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EFFECTS OF GUIDED INQUIRY AND LECTURE METHODS ON SOCIAL STUDIES STUDENTS' ATTITUDES IN NIGERIAN COLLEGES OF EDUCATION

Dr. Aliyu Yaya Aliyu*

Abstract

The study investigated the effects of guided inquiry and lecture methods on social studies students' attitudes in Nigerian teacher training institutions. Two research questions and two hypotheses were generated to guide the investigation. The research design is a quasi-experimental design. Colleges of education in North West Nigeria constituted the population of the study. A sample of six colleges of education and 300 social studies students were selected for the study. The research instrument used for the study is a social studies attitude scale (SSAS) developed to establish students attitudes toward social studies before and after the treatment. Hypothesis one was tested using Non-parametric test of Man-Whitney while hypothesis two was tested using Non-parametric test of Kruskal-Wallis. The results showed that the guided inquiry and guided lecture methods have significant influence on students' attitudes toward social studies and there is a significant difference in the attitude of students in the experimental groups as compared with those of the control groups. In view of the findings of the study, it was recommended that social studies educators in Nigerian teacher training institutions should move away from traditional, teacher-centered and didactic teaching styles to creative and experiential teaching styles which will better influence positive attitudes toward social studies.

Introduction

Social studies is the integrated study of social sciences and humanities to promote civic competence. Social studies is conceptualized as "an organized integrated study of man and his environment, both physical and social, emphasizing on cognition, functional skills and desirable attitudes and actions for the purpose of producing an effective citizenry" (Ololobou, 1998 as cited in Okowonkwo, 2011 p.2).

Research into the attitude students' hold towards social studies is wide and in varying degrees. Hansberry and Moroz (2001)

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investigated male and female students' attitudes toward social studies. The findings of the study suggest that social studies has a low status among Year 9 students at the case-study school. The reason of this poor image was attributed to the teacher-centered, didactic pedagogy and uninteresting content.

Ayaaba (2013) examined the attitude of students towards the teaching and learning of social studies concepts in colleges of education in Ghana. The study revealed that the students had a positive attitude towards the teaching and learning of social studies. Factors such as provision of instructional materials, including computers, and the use of resource persons enhanced the teaching, learning and internationalization of concepts.

Dundar and Rapoport (2014) carried out an assessment of elementary student's attitudes towards Social studies, Math, and Science. Data from the study indicated that upper elementary students (Grade 4 & 5) demonstrated more negative attitudes toward social studies than toward math or sciences. They consider social studies harder, less valuable, and less useful than math and science.

Cener, Acun and Demirhan (2015) specifically investigated the impact of ICT on pupil's achievement and attitudes in social studies. Contrary to many research findings, teaching social studies with ICT did not have any statistically significant effect on pupils' attitudes towards social studies lesson.

Though research into the attitude students' hold toward social studies is wide and in varying degrees, there is still a paucity of research on the attitude students' hold toward social studies in Nigerian colleges of education which are the institutions mandated to produce quality teachers for the Basic Education Sub-Sector. In Nigeria, most researches carried out in this regard have focused on the primary and secondary levels of schooling. Very little insight has been given to teacher training institutions. In view of this, this study aims to investigate the effects of two different instructional methods (Guided inquiry & Guided lecture) on social studies students' attitudes in Nigerian colleges of education.

Statement of the Problem

Researchers have identified a number of reasons for students' predominantly negative attitudes toward social studies, and one of the reasons identified is teachercentered techniques and textbook based social studies instruction which does not encourage independent learning and active participation from learners. It is therefore necessary to seek creative (experiential) teaching techniques which can influence positive attitudes toward social studies.

Objectives of the Study

The objectives of the study are to:

- i. Ascertain the extent to which inquiry and lecture methods influence students' attitude towards social studies.
- ii. Determine the difference in the attitude of students in the experimental groups with those of the control groups.

Research Questions

The following are the research questions that would guide the investigation:

i. How do inquiry and lecture methods influence students' attitude towards social studies?

ii. What is the difference in the attitude of students in the experimental groups as compared with those of the control groups?

Hypotheses

The following research hypotheses were tested at 0.05 level of significance:

- i. Guided inquiry method and Guided lecture method have no significant influence on students' attitude toward social studies.
- ii. There is no significant difference in the attitude of students in the experimental groups as compared with those of the control groups.

Method

The research design adopted for this study is a quasi-experimental design. The students were assigned to two experimental groups and one control group. The experimental groups were taught some social studies concepts using the guided inquiry and guided lecture methods respectively while the control group did not receive treatment. The target population of this study consisted of all the colleges of education in northwest zone of Nigeria. According to statistics from

Table 1

Non Parametric Test of Mann-Whitney of Students Taught With Guided Inquiry Teaching Method and Those Taught With Guided Lecture Teaching Method in Their Attitude toward Social Studies

ATTITUDE COMPUTED	Treatment groups	N	Mean Rank	Sum of Ranks	Z calc- ulated	Sig (p)
	Guided inquiry (teaching method)	100	110.96	11096.00	2.578	.010
	(teaching method) Total	100 200	90.040	9004.00		

the National Commission for Colleges of Education [NCCE], there are nine colleges of education offering approved NCE social studies programmes in northwest Nigeria out of which three are federal and six are state owned. The purposive sampling technique was use to select six federal and state colleges of education and 300 social studies students. The research instrument used for the study is a 20-item Social Studies Attitude Scale (SSAS) developed by the researcher to establish students' attitudes toward social studies before and after the treatment. A reliability co-efficient of alpha level of .963 was obtained for the attitude scale.

Hypothesis one was analyzed using the Non-parametric test of Man-Whitney for opinion differences while hypothesis two was analyzed using the non-parametric test of Kruskal-Wallis for showing the mean rankings of all the groups in their attitudes toward social studies.

Results

Hypothesis One: This null hypothesis states that guided inquiry method and guided lecture method have no significant influence on students' attitude toward social studies.

Result of the non parametric test of Mann-Whitney above showed the mean rankings of social studies students' level of attitude between students taught with guided inquiry teaching method and those taught with guided lecture teaching method. The result showed that significant differences exist between students taught with guided inquiry teaching method and those taught with guided lecture teaching method in their level of attitude. This is because the calculated significant value of 0.010 is lower than the 0.05 alpha value of significance. Their mean level of attitude rankings were 110.96 and 90.040 by those taught with guided inquiry teaching method and those taught with guided lecture teaching method respectively. This shows that students taught with guided inquiry method had significantly higher mean level of attitude than their counterparts taught with guided lecture teaching method.

Consequently, the null hypothesis which states that guided inquiry method and guided lecture method have no significant influence on students' attitude toward social studies is hereby rejected.

Hypothesis Two: There is no significant difference in the attitude of students in the experimental groups as compared with those of the control groups

Table 2

Non Parametric Test of Kruskal-Wallis in the Level of Attitude of Students Taught With Guided Inquiry Teaching Method, Guided Lecture Teaching Method and Those Taught With Traditional Teaching Method

Test variable	group	Ν	Mean Rank	df	Sig(p)
Attitude	guided inquiry method	100	202.51	2	0.000
	guided lecture method	100	166.29		
	control	100	82.70		
	Total	300			

Result of the non parametric test of Kruskal-Wallis test above showed the mean rankings of the three groups of students. The result showed that significant differences exist among the three groups of students in their attitude towards social studies. This is because the calculated significant value of 0.000 is less than the 0.05 alpha value of significance. Their mean attitude level rankings were 202.51, 166.29 and 82.70 by students taught with guided inquiry teaching method, those taught with guided lecture teaching method and those taught

with traditional teaching method respectively. This shows that students taught with guided inquiry teaching method, have the highest attitude mean ranking towards social studies, followed by those taught with guided lecture teaching method and the least attitude ranking are those taught with traditional teaching method respectively.

Therefore, the null hypothesis which states that, there is no significant difference in the attitude of students in the experimental groups as compared with those of the control groups is hereby rejected.

Discussion of the Findings

The discussion of findings is done in relation to the results of the hypotheses tested.

The outcome of the non parametric tests of Man Whitney analysis showed that guided inquiry teaching method and guided lecture teaching method both have significant influence on students' attitude toward social studies. Their mean level of attitude rankings were 110.96 and 90.040 by those taught with guided inquiry teaching method and those taught with guided lecture teaching method respectively.

This finding is in agreement with that of Huseyin and Refik (2010) who discovered that inquiry based learning approach has more positive effects when it is compared to traditional learning approaches on improving the attitudes of learners towards social studies. This finding also corroborate the findings of Grambs and Carr (1979) which showed that the inquiry teaching method enables students to be involved, and critically allows them explore leading to higher level of attitude. The result of the hypothesis has also revealed that using the guided inquiry method influences positive attitudes in students more than the guided lecture method. This finding confirms the previous findings of Olukayode (2012) which also showed that the inquiry method (IM) was found to have been most effective in influencing positive attitudes in students towards social studies because the method encourages divergent thinking, allows students to find out information by themselves and it generates students' enthusiasm at examining issues logically.

Hypothesis two sought to test the level of attitude of the three groups (guided inquiry

group, guided lecture group and the control group). The mean attitude level rankings were 202.51, 166.29 and 82.70 by students taught with guided inquiry teaching method, those taught with guided lecture teaching method and the control group respectively. The result of this hypothesis has shown that significant difference exists in the level of attitude of students in the three groups with students in the inquiry group having the highest mean attitude ranking (202.51) and the students in the control group (traditional method) having the lowest mean attitude ranking (82.70). Thus, there is a significant difference in the attitude of students taught using guided inquiry and lecture methods as compared to those taught using traditional method.

