this world then you need to know about science or study science. Science is creating wonders almost every day. What was once sheer fantasy is now almost a reality by virtue of the recent achievements of men of science. Almost everything that eases our daily life Chores are through the wonders of modern science. Science has conferred many gifts on modern life. Indeed, they are far too many to be counted. Science education should enable the learner to know the facts and principles of science and its applications, consistent with the stage of cognitive, affective and psycho-motor skill development. The children engage in exploratory and hands on activities to acquire the basic cognitive and psychomotor skills through observation, classification, inference, etc. Science education provides all types of values to the students. The application of scientific knowledge helps to satisfy many basic human needs and improve living standards. So the science education is provided from primary classes based on various Educational Commission and Educational Policy. Hence the Science Education is important in Primary Education.

Identification of the Problem

Several reviews on science education have lamented the transformation and It's Related content knowledge on day to day life of the learners by the teachers and implied that improvements in this area would lead to better teaching and learning.

Though the teachers are capable to teach science very well but they are unable to relate and demonstrate the science concepts with daily life of children and they are facing difficulties in choosIng and designIng science activities which are closeLy connected to the daily activities. Discussions have been made with teachers and BRTEs, and the practitioner found that the teachers need guidance in designIng and demonstratIng science teaching integrateD with daily activities. Hence, the practitioner decided to do an action research on this issue and to suggest the ways to integrate science teaching with day to day Life activities.

Need for the Study

The objective that forms a keystone to this reform initiated by NCF-2005 is for making school Education closer to child's familiar everyday world and contextualizing science learning in everyday world of child. Thus according to NCF-2005 school classrooms must be transformed into spaces where children actively engage with their everyday familiar world – physical, social and cultural – around them exploring, observing, solving problems, inventing and working things out, and making It sensible out of it all.

NCF 2005 regards this bridge i.e. between the everyday world of the child and school science learning, to be important cognitively, to make school learning meaningful. It also embraces the view of learning as a collaborative and situated process where learning and understanding are done within a community of learner. Hence, this research needs to be done in required circumstances and provide ways to strengthen the science teaching in schools by guiding the teachers relating to the teaching content with learners environment.

Probable Causes of the Problem

- Teachers do not know how to link science in daily life activities.
- Lack of learning content availability to relate the science with learners' environment.
- Lack ofguidance in doing simple experiments using available materials in learners' environment.

Objectives of the Study

- To develop skill among the teachers in integrating science teaching with day to day activities thereby to make more understanding among learners.
- To suggest various strategies in integrating science teaching with day to day activities.

- To encourage and ascertain that the teachers would use strategies in integrating science teaching with day to day activities in their teaching.

Action Hypothesis

The strategy developed by the practitioner will act as a drive to develop the skill in integrating science in day to day life activities among the primary teachers.

Tools Used for the Study

An observation schedule consists of 12 statements to evaluate the teachers with three alternative responses. The responses are recorded as good, average and low. The score of 3, 2 and 1are given to the responses for the good, average and low performances respectively.

Sample of the Study

25 primary teachers from five schools in Ayothiyapattinam block of Salem district were taken as a sample for this study.

Design of the Study

Experimental method was adopted for the present study. It was planned to organize in the following three stages. Pre test- Intervention-Post test

Pre Test

An observation schedule consists of 10 statements to evaluate the teachers in integrating science teaching in day to day activities of learner.

Intervention Strategy

The intervention consists of the following steps

1. Development of a module
2. Training

Module

The module was prepared by the practitioner in Tamil Version. The following strategies were highlighted in the module with many examples

- Identifying the science concepts available in text book which related with day to day activities
- Science experiments demonstrated by the practitioner using simple house hold things.
- Importance of makIng use of scientific journals
- Gaining experience with field trip
- Wiping out superstitious beliefs

Post Test

After the treatment in order to evaluate the effectiveness of the methodology adopted post-test were conducted. The same procedure which was followed in the pre-test was repeated in the post test.