This finding reconfirms the findings of Huseyin and Refik (2010) which indicated that inquiry-based learning approach is more effective than traditional learning approaches in improving students' attitudes towards social studies lesson. This finding is in agreement with that of Bentley (2009) which concluded that inquiry learning strategies were useful in increasing students' achievement, thus increasing engagement in lessons and facilitating positive attitudes towards what is learnt. The finding also agrees with the findings of Ololobou (2009) which showed that the inquiry did not appear to complement academic growth over lecture teaching method but it did have a significant impact on students' attitudes towards social studies. Okam (2001) has also opined that social studies education seeks to address the affective aspect of learners and hence needs to be taught with solution finding methods like the inquiry and the problem solving methods

Conclusions

From the findings of this study, the following can be concluded:

- 1. Guided inquiry method influences students' attitudes positively towards social studies better than the guided lecture method; and
- Guided inquiry and guided lecture teaching methods are more effective than traditional, teacher-centered and didactic methods in improving students' attitudes towards social studies.

Recommendations

In view of the results of the findings and the conclusions reached in this study, the following recommendations are hereby offered:

- 1. Social studies educators should move away from traditional, teacher-centered and didactic teaching styles to creative and experiential teaching styles which will better influence positive attitudes toward social studies.
- 2. Emphasis should not only be placed on the acquisition of knowledge of social studies concepts and facts, the affective domain of learning should be given cognizance so that learners will acquire more of moral and ethical values.

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ATTITUDE OF STUDENT TEACHERS TOWARDS REFLECTIVE JOURNAL WRITING FOR PROFESSIONAL DEVELOPMENT

Fr. (Dr.) Thomas P. J.* Dr. Tessy Joseph Kallarackal**

(This paper is an outcome of U.G.C. Major Research Project - MRP-MAJOR-EDUC-2013-2409)

Abstract

Reflection on experience is an essential competency for teachers for professional development. A reflective journal is a means of recording ideas, personal thoughts and experiences, as well as reflections and insights the student teachers have during the teaching learning process. The purpose of the present study was to find out and compare the attitude of student teachers towards reflective journal writing for professional development based on their subject of study. The findings of the study reveal that 50% of student teachers have unfavourable attitude towards reflective journal writing, 44%, 30% and 34% of student teachers have unfavourable attitude towards the dispositions of reflective thinking such as open mindedness, responsibility and wholeheartedness and 32%, 36% and 48% of student teachers have unfavourable attitude towards the types of reflective thinking such as reflection in action, reflection on action and reflection for action. English student teachers were found to have more positive attitude towards reflective journal writing for professional development than Physical Science student teachers and Social Science student teachers were found to have more positive attitude towards reflective journal writing than Mathematics, Natural Science and Physical Science student teachers. Researches indicate that Reflective journal writing has a huge potential for providing opportunities to explore concepts or ideas that link theory and practice. Therefore, the attitudinal change towards reflective journal writing for professional development should be emphasized in the teacher education programs.

Key Words: Attitude, Reflective Journal, Professional Development, Journal Writing, Reflective Practice, etc.

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Introduction

In every society, quality of life depends on the quality of education, which in turn depends upon the quality of its teachers. Education is a continuous process of self discovery, developing skills, inculcating values, more importantly promoting the overall personality development of human beings. Teachers who lay the foundation for the personality development of children in schools are the agents of transformation in the society. In this context, teachers have more responsibilities in the formation of a humane society. A teacher can perform his or her multifarious tasks and responsibilities only if he or she is updated professionally and personally. Research confirms teaching as a skill which can be attained through organized training programme. NCTE (1998) has pointed out that teacher education programme should focus on competencies and commitment in much greater magnitude. The future of India depends upon the quality of education and that can be interpreted from attitude of teachers towards the professionalism.

Attitude

Baron and Byrne (1984) define attitudes as relatively lasting clusters of feelings, beliefs, and behavior tendencies directed towards specific persons, ideas, objects or groups. Walley et al. (2009) submits that attitudes may be positive, negative, or neutral. An attitude is not passive, but rather it exerts a dynamic influence on behavior. ABC model is one of the most cited (Van den Berg et al. 2006) models of attitude which suggests that attitude has three components; i.e. Affective, Behavioral and Cogitative. The affective component is the emotional response (liking/ disliking) towards an attitude object. The behavioral component is a verbal or overt (nonverbal) behavioral tendency by an individual and it consists of actions or observable responses that are the result of an attitude object. It involves person's response (favorable/unfavorable) to do something regarding attitude object. The cognitive component is an evaluation of the entity that constitutes an individual's opinion (belief/disbelief) about the object. Every individual has some kind of attitude but, being a psychological phenomenon, each attitude is invisible. Therefore, attitudes are subjective and personal attributes and difficult to measure.

Disposition for Reflection and Reflective Practice

Reflection on experience is an essential competency for teachers for professional development. Dewey (1933) defined reflection as "the active, persistent and careful consideration of any belief or supposed form of knowledge in the light of grounds that support it and the further conclusion to which it tends." (p. 7). For Dewey, a truly reflective person should have a disposition towards open-mindedness, whole-heartedness, and responsibility.

Open-mindedness is defined by Dewey as "a freedom from prejudice, partisanship, and such other habits as close the mind and make it unwilling to consider new problems and ... ideas." It is not, however, "emptymindedness." Rather it is an "active desire to listen to more sides than one; to give heed to facts from whatever source they come; to give full attention to alternative possibilities; to recognize the possibility of error even in the beliefs that are dearest to us" (Dewey, 1933, p. 30). Dewey says that rather than open-mindedness, "mental closure" tends to be our more common attitudinal state. Goodman furthers Dewey's thought by adding that teachers who are open-minded examine the rationales that underlie what they may take for granted as right and natural in the schools. These teachers realize that the traditional perceptions of education may or may not be valid, and they are willing to question their own views of and reactions to the school culture (Goodman, 1984).

Dewey's second disposition necessary for reflection is responsibility. For Dewey, "to be intellectually responsible is to consider the consequences of a projected step, be willing to adopt these consequences when they follow reasonably from any position already taken" (Dewey, 1933, p. 32). Intellectually responsible teachers are not only open to ideas and willing to scrutinize those they hold dear, but desire to analyze and evaluate ideas through considering consequences and implications in the shortterm and long- term (Goodman, 1984). Reflectively responsible teachers constantly consider the educational, psychological, and larger social contexts and implications of classroom life

The final disposition necessary for reflection is *whole-heartedness*. Whole-heartedness, for Dewey, is "a genuine enthusiasm... that operates as an intellectual force" and gives onward impetus to thinking (Dewey, 1933, p. 32). While many teachers fear the real world consequences of disturbing tradition, making changes, and

being "different," people with wholeheartedness have the courage to overcome this fear or insecurity. This passion and level of conviction and care enables them to follow through with action based on their analysis and evaluation of curricula, schools, education overall, society, and even themselves (Goodman, 1984).

Types of Reflective Thinking: Reflection-in-action, Reflection-onaction and Reflection-for-action

It was Schön, in the mid-1980s, who distinctively popularised the image of the 'reflective practitioner' by extending Dewey's (1933) foundational ideas on reflection through observing how practitioners think in action. Schon (1983, 1987) argued that reflection should be more tied to action, so he went beyond Dewey, and characterized reflective practitioners as being able to think while acting, reflectionin-action, and also subsequently after an action, to consider what has been done. reflection-on-action. This led to Schön (1983) coining reflection-on-action and reflection-in-action as the two forms of reflective thinking. Reflection-on-action requires looking back on what one has accomplished and reviewing the actions, thoughts, and final product. In reflection-inaction, the individual reflects while carrying out a task. Killion and Todnem (1991) expanded Schon's reflection model to include the concept of reflection-for-action. This type of reflection guides future action based on past thoughts and actions and combines reflection-on-action and reflection-in-action. Reflection-for-action, knowledge for planning ahead, requires the participant to review what has been accomplished and

identify constructive guidelines to follow to succeed in the given task in the future.

Reflective practice engages teachers in a recurring "cycle of thought and action based on professional experience" (Wellington, 1991, p.4). In most teacher training and preparation programs, reflective practice is used at both the pre-service and in-service stages of teaching. Reflective practice is the process of critical analysis of one's own action by way of discussion with colleagues, feedback from peers and students, self evaluation, teaching portfolios and reflective journal writing.

Reflective Journal Writing

Writing journals is a common practice within various fields including education. According to Finkle (2000), one of the most effective means for reflecting on experience is writing. Reflective journals allow the writer to note experiences, reflect on these experiences for the purpose of analysis and reassessment as well as to share insight with other learners. Teachers need to set aside some time to sit back and mull over the incidents and activities which had occurred in the classroom and in the school. In writing regularly, the writers will soon discover new perspectives of particular experiences and begin to create ideas about what actions can be taken. A concise definition of a reflective journal is not consistent in the literature (Farrell, 1999). Some writers and researchers refer to journals as either learning logs, diaries, dialogue journals or personal narratives. Some use the terms interchangeably, however, an agreed upon characteristic of reflective journal is that it allows critical and in-depth analysis of what a teacher does in his or her teaching and St. Thomas College of Teacher Education, Pala, Kerala

enables him/her to decide on future corrective steps to improving practice.

Need and Significance of the Study

Reflective practice is a significant element in student teachers' initial training programme. Jacobs, Vakalisa and Gawe (2011) contend that reflective teaching offers teachers the opportunity to renew their practice and to understand the effects of their teaching. Therefore, reflective practice assist teachers in refining their beliefs and theories about teaching as they will relate what they knew and learned to their practical experiences. Killen (2007) maintains that unless teachers understand what they are doing and why they are doing it: there is little chance that their efforts will result in student learning. This suggests that reflection will improve practice if teachers learn from it. Yang (2009) indicates that critical reflection does not come naturally to most teachers, therefore appropriate opportunities for reflection should be provided to studentteachers. This suggests that reflectivity is a skill that needs to be acquired by learning and not by automatic occurrence.