Statistical Techniques Used in the Study

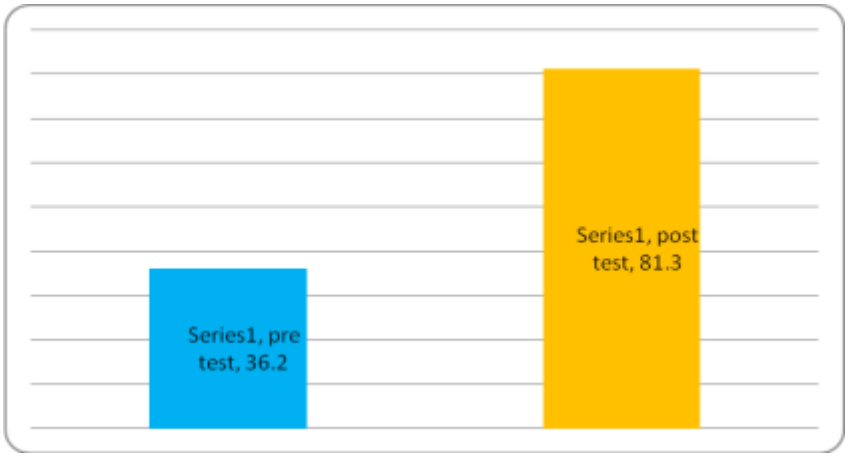
The data obtained from the same were analyzed by using appropriate statistical techniques as 'mean and percentage of average marks' obtained by the teachers.

Analysis and Interpretation

The test scores collected from the Pre-test were tabulated and analyzed. Average Mean Scores from Pre-test and Post-test were calculated and tabulated as follows.

Table 1 Average marks of over all teachers

Pre-test Marks (Average marks obtained by overall teachers)	Post-test Marks (Average marks obtained by overall teachers)
36.2	81.3



Average marks obtained by overall teachers

The above chart shows the average scores obtained by the teachers in the pre-test and post-test. The average score of the pre-test was 36.2% and the average score of the post-test was 81.3 % .This result gives a clear picture that the post-test scores were 45 % higher than the pre-test scores.

Table 2 Teachers average marks school wise

School Name	Pre-test Marks (Average marks obtained by overall teachers)	Post-test Marks (Average marks obtained by overall teachers)
PUPS ,Kamarajnagar colony,	38.8	86.4
PUMS Thathampatti	34.8	88.4
PUPS Valasaiyur	38	85
PUPS Pallipatti	35.2	84.2
PUPS Veeranam	33	82.2

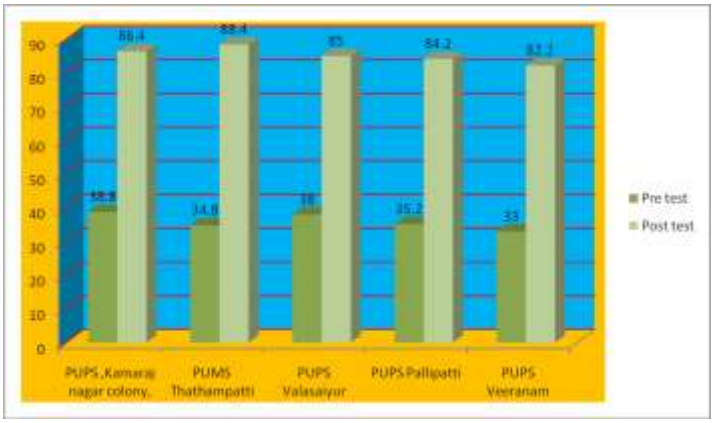


Figure 2 School wise average marks obtained by teacher

The above chart shows that the School wise average marks obtained by the teacher. Comparing with five school performance PUMS Thathampatti performance is better than other four schools. Their Post test score is 88.4 %. Out of five schools PUPS Pallipatti performance seems low. Their Post test score is 82.2%.

Result and Findings

The following findings were obtained after analyzing the post test data and also from the feed backs received from the sample teachers.

- Almost all the teachers were motivated and developed their skill much better than the pretest scores.

- After intervention teachers were able to connect the content with real life situation.
- All teachers were well versed in conducting science experiments by using house hold things and materials. Also understood that how the household materials have the scientific properties.
- All the samples showed expected improvement in the usage of science concepts of day to day life in their science teaching process.
- Only after the intervention most of the teachers had the opportunity to know about the science related magazines .Also they learned about the usage of science magazines in updating their science teaching learning process.
- The desired exposure over attaining knowledge of scientific knowledge from the e-content was utilized by the students.
- ComparIng with five school's performance PUMS Thathampatti performance is better than other four schools.
- PUPS Pallipatti performance is lower compareD to other four schools.

Recommendations

- Teachers should give more importance to hands on experiences rather than conceptual knowledge.
- Science exposure visits can be provided to teachers.
- Schools should be more proactive in conducting science exhibitions fairs and seminars.
- Training should be provided in various teaching and learning methods.
- The intervention of the action research was effective and the usage of integrating science in day to day activities has been improved. Hence this method can be adapted to all the schools of the block and further to entire district.