Little has been done to investigate student teachers' attitude towards reflective journal writing and reflective experiences during teaching practice. In order to understand the present scenario of teacher education in India, a need was felt to study the attitude of secondary school student teachers towards reflective journal writing. This will also be helpful to the teachereducators in developing positive attitudes towards reflective journal writing as a strategy of reflective practice for professional development and useful and provide guidelines in conducting educational training programmes, both in-service and preservice training. Hence, the investigators made an attempt to examine the attitude of student teachers towards reflective journal writing.

Statement of the Problem

The purpose of this study was to assess attitude of student teachers towards reflective journal writing. Hence the study is entitled as "Attitude of Student Teachers towards Reflective Journal Writing for Professional Development".

Operational Definition of the Key Words

Attitude

Attitude refers to "a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour" (Eagly & Chaiken, 1993, p. 1). In the present study score obtained on the 'Scale for Measuring Student Teachers' Attitude towards Reflective Journal Writing' constructed and standardized by the investigators determined the favourable/ unfavourable attitude of student teachers towards reflective journal writing for professional development.

Reflective Journal writing

Reflective Journal writing is the personal writing of teachers regarding their professional experiences. Journal writing is a regularly writing process where teachers question and analyze what they do both inside and outside the classroom in order to become more aware of their teaching styles, and be better able to monitor their own practices. A reflective journal is a means of recording ideas, personal thoughts and experiences, as well as reflections and insights the student teachers have during the teaching learning process.

For the purpose of this article, reflective journal writing refers to any writing that student teachers perform regarding classroom experiences that challenges them to reflect on past situations, as well as consider how they might perform differently if similar situations arise in the future.

Objectives of the Study

- 1. To find out the attitude of student teachers towards reflective journal writing for professional development.
- 2. To find out the attitude of student teachers towards the dispositions of reflective thinking such as open mindedness, responsibility and wholeheartedness.
- 3. To find out the attitude of student teachers towards the types of reflective thinking such as reflection in action, reflection on action and reflection for action.
- 4. To compare the attitude of student teachers towards reflective journal writing for professional development based on their subject of study.

Hypothesis of the Study

There is no significant difference between English, Mathematics, Natural Sciences, Physical Sciences, and Social Sciences student teachers in their attitude towards reflective journal writing for professional development.

Method Used in the Study

The purpose of the study was to find out the attitude of student teachers towards reflective journal writing for professional development. Hence the investigators have employed survey method.

Population and Sample

All pre-service student teachers at secondary level of Kottayam district comprised the population of the present study. The investigators chose 100 student teachers with the bifurcation of 11 male and 89 female student teachers and 24 English, 20 Mathematics, 16 Natural Sciences, 20 Physical Sciences, and 20 Social Sciences student teachers. The sample was collected by way of random sampling method.

Tools used

Scale for Measuring Student Teachers' Attitude towards Reflective Journal Writing constructed and standardized by the investigators is used for data collection. The scale contained two sections. Section A focused on demographic information of student teachers and Section B contained twenty eight items consisting of seven dimensions to measure the student teachers' attitude towards reflective journal writing. The seven dimensions dealt with in the scale are perceptions of reflective journal writing, open-mindedness, responsibility, whole heartedness, reflection in action, reflection on action and reflection for action. Five point Likert continuum scale consisting of strongly disagree, disagree, undecided, agree, and strongly agree has been provided for each item. The subjects responded by putting tick mark in the chosen alternative against the attitude statement. Each item alternative has been assigned a score ranging from four (strongly agree) to zero (strongly disagree). The attitude score of a subject is the sum total of item scores of all the seven dimensions. The theoretical range of scores is from 0 to112. Higher score indicates more favourable attitude towards reflective journal writing.

Procedure

The scale for measuring student teachers' attitude towards reflective journal writing was administered to100 student teachers studying in two selected colleges of education. The preliminary information of the student teachers along with the scale was administered by giving some instructions to the student teachers. Though no time limit was assigned for recording responses on the answering Performa, yet student teachers were asked to complete it as soon as possible. Once the exercise was over the different categories were sorted out based on subjects of study.

Statistical Techniques Employed

The data is subjected to statistical analysis such as mean, standard deviation, percentage analysis, ANOVA and the post hoc Scheffe Test.

Results and Discussion

1. Attitude of Student Teachers towards Reflective Journal Writing for Professional Development

The data collected from the student teachers through the administration of scale for measuring student teachers' attitude towards reflective journal writing were analyzed to find out the mean score of attitude of student teachers towards reflective journal writing for professional development. Arithmetic mean and standard deviation of the scores on attitude of student teachers towards reflective journal writing along with the distribution of the scores are given in Table 1.

Table 1

Mean (M), Standard Deviation (SD) and Distribution of the Scores on Attitude of Student Teachers towards Reflective Journal Writing

Variable	Ν	Ran	ige		
		Minimum	Maximum	М	SD
Total Attitude Score	100	73	103	86.28	7.60

The minimum and maximum scores possible for attitude of of student teachers towards reflective journal writing are zero and 112 respectively. The scores which are 1 SD above the mean and 1 SD below the mean are used to mark out the high and low level of attitude of student teachers towards reflective journal writing respectively. Very low, low, moderate and high level of attitude of student teachers towards reflective journal writing with the percentage are given in Table 2

Table 2

Level of Attitude of Student Teachers towards Reflective Journal Writing

	Very Low		Lo	Low		Moderate		<u></u> gh
	No	%	No	%	No	%	No	%
Attitude	22	22	28	28	28	28	22	22

From Table 2 it can be interpreted that 50% of student teachers have unfavourable attitude towards reflective journal writing and 28% of them have favourable and 22% of them have highly favourable attitude towards reflective journal writing for professional development.



Attitude towars Reflective Journal Writing

Figure 1. Mean Scores of Attitude of Student Teachers towards Reflective Journal Writing for Professional Development

2. Attitude of Student Teachers towards the Disposition of Reflective Thinking such as Open Mindedness, Responsibility and Wholeheartedness

Arithmetic mean and standard deviation of the scores of attitude of student teachers

towards the disposition of reflective thinking such as open mindedness, responsibility and wholeheartedness along with the distribution of the scores are given in Table 3.

Table 3

Mean (M), Standard Deviation (SD) and Distribution of the Scores on Attitude of Student Teachers towards the Disposition of Reflective Thinking such as Open Mindedness, Responsibility and Wholeheartedness

Variable	N	Range			
		Minimum	Maximum	M	SD
Open-mindedness	100	8	16	12.76	1.47
Responsibility	100	8	15	11.40	1.61
Wholeheartedness	100	9	16	12.46	1.68

The minimum and maximum scores possible for all the above dimensions of attitude of student teachers towards reflective journal writing are zero and 16 respectively. The scores which are 1 SD above the mean and 1 SD below the mean are used to mark out the high and low level of attitude of student teachers towards Open-mindedness Responsibility, and Wholeheartedness respectively. Very low, low, moderate and high level of attitude of student teachers towards the above dimensions of reflective journal writing with the percentage are given in Table 4

Table 4

Level of Attitude of Student Teachers towards the Disposition of Reflective Thinking such as Open Mindedness, Responsibility and Wholeheartedness

Dispositions of	Very	y Low	Lc	W	Mod	erate	Hig	;h
Reflective	No	0/	No	0/	No	0/	No	0/
Thinking	INO	70	INO	70	INO	70	INO	70
Open-mindedness	6	6	38	38	18	18	38	38
Responsibility	14	14	16	16	48	48	22	22
Wholeheartedness	8	8	26	26	40	40	26	26

From Table 4 it is observed that 6%,14% and 8% of student teachers have very low, 38 % 16%, and 26% of them have low, 18%, 48%, and 40% of them have moderate and 38%, 22% and 26% of them have high level of attitude towards Open-mindedness, Responsibility, and Whole

heartedness. Hence from the analysis of scores on attitude of student teachers towards reflective journal writing, it can be interpreted that 44%, 30% and 34% of student teachers have unfavourable and 18%, 48%, and 40% of them have favourable and 38%, 22% and 26% of them have highly favourable attitude towards Open-mindedness, Responsibility, and Wholeheartedness aspects of reflective thinking respectively.

Figure 2. Levels of Attitude of Student Teachers towards the Dispositions of Reflective Thinking such as Open Mindedness, Responsibility and Wholeheartedness

3. Attitude of Student Teachers towards the Types of Reflective Thinking such as Reflection in Action, Reflection on Action and Reflection for Action



Arithmetic mean and standard deviation of the scores of attitude of student teachers towards the types of reflective thinking such as reflection in action, reflection on action and reflection for action along with the distribution of the scores are given in Table 5.

Table 5

Mean (M), Standard Deviation (SD) and Distribution of the Scores on Attitude of Student Teachers towards the Types of Reflective Thinking such as Reflection in Action, Reflection on Action and Reflection for Action

Variable	Ν	Ran	ge		
		Minimum	Maximum	M	SD
Reflection in Action	100	7	15	11.42	1.85
Reflection on Action	100	9	16	12.96	1.54
Reflection for Action	100	10	15	12.58	1.60

The minimum and maximum scores possible for all the above dimensions of attitude of student teachers towards reflective journal writing are zero and 16 respectively. The scores which are 1 SD above the mean and 1 SD below the mean are used to mark out the high and low level of attitude of student teachers towards reflection in action, reflection on action and reflection for action dimensions respectively. Very low, low, moderate and high level of attitude of student teachers towards the above dimensions of reflective journal writing with the percentage are given in Table 6

Table 6

Level of Attitude of Student Teachers towards the Types of Reflective Thinking such as Reflection in Action, Reflection on Action and Reflection for Action

0		, ,			0	0		
Types of	Very	' Low	Lc	W	Mod	erate	Hig	<u></u> gh
Reflective	NI.	0/	N.	0/	N.	0/	NI-	0/
Thinking	NO	%	NO	%0	NO	%	NO	%
Reflection in								
Action	16	16	16	16	60	60	8	8
Reflection on								
Action	18	18	20	20	44	44	18	18
Reflection for								
Action	24	24	22	22	24	24	30	30

From Table 6 it can be interpreted that 32%, 36% and 48% of student teachers have unfavourable and 60%, 44%, and 24% of them have favourable and 8%,

18% and 30% of them have highly favourable attitude towards reflection in action, reflection on action and reflection for action respectively.



Figure 3. Levels of Attitude of Student Teachers towards the Types of Reflective Thinking such as Reflection in Action, Reflection on Action and Reflection for Action

4. Comparison of the Attitude of Student Teachers towards Reflective Journal Writing for Professional Development based on their Subject of Study

To compare the mean scores of attitude of student teachers towards reflective journal writing for professional development based on their subject of study, the data collected from English, Mathematics, Natural Sciences, Physical Sciences, and Social Sciences student teachers through the administration of scale for measuring student teachers' attitude towards reflective journal writing were analysed and the arithmetic mean and standard deviation of the total scores of attitude were calculated and analysed separately. The results are given in Table 7.

Table 7

The Number (n), Mean (M) and Standard Deviation (SD) of Total Scores of Attitude of Student Teachers towards Reflective Journal Writing for Professional Development based on their Subject of Study

Subject	и	Range				
	п	Minimum	Maximum	M	SD	
English	22	76	101	87.64	6.877	
Mathematics	20	76	99	83.30	8.027	
Natural Science	18	78	94	84.78	4.941	
Physical Science	20	73	88	81.30	5.090	
Social Science	20	82	101	92.30	5.391	

From Table 7, it is observed that the mean scores of attitude of Social Science student teachers towards reflective journal writing (M=92.30 with range of scores 82 - 101), is higher than English student teachers (M=87.64 with range of scores 76-101), Natural Science student teachers (M = 84.78 with range of scores 78 -94),

Mathematics student teachers (M = 83.30 with range of scores 76 -99) and Physical Science student teachers (M = 81.30 with range of scores 73 -88). The minimum and maximum scores possible for attitude of student teachers towards reflective journal writing are zero and 112 respectively.



Figure 4. Mean scores of attitude of student teachers towards reflective journal writing for professional development based on subject of study

In order to determine whether there is any significant difference in the mean scores of attitude of English, Mathematics, Natural Sciences, Physical Sciences, and Social **Table 8** Sciences student teachers towards reflective journal writing for professional development, analysis of variance (ANOVA) was employed. The results are given in Table 8

Summary of One-way Analysis of Variance (ANOVA) of Total Scores of Attitude of Student Teachers towards Reflective Journal Writing based on their Subject of Study

	5		0		5 5 2
Experience	Sum of	df	Mean	F value	Significance
	Squares		Square		level
Between					
Groups	1466.558	4	366.639	9.473	P<0.01
Within					
Groups	3676.802	95	38.703		
Total	5143.360	99	-		

From Table 8 it is evident that the F value is 9.473 (greater than the theoretical value 3.51 at 0.01 level of significance) is significant at 0.01 level with df 4/95. It indicates that mean scores of attitude of English, Mathematics, Natural Sciences, Physical Sciences, and Social Sciences student teachers towards reflective journal writing differ significantly. Thus the null hypothesis which states that 'there is no significant difference between English, Mathematics, Natural Sciences, Physical Sciences, and Social Sciences student teachers in their

attitude towards reflective journal writing for professional development' is rejected. Hence it can be interpreted that the English, Mathematics, Natural Sciences, Physical Sciences, and Social Sciences student teacher differ significantly in their attitude towards reflective journal writing. Further in order to know which group's mean score of attitude towards reflective journal writing differ significantly from others the data were further analysed by using the post hoc Scheffe Test and the results are given in Table 9

Table 9

Summary of the post hoc Scheffe Test Analysis of the Mean Scores of Attitude of Student Teachers towards Reflective Journal Writing based on their Subject of Study, Taken Separately

Subject (I)	Subject (J)	Mean Difference (I-J)	Std. Error	Sig.
English	Physical Science	6.336*	1.922	.05
Mathematics	Social Science	-9.000**	1.967	.01
Natural Science	Social Science	-7.522**	2.021	.01
Physical Science	English	-6.336*	1.922	.05
	Social Science	-11.0**	1.967	.01
Social Science	Mathematics	9.0**	1.967	.01
	Natural Science	7.52**	2.021	.01
	Physical Science	11.0**	1.967	.01

* The mean difference is significant at the .05 level;

** The mean difference is significant at the .01 level.

From Table 9 it can also be seen that the mean scores of attitude of English student teachers towards reflective journal writing is 87.64 which significantly higher than that of Physical Science student teachers whose mean scores of attitude towards reflective journal writing is 81.30. Hence it can be interpreted English student teachers were found to have more positive attitude towards reflective journal writing for professional development than Physical Science student teachers.

From Table 9 it can also be seen that the mean scores of attitude of Social Science student teachers towards reflective journal writing is 92.30 which significantly higher than that of Mathematics, Natural Science and Physical Science student teachers whose mean scores of attitude towards reflective journal writing is 83.30, 84.78 and 81.30 respectively. Hence it can be interpreted Social Science student teachers were found to have more positive attitude towards reflective journal writing for professional development than Mathematics, Natural Science and Physical Science student teachers.

Major Findings of the Study

- 1. 50% of student teachers have unfavourable attitude towards reflective journal writing and 28% of them have favourable and 22% of them have highly favourable attitude towards reflective journal writing for professional development.
- 44%, 30% and 34% of student teachers have unfavourable and 18%, 48%, and 40% of them have favourable and 38%, 22% and 26% of them have highly favourable attitude towards Openmindedness, Responsibility, and Wholeheartedness dimensions of reflective journal writing respectively for professional development.

- 32%, 36% and 48% of student teachers have unfavourable and 60%, 44%, and 24% of them have favourable and 8%, 18% and 30% of them have highly favourable attitude towards reflection in action, reflection on action and reflection for action dimensions of reflective journal writing respectively for professional development.
- 4. English, Mathematics, Natural Sciences, Physical Sciences, and Social Sciences student teachers differ significantly in their attitude towards reflective journal writing.
- 5. English student teachers (M = 87.64) were found to have more positive attitude towards reflective journal writing for professional development than Physical Science student teachers (M = 81.30)
- 6. Social Science student teachers (M =92.30) were found to have more positive attitude towards reflective journal writing for professional development than Mathematics (M =83.30), Natural Science (M =84.78) and Physical Science student teachers (M =81.30).

Conclusions

The research study reveals that majority of secondary student teachers displayed lack of positive or favourable attitude towards reflective journal writing for professional development. The changing demand and responsibilities placed on teachers requires them to be reflective in order to respond appropriately to their changing circumstances (Killen, 20007). Teachers engaged in reflective analysis of their own teaching report that it is a valuable tool for selfevaluation and professional growth. Reflective teaching suggests that experience alone is insufficient for professional growth, but that experience coupled with reflection can be a powerful impetus for professional development. Reflectivity is a complex process that requires student teachers to be adequately prepared to question their actions and change. Reflective journal writing has a huge potential for providing opportunities to explore concepts or ideas that link theory and practice. Therefore, positive attitudes on the part of student teachers would assist them to remain open to learning possibilities to improve their practice.

Attitude being a dynamic entity gets influenced by variables like age, previous experience, beliefs, gender and stream of education. New teachers enter the teacher training program with already established beliefs but Pre-service teacher training programmers help in shaping the attitude of teacher trainees by providing a series of experiences incorporated in their curriculum. A positive attitude towards teaching profession can bring the desired quality in the education sector by developing sense of duty, professional competence and by giving them an insight of the student's needs and problems.

The attitudinal change towards reflective practice for professional development should be the focal point in the teacher training programs. This study may help the teacher educators to plan or to bring about certain modifications in the pre-service training programs, both in content and methodologies, in such a way that the attitude of the prospective teachers towards reflective journal writing is increased which will eventually get translated into actions or skills.

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TRENDS IN SCHOOL ENROLMENT OF SC/ST STUDENTS IN KERALA

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Abstract

In India, scheduled caste and scheduled tribe population represents the most economically impoverished and marginalized groups. In accordance with the Constitutional provisions and directives, the government of India and all States have formulated and implemented various schemes and programs for the upliftment of scheduled caste and scheduled tribe population. Education up to higher level has been made free for scheduled caste and scheduled tribe students. However in many states the scheduled caste and scheduled tribe population often experience passive indifference that may take the form of exclusion from educational opportunities and social participation. In other words, they are often debarred from the mainstream of society. There are several factors such as force of habit and prejudice tend to limit the opportunities of scheduled caste and scheduled tribes in the society. One of the major reasons for the inferior status of them is linked to their traditional role. In many societies they are never treated as an able workforce for their socio-economic development. In such a situation an analysis of the educational developments of these sections are worth mentioning. The study shows that there is considerable progress in school enrolment of SC/ST students in Kerala.

Key Words: Education, Enrolment, Scheduled Caste, Scheduled Tribe, Deprived Section, Inequality, Literacy, etc.