Conclusion

Applying science in day today life activities is a mental and cultural tradition that helpS to understand the why's and how's of life. It preserves the traditional beliefs and without hampering man's curiosity about nature, the wonders of creation and origin of universe. Applying science knowledge is necessary for an individual to lead a smooth and comfortable life in the society. In order to enhance science knowledge among students specific and clear goal oriented curriculum is essential. Hence the module would help to develop the skill in integrating science in day today life activities among the teachers and in turn makes use of them in class room teaching learning process successfully.

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DEVELOPING THE SKILL IN INTEGRATING SCIENCE IN DAY TODAY LIFE ACTIVITIES AMONG UPPER PRIMARY TEACHERS

[1]K. Kanniammal

Abstract

Wherever you go, science is involved ... without Science, we'd be no place!! Human life is very associated with scientific concepts and knowledge, along with scientific actions and phenomena. It is also necessary for everyone to understand life skills/ activities through scientific (attitudes) concepts. So that understanding of science concepts will help the students at the upper primary level to lead others to do the life- oriented activities. Understanding of scientific concepts will minimize the legends of both teachers and students. Also, this knowledge will help them to lead their without conflicts and controversies. Science is an art which plays a very significant role in our day to day life. Science has given numerous useful gifts to humanity. Science always plays vital role in our life, whether we realize it or not. Anything that we do is forever involved some parts of science. Science education is accurate to the kid, right to existence and factual to science. Science not only implants the courage of curiosity among the students but helps in developing methodical temper. In general, a person having a scientific approach uses the method of science in his/her daily life decision-making process, knowingly or unknowingly. Our first prime minister, Jawaharlal Nehru, was very fond of using the term "Scientific Temper." He was keen that we should not learn science superficially' i.e., just the facts of biology or chemistry and physics. He wanted people to possess scientific temper to be better scientists, better citizens, and capable of governing their thoughts and actions in a scientific manner.

Keywords: Integrating skills and Upper Primary Teachers

Introduction

The importance of developing scientific temper is very clearly establishing the fact that, it is one of our primary duties to expand scientific temper and strength of investigation amongst member inhabitants. Article 51 A of our constitution which contracts with basic duties makes it a responsibility of each citizen to expand a Scientific Temper. Article 51A of our constitution also makes it a duty of every citizen to develop humanism &spirit of inquiry and reform. Our science rule also repeats the similar judgments. For developing scientific temper among the students, several of efforts are being made the government and several Non-Government Organizations. The National Curriculum Framework (NCF 2005), which is at present consider as the bible of school instruction, has also keen out that sciences, similar to the systems of mathematics, have their concepts, often interconnected through theories, and attempt to describe and explain the natural world. Scientific inquiry involves observation and experimentation to validate predictions made by premise (hypotheses). The National focus group on Teaching of Science suggested prevention of marginalization of experiment-based learning in a school science curriculum. In fact, for the overall expansion and progress of any association or the nation as a whole, we have to promote a Scientific Temper in the nations with complete ability for significant evaluation. The lack of Scientific Temper deteriorates our aptitude to make rational decisions. Science education has a vital position to play in the all-round civilizing and communal growth of human kind and for evolving a civilized society. The essence of scientific spirit is to think globally and act locally, since scientific knowledge is universal in nature while the fruit of science have some site specificity. Similarly, Kalbag 1991 says that the scientific temper or scientific approach is a refinement of thinking that comes naturally to every human being. Instituting these changes could remove many of the problems the general public now has in understanding and appreciating scientific research.

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Learning science situations has inward much concentration in the past two decades with an augmented focal point for school-aged kids on the position of connecting in-school and out-of-school i.e. in daily life. In addition to children, though, teachers also investigate and support the learning of science. Nehru (1946) described the concept of Scientific Temper as follows: "A person who cannot understand another's points to that extent limited in mind and culture because nobody can presume to have the fullest knowledge and wisdom or truth. If we push to our minds to that, then we not only divest ourselves of it, but we farm an approach of mind that is dissimilar to that of unrefined man. An open mind is scientific in its approach to life's problems".

Definition of the Problem

We are developing skill in integrating science in day to day life Activities among the Upper primary teachers

Need for the Study

The students are unaware of scientific truths, scientific actions, and phenomenon are in their daily life activities. There is a lot of possibilities among rural students to misunderstand the myths, misconnects of life-oriented activities. So it is highly essential to inspire scientific thoughts, truths, and facts associated with life-oriented activities. Also, it is highly needed to have an apparent knowledge and understanding of scientific actions and reactions, which will be very helpful and useful to their daily life.