Introduction

The present world demands a society that is made up of citizens capable of acting and thinking automatically about the rapid social evolution. With the progress of society and civilization, education becomes a basic need because it acts as the most powerful medium of socio-economic development as well as cultural improvement. Most of the people especially those who belong to

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marginalized groups look education as a means of their vertical social mobility. In a society, where education is considered as an essential tool of self-defense, educational equality can no longer be treated as superfluous. It means that educational opportunities should be better distributed among various social groups in accordance with the changing societal conditions. In this context an analysis of the trends in enrolment of scheduled caste and scheduled tribe students in Kerala are worth mentioning. It is because among the several states in India, Kerala occupies a prominent position in terms of literacy and education.

Importance of education for deprived sections

In India even after the 69 years of independence of the country, the concept of 'social justice' still remains a myth to the downtrodden castes and groups. Article 46 of the Indian constitution lays down that 'the state shall promote, with special care to the education and economic interest of the weaker sections of the people, and in particular, of scheduled castes and scheduled tribes and shall promote them from social injustice and all forms of exploitation. The program of DPEP and later SSA was drawn in tune with the national objectives of universal access, retention and achievement of minimum levels of educational attainment with a focus on girls and children belonging to socially deprived and economically backward sections of the society. The notion of universal primary education concerns itself equality in education as one of the major aspects. At present education is widely perceived by members of disadvantaged groups as most promising means of upward

social mobility. However in every state, especially developing and under developing nations, universal education is critical factors in respect of social and economic development. It is because in order to get rid of social discrimination and marginalization, it should assume changes in attitudes, values and cognitive behavior. This is possible through a better system of education free from all kinds of cultural constraints to all classes in accordance with changing socioeconomic developments.

Obstacles of education of SC/ST students

There are several factors which lead to the inferior status of deprived sections in the society. In a caste ridden societies, where upper caste ideologies set the norms and standards of social life. It means sociocultural incentives of education are strong for upper caste than other sections. Moreover curriculum, class room activities, home experiences, media etc. are in favor of elitist ideologies which spread the values of sectarianism. Consequently a dominant group often valuing education as a way for maintains their social status. At the same time lower caste people overlook the social necessity of education as a means for attaining their self-worth and empowerment. In such a society many parents still schooling their children because others do so. It is one of the reasons for the high rate of dropout from the deprived sections. They often stick on their social habits and traditional roles. However these are not only imposed by a dominant group but also made themselves. Thus the force of habit and prejudice tend to limit their perspective of life. To get rid of from these social taboos and cultural constraints, there is an urgent need to think about quality education to these classes than mere schooling. A majority of schools in backward areas especially in tribal areas are without basic infrastructure facilities There are no serious efforts from the authorities to empower these communities through quality education along with quantitative expansion. It is evident from the fact that normally school buildings in tribal areas have thatched roofs, dilapidated walls, and non-plastered floors. Even a large number of tribal schools do not have teaching-learning materials or even blackboards except some model residential schools. Besides, a large number of teachers lack awareness of tribal culture and environment. All these issues force them to leave their education at very early stages and higher education remains only a dream.

Education of SC/ST students in Kerala

Among the several states in India, Kerala occupies a prominent position in terms of literacy and education. Above all it achieved the status of near total literacy and also ranking among the most literate in the millennium development goals set for education much ahead of time. It has made significant advances in creating educational facilities -enrolling and retaining children in primary schools. It may be true that 98.50per cent of the population is served by a school within the walking distance of 1 km by the joint efforts of government and private agencies. All these factors lead to the increasing number of enrolment in schools.

There are several factors that led to make a strong social tradition in favor of education in Kerala. It includes progressive outlook of the government of the princely states, efforts of the Christian missionaries and the emergence of renaissance movements especially from backward classes. In other words, in Kerala removal of traditional inequalities based on religion, caste, class, gender etc. made a favorable social condition to education. It also witnessed the intimate connection between education process and social progress. In short its historical experiences powerfully bring out the relationship between education process and social change.

In Kerala many of the social movements recognized the value of school education and worked to overcome the three great obstacles to mass school education in India, those created by class, caste and gender discrimination. This was resulted the wide range of enrolment in schools from all sections of the society. Although public provisioning in education in Kerala has been more effective than any other states, and better distributed between social groups, traditional patterns of inequality have not entirely been eliminated. So a detailed analysis would be helpful to reveal the facts of school education among the deprived sections.

Indicators of the enrolment trent of SC/ST student's

In order to identify the trends of SC/ST student's enrolment, two indicators are used for the study.

- 1, Growth Index of SC/ST student's Enrolment
- 2, Percentage Distribution of SC/ST Boys and Girls

Enrolment sc/st students in schools

Kerala has topped in terms of the number of students enrolled in schools. It has made

significant advances not only in enrolling and but also retaining them in schools. This is made possible by the joint efforts of government and private agencies. In order to identify the educational progress of a society, enrolment of students belongs to backward communities should be taken for consideration. Otherwise discussion on the progress of the society became unfair. So that enrolment details of SC/ST students in Kerala is a great indicator to analyze the educational progress of Kerala. Table 1 shows the enrolment and growth index of students belonging to SC/ST in Kerala since 1956-57

Year	Enroln	nent	Growth Index			
	SC students	ST students	SC students	ST students		
1956-57	185585	10837	100	100		
1960-61	264894	11446	143	106		
1965-66	398801	20441	215	189		
1970-71	430198	25326	232	234		
1975-76	479980	28280	259	261		
1980-81	628776	39275	339	362		
1985-86	651648	52672	351	486		
1990-91	663418	65917	357	608		
1995-96	619607	62431	334	576		
2000-01	549060	58066	296	536		
2005-06	507895	66850	274	617		
2010-11	479456	78790	258	727		
2015-16	425343	78514	229	724		

Tabla 1

Source- Directorate of Public Instruction, Kerala

Table 1 shows that there is tremendous growth of schedules tribe students' since 1956-57 as compared with scheduled caste students. In 1956-57, there were 185585 scheduled caste students and 10837 scheduled tribe students. Over the years there has been considerable increase in the number of enrollment in both categories. In 2014-15, there are 229 percentage growths in SC student's enrolment. In the case of ST students it is 724percentages. High rate of index growth in ST students indicates their backwardness in past and the improvement in later years. In the case of SC and ST students' index growth is decreasing since 1995 onwards. However the decline is not only confined to any group but is equally serious for other groups. This was related to the demographic transition in Kerala by which the population size has almost stabilized due to low birth rate. Consequently the number of school going children began to decline. Therefore, the decline rate of enrolment may not be taken in negative sense. But in the case of ST student's index growth began to increase again since 2005 onwards

Gender wise enrolment of SC/ ST students

Gender disparity is one of such serious problem of many societies which is also reflects in education. In a society where literacy and education as an essential tools of self-defense, gender parity can no longer be treated as superfluous. Mere the analysis of total enrolment would not help to provide the detailed picture of the educational developments of the community. It should be considered how it would be gender wise distributed. So that table 2 shows the enrolment and index growth of boys and girls belongs to SC communities.

Table 2

Gender v	vise Enrolment of Scheduled Caste Students	
Year	Scheduled Caste	

Year	Scheduled Caste			Growth Index			
	Boys	Girls	Total	Boys	Girls	Total	
1956-57	109777	75808	185585	100	100	100	
1960-61	150578	114316	264894	137	151	143	
1965-66	219970	178831	398801	200	236	215	
1970-71	235942	194256	430198	215	256	232	
1975-76	252932	227048	479980	230	300	259	
1980-81	323988	304788	628776	295	402	339	
1985-86	332553	319095	651648	303	421	351	
1990-91	339577	323841	663418	309	427	357	
1995-96	315470	304137	619607	287	401	334	
2000-01	282054	267006	549060	257	352	296	
2005-06	261636	246255	507895	238	325	274	
2010-11	246582	232874	479456	225	307	258	
2014-15	218022	207321	425343	199	273	229	

Source- Directorate of Public Instruction, Kerala

There were very large disparity between scheduled caste boys and girls during the year 1956-57. Enrolment of girls (75808) was much lower than boys (109777). But in 2014-15 there were only slight margin between the enrolment of boys and girls. The number of girl's enrolment was increased to 207321 as compared with 218022 of boys. Not only that the index growth of girls are found to be higher than the index growth of boys. It was increase to

273 percent as compared with 199 percent of boys. This trend is followed from the year 1956-57 onwards. It indicates the increasing enrolment of boys and girls as against the traditional inequalities of education. Though the index growth began to decline since 1990's it would not mean its reversibility. It was due to the decline of population of school going children. Table 3 shows the gender wise enrolment of scheduled tribe students and its index growth

Year		Scheduled Tribe			Growth Index			
	Boys	Girls	Total	Boys	Girls	Total		
1956-57	7271	3566	10837	100	100	100		
1960-61	7173	4273	11446	100	120	106		
1965-66	11771	8670	20441	162	243	189		
1970-71	14666	10660	25326	202	299	234		
1975-76	15794	12486	28280	217	350	261		
1980-81	21352	17923	39275	294	503	362		
1985-86	27964	24708	52672	385	693	486		
1990-91	34139	31778	65917	470	891	608		
1995-96	32073	30358	62431	441	851	576		
2000-01	30136	27930	58066	414	783	536		
2005-06	34663	32187	66850	477	903	617		
2010-11	40778	38012	78790	561	1066	727		
2014-15	40491	38023	78514	557	1066	724		

Table 3 Gender wise Enrolment of Scheduled Tribe Students

Source- Directorate of Public Instruction, Kerala

In the case of scheduled tribe students, there were very large disparity between boys and girls during the year 1956-57. Enrolment of girls was 3566 and boys were 7221. It shows that enrolment rate was much lower than boys. But in 2014-15 there were only slight margin between the enrolment of boys and girls as compared with previous years. The number of girl's enrolment was increased to 38023 as compared with 40491 of boys. Not only that the index growth of girls are found to be much higher than the index growth of boys. It was increase to 1066 percent as compared with 557percent of boys. This trend is followed from the year 1956-57 onwards.

Percentage distribution of boys and girls beloning to SC/ST students

Index growth of the students shows that girl's enrolment rate is much higher than boys in both categories of students. It indicates some disproportions in the enrolment of boys and girls. It can be analyzed through the percentage distribution of enrolment in gender wise. Table 4 shows the proportion of the enrolment of boys and girls belongs to SC/ ST community in different years.

Year	Sc	Scheduled Caste			Scheduled Tribe			
	Boys	Girls	Total	Boys	Girls	Total		
1956-57	59.15	40.84	100	67.09	32.90	100		
1960-61	56.84	43.15	100	62.66	37.33	100		
1965-66	55.15	44.84	100	57.58	42.41	100		
1970-71	54.84	45.15	100	57.90	42.09	100		
1975-76	52.69	47.30	100	55.84	44.15	100		
1980-81	51.52	48.47	100	54.36	45.63	100		
1985-86	51.03	48.96	100	53.09	46.90	100		
1990-91	51.18	48.81	100	51,79	48.20	100		
1995-96	50.91	49.08	100	51.37	48.62	100		
2000-01	51.37	48.62	100	51.89	48.10	100		
2005-06	52.02	48.48	100	51.85	48.14	100		
2010-11	51.42	48.57	100	51.75	48.24	100		
2014-15	51.25	48.74	100	51.57	48.42	100		

Table 4						
Percentage	Distribution	of Boys	and Girls	belongs [•]	to	SC/ST

Source- Directorate of Public Instruction, Kerala

Above table shows the proportion of the enrolment of boys and girls belongs to SC/ST community in different years. In 1956-57 the percentage distribution of scheduled caste boys and girls were 59.15 and 32.90. It shows the gender gap of 26.25. Gradually the number of girls enrolment was began to increase. In 1975-76 the gender gap was minimized to 5.3percent. In 2014-15 percentages distribution between boys and girls were 51.25 and 48.74. Gender gap was only 2.51 percent. In case of the proportion of the enrolment of scheduled tribe boys and girls the same trends can be found. In 1956-57 the percentage distribution of scheduled caste boys and girls were 67.09 and 40.84. It shows the gender gap of 18.31. Gradually, the number of girls enrolment was began to increase. In 1975-76 the gender gap was minimized to 11.69percent. In 2014-15 percentages distribution between

boys and girls were 51.57 and 48.42. Gender gap was only 3.15percent. These differences may be due to the differences of sex ratio as mentioned earlier.

Suggestions

Following suggestions can be used to made education as an empowerment program for deprived sections

- 1, Government should take additional effort to make quality education to socially and economically backward students other than mere literacy.
- 2, Incentives and scholarship should be provides to those students who belongs to socially and economically backward regions.
- 3, Hostel or travel facilities should be arranged to students belongs to tribal areas or communities.

- Special attention should be taken by Panchayat authorities to enroll out of school going children and also minimize dropout rate.
- 5, Attractive programs should be arranged in schools with the active participation of students belongs to backward classes.
- 6, Education should be linked with economic activities in order to ensure employability in future
- 7, Education should aims to make selfconfidence and self-dependence among depressed classes.
- 8, Awareness program should be provided to the parents with regard to their children's education.
- 9, Class room activities should be arranged on equal basis.
- 10, curriculum should meet the local requirements of the students.

Conclusion

In Kerala educational disparities existed in the past and also still existing especially in socially and economically backward areas. There is an urgent need to provide quality education in the true spirit of democracy to all. So we need to change our developmental perspective of education from mere schooling of backward classes to the process of uplifting them to the mainstream of civilized life.

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INTEGRAL EDUCATION OF AUROBINDO – AN IMPLEMENTATION OF CONSTRUCTIVISM IN THE INDIAN CONTEXT

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Abstract

Sri Aurobindo, the prophet of Indian nationalism, was one of the pioneers of political awakening in India. He was the leader of the revolutionary movement. He played a great part in the country's national struggle from 1908. He was in the forefront of the national struggle during the days of the partition of Bengal. He strongly believed that life has a divine purpose and one of the most important tasks of education is to lead the student to discover for himself the aim of life and the specific role that he himself has to play in it. He conceived education as an instrument for the real working of the spirit in the mind and body of the individual and the nation. This he called it as an integral education that inspires the children to develop the five essential aspects of personality such as the physical, the vital, the mental, the psychic and the spiritual. Constructivism is an innovation in the teaching-learning process. Constructivism transforms the student from a passive recipient of information to an active participant in the learning process. Always guided by the teacher, students construct their knowledge actively rather than just mechanically ingesting knowledge from the teacher or the textbook. This study has an analysis of Integral education of Aurobindo and views it as Constructivism in our Indian scenario.

Key Words: Accomplished Scholar, Educational Philosophy, Integral Education, Constructivism, etc.

Introduction

Sri Aurobindo was born in a Bengali family in Calcutta in 1872. His anglophile father Dr K D Ghose christened him Aurobindo Ackroyd Ghose at birth. When he was five years old, Aurobindo was admitted to the Loreto Convent School in Darjeeling. At the age of seven, he was sent to St. Paul's School in London and then to King's College, Cambridge with a senior classical scholarship.

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An Accomplished Scholar

From school Aurobindo went to King's College, Cambridge, where he distinguished himself as a student of European classics. He passed the Indian Civil Service Examination with great credit in 1890. Failing, however, to stand the required test in horsemanship, he was not allowed to enter the Covenantal Service of the Indian Government. But, returning to India, he became the Vice-principal of the State college in Baroda. He was held in great respect by the Maharaja of Baroda.

Aurobindo was an accomplished scholar in Greek. He got high distinction in Latin. He learnt French very well and picked up a little of German and Italian to study Goethe and Dante in the original. He was steeped in the lore of our ancient Vedic scriptures.

Sri Aurobindo was a genius in history and poetry, a scholar in English and Latin. He was in England for fourteen years. When he was only seven years of age, Dr. K.D. Ghosh sent him to England to be steeped in Western education. That early age was chosen deliberately in order that Aurobindo might forget the native touch and learn to adopt the Western forms instead Academically brilliant, he soon became proficient in English, Greek, Latin and French and became well acquainted with German, Italian and Spanish. He also qualified for the Indian Civil Service but was dismissed from the Service for not presenting himself at the riding examination upon completion of his two vears of probation.

In 1893, at the age of 21, Aurobindo Ghose began working under the Maharaja of Baroda. He went on to become a parttime lecturer in French at Baroda College, and then a regular professor in English, and afterwards the Vice-Principal of the college.

In 1906, Aurobindo abandoned the position of the Principal of India's first National University in Calcutta, and plunged into active politics. He participated in India's struggle for freedom against the British, and soon became a prominent name with his patriotic editorials in Bande Mataram. For the Indians, he became, as said C R Das, "the poet of patriotism, the prophet of nationalism and a lover of humanity"

Educational Philosophy

Aurobindo is one of the greatest educators whose educational philosophy swayed the masses of India as never before. He engaged himself for forty five years out of his seventy eight years in the practice of yoga and developed a philosophy of complete affirmation, affirming the reality of the world from the ultimate stand point and the meaningfulness of socio-political action from the spiritual stand point.8 He dedicated his life to make all men travel towards divine perfection and to express the power, the harmony, the beauty and joy of selfrealization.9

According to Sri Aurobindo education means one that will offer the tools whereby one can live "for the divine, for the country, for one self and for others and this must be the ideal in every school which calls itself national. The guiding principle of the philosophy of education of Sri Aurobindo was the awakening of man as a spiritual being. According to him neither education nor religion in the past had changed man. Now it is the time to give a total spiritual

orientation to the whole education and the life of the nation 10 This he called it an integral education. It imparts an integrated view of the universe to the learners and tries to bring about an all round harmonious balanced and integrated development of the learners. In the words of Sri Aurobindo, "there will be needed a yoga which shall be at once a voga of integral knowledge, a yoga of integral will and it works, a yoga of integral love, adoration and devotion and a voga of an integral perfection of the whole being and of all its parts and states and power and motions".11 When the number of integral men is increased evil will disappear from ignorance, hatred, untouchability, slavery and exploitation, people will be in a position to live of justice, equality, freedom, peace, love and brotherhood. Thus integral education will be able to produce Supermen having virtues of a super human being. In devising a true and living education, according to Sri Aurobindo three things should be taken into account. They are the man, the individual in his commonness and his uniqueness, the nation or people and universal humanity.12

Sri Aurobindo conceived education as an instrument for the real working of the spirit in the mind and body of the individual and the nation.13 It is conceived as a process of organic growth, and the way in which various faculties could be developed and integrated is dependent upon each child s inclination, rhythm of progress and law of development, *Swabhava* (inherent disposition) and *Swadharma* (inner nature).14 Integral education is conceived to provide facilities for varieties of faculties, varieties of subjects and various combinations of pursuits of knowledge, power, harmony and skill in works. These faculties are so provided that they could be made use by each student and the teacher so that a natural process of harmonious development could be encouraged.15

Integral Education

If we want education to have its maximum result, it should begin even before birth; in this case it is the mother herself who proceeds with this education by means of a twofold action: first, upon herself for her own improvement, and secondly, upon the child whom she is forming physically. For it is certain that the nature of the child to be born depends very much upon the mother who forms it, upon her aspiration and will as well as upon the material surroundings in which she lives. To see that her thoughts are always beautiful and pure, her feelings always noble and fine, her material surroundings as harmonious as possible and full of a great simplicity - this is the part of education which should apply to the mother herself. And if she has in addition a conscious and definite will to form the child according to the highest ideal she can conceive, then the very best conditions will be realised so that the child can come into the world with his utmost potentialities.