Objectives of the Study

- To enable the teachers at the upper primary level to integrate the science of everyday life with the curriculum.
- To synchronize scientific concepts in the classroom teaching-learning process.
- To make the teachers utilize various E-resources for the teaching-learning process.
- To make them do simple science experiments whenever possible during the teaching of science in the classroom.
- To enable them to communicate scientific ideas in a more child-friendly way.

Probable Causes of the Problem

- Lack of interest among the teachers towards science.
- Teachers do not know how to link science in daily life activities.
- Lack of science teachers in schools.
- Lack of interactions between students to teachers and also teachers to teachers.
- Lack of interest among teachers in updating science knowledge.
- Lack of adequate lab facilities in many schools.

Probable Solutions for the Problem

- They are making teachers' link science in daily life activities.
- Create interactions between students to teachers and also teachers to teachers.
- They are maximizing science learning by practical experiences.
- They are enabling adequate lab facilities in all schools.

Research Hypothesis

The strategy developed by the practitioner will act as a drive to Develops the skill in integrating science in Day to day life Activities among the Upper primary teachers.

Tools used for the Study

The practitioner is prepared questionnaire and it is used as a tool of the study.

Sample of the Study

The sample of the present study is five upper primary teachers from 5 Panchayat Union Middle schools in Nallampalli block of Dharmapuri district.

Design of the Study

Experimental method is used for the present study. It is plan to organize in the following three stages. Pre-test Intervention-Post test

Pre-Test

The questionnaire is prepared by the investigator administered to a sample of 5 teachers, and the procedure to fill the questionnaire was also instructed. On average they took about 20 minutes to fill the questionnaire.

Intervention Strategy

After the identification of hard-spots of the teacher, a module is prepared, which helped the teachers to attain knowledge when they have time. It was a great eye-opener for the teachers. The module consisted of several examples that can be used by the teacher along with web resources that may enhance the science teaching of the sample teachers.

Session -1

Teachers were also allowed to find out the hard spots in science textbooks. Since the biology teacher may find hard to identify the scientific facts in physical science and chemistry and vice versa, hard marks were discussed and explained to become thorough in all areas with the help of the module. Modules supplies to the teachers. All aspects in the module explained and discussed.

Session-2

Science Experiment demonstrates to the teachers by using simple household things. Many objects /materials and specimens exhibits to arouse interest in science facts in it. Teachers were also allowed to do some experiments of their own and explain.

Session -3

The practitioner is taken a model lesson. Teachers demonstrate about the usage of mobile applications in classroom science teaching and learning. Teacher gives the opportunity to make use of websites/internet facilities and other science-related websites.

Session-4

Discussion session is organized among the teachers about the usage of science websites, internet facilities, cell phone applications, science magazines, and exposure visits to develop the skill of integrating science in daily life activities.

Post-test

After 10 weeks, post-test conducts on the teachers, and the results were compared with the pre-test and analyzed. The results reveal that the scores obtains to the teachers in the post-test were higher than the pre-test scores. From the results, it is examined that the intervention has brought positive influence in developing the skill in integrating science in day- to-day life activities

Analysis and Interpretation

Sl. No	Name and address of the teacher	Pre-test score	Post-test score
1	Mr.K.Anbalagan, BT Asst., PUMS Pagalahalli.	40	84
2	Mrs.P.Nirmala Devi,BT Asst,Kamaraj Nagar.	44	92
3	Mr.P.Elangovan,BT Asst., PUMS Kombai	48	96
4	Mr.G.Velusamy,BT Asst,PUMS.Dhandukaranpatti.	40	92
5	Mrs.Faritha Begam, BT Asst, PUMS Mundasupuravadai	36	84

Interpretation

The scores of pre-test and post-test were analyzed quantitatively and qualitatively to arrive at conclusions. The average percentage of gain scores, which is 48 % higher than the pre-test average

scores, reveals that the intervention strategies adopted having brought out desirable changes in developing skills in integrating science in day-to-day life Activities among the Upper primary teachers. The result shows that (i) the comparison of pre-test and post-test scores (ii) comparing average scores of pre-test and post-test scores , which gives to the following charts.