Integral Education regards the child as a growing soul and helps him to bring out all that is best, most powerful, most innate and living in his nature. It helps the child develop all facets of his personality and awaken his latent possibilities so that he acquires

- a strong, supple, healthy, beautiful body
- a sensitive, emotionally refined, energetic personality

- a wide-ranging, lively intelligence and will
- the subtler spiritual qualities that unify and harmonise the being around his inmost Truth or Soul

The focus and emphasis in Integral Education (IE) is not just information and skills acquisition but also self-development, triggered from within the child and supported and nourished by teachers and parents. Every experience becomes a learning tool for the child as he grows. IE helps him to integrate with his true self, his surroundings, his society, his country and humanity in other words, to become the complete being, the integrated being that he is meant to be.

Education is meant to maximise one's potential and help one integrate with one's true self, surroundings, society, country and humanity. Sri Aurobindo developed an education system which is popularly known as integral education. Integral Education aims at bringing about change not merely in the society but primarily in the human behaviour or nature itself. Therefore it seeks to help the individual as follows:

- 1. To develop an integrate personality of both the pupil & the teacher.
- 2. To realize self-perfection in physical, mental, vital, psychic and spiritual aspects.
- 3. To manifest supreme divine consciousness in the physical life.

Curriculum

Sri Aurobindo includes the four basic values, physical, vital, mental and psychic in his curriculum. The child is not moulded according to the desire of his parents or teachers. Therefore he emphasizes flexible, interest-related and environment-based curriculum.

Yoga, physical exercise through games, sports etc. Intellectual cultivation through reading, writing, learning, teaching and so on. Spiritual values are also emphasized by him.

Methods of Teaching

The methods and techniques of teaching should be determined by the objectives. In this connection Sri Aurobindo has enunciated three principles of teaching in his book "A system of National Education". His principles of teaching are discussed below:

1. Nothing can be taught:

The pupil has to acquire new knowledge by his own attempt and the teacher is to work as helper or guide to the pupil. The pupil is allowed to study by his own capacity and interest.

2. Self-pace learning:

The teacher should not impose on the child from above if the child is not prepared to receive the knowledge. Once the Mother said that if a child wants to remain ignorant we may explain to him consequences of remaining ignorant but we should not pressurize the child for learning. The child will be allowed to learn according to his interest.

3. Teaching from near to far:

According to Sri Aurobindo, the child should be led from near to far. That is all education should be built upon the day-today experience of the learners. We may teach the child through the use of audio-visual aids, but if the application of this principles is felt essential.
Role of Teacher

A teacher is a true Yogi who acts as a philosopher and guide to the students. He nourished the students as plants. According to Sri Aurobindo the duty of the teacher, "is to suggest not to impose". He does not actually train the pupil's mind; the only shows how to perfect his instrument of knowledge and helps & encourages him in the process. He does not call for knowledge that is written. He only shows the student where it lies and how it can be habituated to rise to the surface. The Mother says "One must be a saint, Yogi and a hero to be a good teacher".

Constructivism

In Constructivism people construct their own understanding and knowledge of the world, through experiencing things and reflecting on those experiences. There are many psychologists such as Vygotsky, Piaget and John Dewey who have worked to develop Social Constructivist Learning Theory. This theory seeks to answer the question how people know what they know (Gordon, Habley, and Grites, 2008). When we encounter something new, we have to reconcile it with our previous ideas and experience, maybe changing what we believe, or maybe discarding the new information as irrelevant. In any case, we are active creators of our own knowledge. To do this, we must ask questions, explore, and assess what we know.

Ashcraft, Treadwell, and Kumar (2008) state that, in social constructivism, knowledge is developed through cognitive activity which happens through the discussion of experiences with other individuals or in groups. This gives them ever-broadening tools to keep learning. With a well-planned classroom environment, the students learn 'how to learn'. In the classroom, the constructivist view of learning can point towards a number of different teaching and learning practices. In the most general sense, it usually means encouraging students to use active techniques (experiments, real-world problem solving) to create more knowledge and then to reflect on and talk about what they are doing and how their understanding is changing.

The teacher makes she sure understands the students' preexisting conceptions, and guides the activity to address them and then build on them Constructivist teachers encourage students to constantly assess how the activity is helping them gain understanding. By questioning themselves and their strategies, students in the constructivist classroom ideally become constructers. According to Ndon (2011) a teacher as a facilitator, should provide rich environments, experiences, and activities for learning by incorporating opportunities for collaborative work, problem solving, authentic tasks. The teacher facilitates the learning process in which students are encouraged to be responsible and self-governing (Gray, 1997).

In literary studies, the realization that meanings are not materially inherent in words or texts but have to be supplied by readers from their individual stores of experiential abstractions has drawn attention to the fact that interpretations are necessarily subjective and that the source of interpersonal agreement concerning an author's intentions must be found in the construction of a consensual domain (Schmidt, 1983). In Constructivism teachers help students to construct knowledge rather than to reproduce a series of facts. The constructivist teacher provides tools such as problem-solving and inquiry-based learning activities with which students formulate and test their ideas, draw conclusions and inferences, and pool and convey their knowledge in a collaborative learning environment. Constructivism transforms the student from a passive recipient of information to an active participant in the learning process. Always guided by the teacher, students construct their knowledge actively rather than just mechanically ingesting knowledge from the teacher or the textbook.

The search for understanding motivates students to learn. When students want to know more about an idea, a topic, or an entire discipline, they put more cognitive energy into classroom investigations and discussions and study more on their own. We have identified five central tenets of constructivism (Grennon Brooks & Brooks, 1993).

- First, constructivist teachers seek and value students' points of view. Knowing what students think about concepts helps teachers formulate classroom lessons and differentiate instruction on the basis of students' needs and interests.
- Second, constructivist teachers structure lessons to challenge students' suppositions. All students, whether they are 6 or 16 or 60, come to the classroom with life experiences that shape their views about how their worlds work. When educators permit students to construct knowledge that challenges their current suppositions, learning

occurs. Only through asking students what they think they know and why they think they know it are we and they able to confront their suppositions.

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- Third, constructivist teachers recognize that students must attach relevance to the curriculum. As students see relevance in their daily activities, their interest in learning grows.
- Fourth, constructivist teachers structure lessons around big ideas, not small bits of information. Exposing students to wholes first helps them determine the relevant parts as they refine their understandings of the wholes.
- Finally, constructivist teachers assess student learning in the context of daily classroom investigations, not as separate events. Students demonstrate their knowledge every day in a variety of ways. Defining understanding as only that which is capable of being measured by paper-and-pencil assessments administered under strict security perpetuates false and counterproductive myths about academia, intelligence, creativity, accountability, and knowledge.

This theory focuses on the belief that solving problems helps individuals in thinking, learning, and development. Problem solving helps individuals in taking their own unique experiences and expertise to find a solution and once they do, they all extract unique lessons from it (Ekins, Hupcey, and Williams, 2001). According to Tomei (2009, p. 60) "Constructivist learning theory meaning is seen as a cognitive activity that produces mental models that represent perceptions of reality". Generally, Constructivism aims to identify how to implement learning processes in the classroom, and how knowledge is constructed (Butler and Griffin, 2010).

Conclusion

Integral education is conceived as a process of organic growth and the way in which the various faculties could be developed and integrated. It is dependent upon each child's inclination, rhythm of progress and law of development swabhava (inherent disposition) and swadharma (inner nature). The idea is to provide facilities for varieties of faculties, varieties of subjects and various combinations of pursuits of knowledge, power, harmony and skill in work. These faculties are so provided that they could be made use of by each student and the teacher so that a natural process of harmonious development could be encouraged. Constructivism triggers the student's innate curiosity about the world and how things work. Students do not reinvent but, rather, attempt to understand how it turns, how it functions. They become engaged by applying their existing knowledge and realworld experience, learning to hypothesize, testing their theories, and ultimately drawing conclusions from their findings. So we can see that Integral education is also having principals of Constructivism and hence it is the application of Constructivism in the Indian context.

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EFFECT OF LEARNING STYLES IN MINIMIZING THE LEARNING DISABILITIES OF SOCIO-CULTURALLY BACKWARD STUDENTS AT SECONDARY LEVEL

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Abstract

The study to find the effect of learning styles and minimizing the learning disability of socio-culturally backward students was done on a sample of secondary school students from Alappuzha and Kottayam districts of Kerala. The study was conducted to minimize dyscalculia, a mathematical learning disability of students, by capitalizing their learning styles. By adopting suitable remedial programme, the investigators were able to find out that the performance level of dyscalculia students improved to a greater extent.

Key Words: Learning Style, Learning disability, Socio-Culturally Backwardness, etc.

Introduction

Learning is defined as modification of behaviour through experience. It is also defined as the acquisition of a desirable behavior pattern. In other words learning is the modification and co-ordination of the response of the organism. Thus learning is essentially an active process and not a passive observation of knowledge. It is not the mere reading of books or listening to lectures is an enrichment of experience. Learning occupies an important place in the school. Without learning all efforts of pupils as well as teachers are bound to become purposeless. Learning essentially consists of modification of reactions due to experience or practice.

Attainment of mathematical competencies has become a difficult task for almost all students. It is essential that the ambiguity regarding the acquisition of mathematical competencies should be

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reduced to a maximum possible extent. A thorough knowledge about the pattern of learning of the learner is essential for the attainment of this task. Here the "learning style describes how a student learns not what he/she has learnt", (Hunt, 1970). This definition highlights the importance of a teacher's role in fostering the learning styles of students in a multicultural setting.

The study refers to the impact of learning styles in minimizing learning disabilities of socio culturally backward student at secondary level. So before thinking about the teaching and learning of mathematics, a teacher must know about pupils' learning styles. For the purpose of the study, a review of various literature including studies and article is essential. A brief description of the review is enclosed in following chapters.