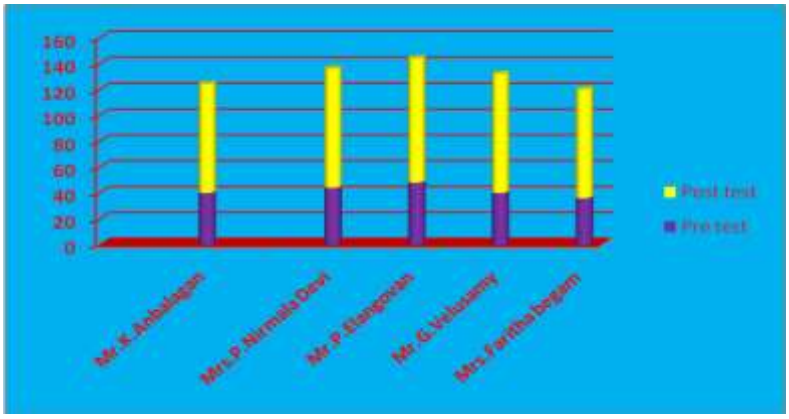

Chart 1 Comparison of Pre-Test and Post Test

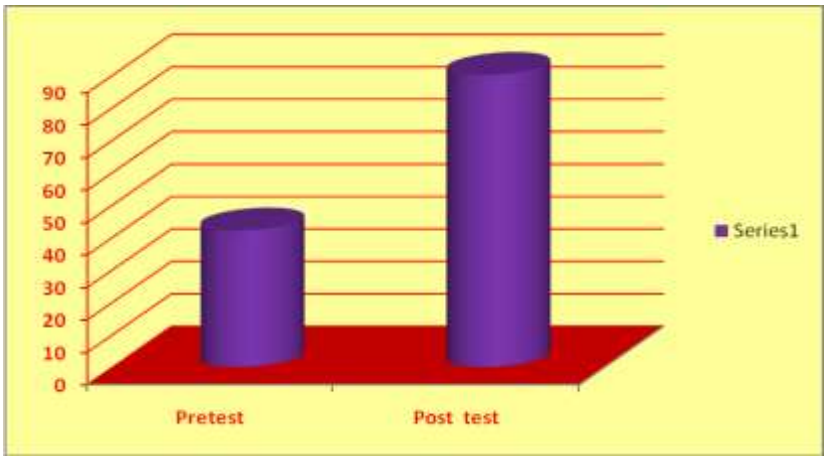

Chart 2: Comparisons of Average Scores of Pre-test and Post-test

The above chart shows the average scores obtained by the teachers in the pre-test and post-test. The average score of the pre-test was 42%, and the average score of the post-test was 90 %. This result gives a clear picture that the post-test scores were 48 % higher than the pre-test scores.

Findings of the Study

The following finding obtains after analyzing the post-test data and also from the feedbacks received from the sample teachers.

- Almost all the teachers were motivated and developed their skills much better than the pretest scores.
- All teachers were well versed in conducting science experiments by using household things and materials. Also understood that how the household materials have scientific properties.
- All the samples showed expected improvement in the usage of science concepts of day- to-day life in their science teaching process.
- Only after the intervention most of the teachers were able to know about science-related magazines. Also, they learned about the usage of the science magazines in updating science teaching-learning process.
- The desires exposure over attaining knowledge of scientific knowledge from the e-content.

Recommendations

- Exchange of teachers by a deputation to handle the main subjects, to handle the theme in detail. Subject teachers will have in-depth knowledge in their subject.
- Teachers should give more importance to hands-on experiences rather than conceptual knowledge.
- Science exposure visits can provide to teachers.
- Schools should be more proactive in conducting science exhibition fairs and seminars.
- All middle school teachers and students should have the opportunity to visit a university/ college/science foundation's /commercial research lab, along with the chance to ask questions and meet some actual doctoral scientists, graduate students, and research technicians working .
- Training should provide in various teaching and learning methods.
- The intervention of the action research was effectual and the usage of integrating science in day-to-day activities. Hence this method can be adapted to all the schools of the block and further to the entire district.

Conclusion

Applying science in day-to-day life activities is a mental and culture tradition that helps to understand the why's and how's of life. It preserves the traditional beliefs and without hampering man's curiosity about nature, the wonder of creation, and the origin cause of the universe. Applying scientific knowledge is necessary for an individual to lead a smooth and comfortable life in society. To enhance science knowledge among understudies explicit and clear goal-oriented curriculum is essential. Hence the module would help to develop the skills in integrating science in day-to-day life activities among the teachers and, in turn, make use of them classroom teaching-learning process thusly utilizes them in homeroom showing learning measure effectively.

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