Need and Significance of the study

In the present schooling system, mathematics is considered as a core subject as it has correlation with one's day to day life. Life without mathematics is beyond imagination but it is a fact that teaching of mathematics is a complex integration of cognition, motivation and emotion. It is seen that teachers play a significant role in developing a positive attitude among children towards mathematic. The attitude towards mathematics forced at the secondary level lays foundation for future specialization studies.

A learning disabled child should be helped both by his parents and teachers to overcome his difficulty. If the parents are able to channelize their children according to their learning styles, this problem can be minimized to a greater extent. But when it comes to socio culturally backward child, he gets only a minimum help from his parents as they are ignorant of his difficulties. It becomes essential to help the learning disabled children among the socio culturally backward students to minimize their disabilities and bring them to the fore front.

Catering to learning disabilities by identifying their learning styles would definitely pave way for better man power management in the coming future.

Area mentioned for the present project is of utmost important both at the national and international level as prime focus is now given to the learning styles and teaching styles of learners as well as teachers all over the world. Moreover we are now in the process of having inclusive education in the educational scenario. This area is to be seriously dealt with for the smooth functioning of the schools within and outside Kerala.

Interdisciplinary Relevance

- This study would definitely help the learning disabled students to process information in their preferred mode and also to discuss with teachers about the features of instructions that work best for them.
- This study would be of great relief to parents of learning disabled children so that they can support the school efforts and also provide such practices at home
- This study would be an eye-opener to educators who can thereby tailor and modify instructions to ensure the needs of learning disabled children in an inclusive atmosphere.

Statement of the Problem

With the advent of Activity Based Curriculum (ABC), the present scenario demands more process oriented learning among mathematics. Though integrative group learning is the main focus behind this approach, one has to really analyze whether collaborative learning is beneficial to all the students, as learning styles differ from one student to another. In order to equip the learners with reflective thinking among differentiated styles of learning, it becomes essential to conduct a study on the impact of learning styles in minimizing the mathematical learning disabilities of socio culturally backward students at secondary level.

Hence the study is entitled "Effect of Learning Styles in Minimizing the Learning Disabilities of Socio-Culturally Backward Students at Secondary Level".

Definition of Key Terms

Learning Style: Relative permanent change in behavior that is the result of past experience or practice. The concept includes the acquisition of knowledge. According to Dunn and Dunn (1993), learning style is "the way that students begin to concentrate on, process, internalise, and remember new and difficult academic information."

Learning disability: Learning disabilities is a generic term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning or mathematical abilities. These disorders are intrinsic to the individual and presumed to be due to central nervous system dysfunction. In the present context, learning

style is the application of the information within a meaningful experience in the learner's environment that enables learning to take place. Mainly four learning styles, viz., Pragmatists, Activists, Reflectors, and Theorists are considered in the study.

Socio-Culturally Backward: Social or cultural backwardness due to cast, economical barrier, physical challenges, gender etc.

The socio-cultural perspective is a theory used in various fields such as psychology and is used to describe awareness of circumstances surrounding individuals and how their behaviors are affected specifically by their surrounding, social and cultural factors. According to Catherine A. Sanderson (2010) "Sociocultural perspective: A perspective describing people's behavior and mental processes as shaped in part by their social and/or cultural contact, including race, gender, and nationality." Socio-cultural perspective theory is a broad yet significant aspect in our being. It applies to every sector of our daily lives. How we communicate, understand, relate and cope with one another is partially based on this theory. Our spiritual, mental, physical, emotional, physiological being are all influenced by socio-cultural perspective theory.

Objectives:

- 1) To identify socio culturally backward secondary school students with learning disabilities.
- To identify the learning styles of socio culturally backward secondary school students with learning disabilities.

- To orient the teachers and parents of socio culturally backward learning disabled students with regard to their learning styles.
- To develop the certain remedial programs for minimizing the learning disabilities of students with varied learning styles.
- 5) To find the effect of remedial programs in minimizing the learning disabilities of students with varied learning styles.

Hypotheses of the Study:

The various hypotheses of the study are as follows:-

- There is no significant difference in the learning disability of control and experimental group with regard to the pre test.
- There is no significant difference in the learning disability of control and experimental group with regard to the post test.
- There is no significant difference in the learning disability of experimental and control group of socio culturally backward students with varied learning styles.

Methodology in Brief

The methodology adopted in experimental method for that the learning styles and learning disabilities of student were identified using survey method. Based on the learning disability and learning styles of a student a remedial program was developed and its effectiveness was tested using experimental method. The remedial programme developed during the experimental procedure was for minimizing the learning disabilities of socio culturally backward secondary school students. Sample of the study comprise secondary school students of Alappuzha and Kottayam districts who follow the Kerala state syllabus. The sample size of the present study consists of 150 learning disabled socio-culturally backward secondary school students who considered from the coastal belt of Kerala.

Tools & Techniques used in the Study:

The tools and techniques used for the study are:

- Personal Information Schedule
- Learning Disability Test
- Learning Style Inventory
- Observation Schedule
- Evaluation Performa for teachers
- Remedial Lesson Plan
- Computer Assisted Instruction

Statistical Techniques

The statistical techniques used for study are

- The t test
- The Analysis of Co-Variance (ANCOVA)

Scope of the Study

The particular study is beneficial to both the teachers and learners. Tools used in this study can be used by teachers to know the Learning Styles of their pupils. Teachers can improve their teaching strategies in order to develop interest in the subject by making teaching – learning process enjoyable. The present study will be an eye opener to teachers as well as various educational experts who engage in designing the curriculum.

Delimitation of the Study

The study is mainly based on the data obtained using normative survey method (N=500) and Experimental method and Observation Schedule (N=120) on secondary school student in Alappuzha and Kottayam district. The present study is confined to secondary school students of state syllabus. The study is delimited to the government and aided sectors of Alappuzha and Kottayam district.

Findings

- The inventory also revealed that some students have exhibited more than one learning style. It was observed that a few Theorists were Reflectors and a few Pragmatists were Activists also and vice versa. Though there are such instances where some students exhibit characteristics of more than one learning style, it is possible to categories all students on the basis of the select four learning styles, viz., Pragmatists, Activists, Reflectors and Theorists.
- It was found that Theorists, Pragmatists and Reflectors have more or less the same mathematical learning disability. But it was noted. The **qualitative analysis** of the data obtained through the post test of experimental group for comparing the interactive level of various learning style groups are detailed as follows:
- Theorists and Pragmatists actively participated in different learning style mathematical class.
- Theorists and Reflectors spent more time in thinking and planning than communicating to others.

- Activists showed attention seeking tendency in groups.
- Theorists and Pragmatist were interested to solve the problems systematically and accurately.
- Post test score shows grate changes in mathematical learning disability. Which can minimize through learning style group transaction

Implications

The findings of the present study have the following implications:

- (1) Identification of the learning style preferences will be helpful for a teacher to design everyday classroom transactions. If the materials to be learned are reached to the learner through the preferred styles for which the learner is predisposed, learning will be highly effective. The Learning Style Inventory adopted in the present study will serve as a good tool for identifying the learning styles of students as Pragmatists, Activists, Reflectors and Theorists in schools.
- (2) Knowledge about the learning styles of the students in different grades can be utilised for designing the course and the curriculum. The mathematics course design and curriculum should be in accordance with the various learning styles.
- (3) The academic performance of students in mathematics is related to their learning styles and the teaching style of the teacher. If teachers are made aware of the learning styles of students, they can alter their teaching styles accordingly and thereby develop

appropriate thinking styles among learners. Identifying one's learning style helps a student to strengthen his learning modalities and thereby perform better in Mathematics.

- (4) The findings of the study would be an eye opener to educationists, parents and teachers with regard to various learning disabilities in children. Early identification of such learning disabilities can easily be addressed and rectified
- (5) The findings of the study support the idea that with proper teacher facilitation and formation help socio-culturally backward students for minimizing their learning disability in mathematics and other subjects. The transaction of curriculum depends on one's attitude and interest.
- (6) Identifying one's own learning style helps in minimizing the learning disability of an individual.

Limitations of the Study

The present study is not without its limitations.

- The investigator has considered only four aspects of learning styles.
- The investigator did not explain about benefits of multimedia approach
- The study is done only on the 9th standard students.

Suggestions for further Research

 The investigator has considered only four aspects of learning styles. Research can be done on other dimensions of learning styles like Jungian, Dunn, Kolb, VAK styles and the like so that it will be further beneficial for our students.

- (2) Research on learning styles and
- language learning needs to be considered in the present educational system followed in Kerala.
- (3) The present study can be researched at higher levels of schooling and college.
- (4) Effects of thinking styles on learning preferences of students in mathematics are needed to be studied.

Conclusion

The study throws light into the fact that learning style of an individual has an effect on minimizing his learning disability in mathematics. The present study reveals that Theorists and Pragmatists have comparatively better performance in learning style group class than Reflectors and Activists who are weaker in tackling abstract ideas quickly. Therefore students who were grouped according to their learning style were found to perform better by minimizing their mathematical learning disability. The students with different learning styles would interact actively in present student centered atmosphere.

Different learning style groups are different in their nature and nurture but the present Activity Based Curriculum is suited for all these groups. Especially Theorists and Pragmatists are more active than others. But Activists and Reflectors also have average mathematical learning ability. This is developed through learning style centered learning atmosphere. The study refers to the effect of learning styles in minimizing learning disabilities of socio culturally backward students at secondary level. So before thinking about the teaching and learning of mathematics, a teacher must know about pupils' learning styles.

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PARENTAL MOTIVATION: AN IMPETUS FOR DEVELOPMENT OF NUMERICAL ABILITY AMONG YOUNG MINDS

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Abstract

The study intends to find out the relation between Parental motivation and Numerical ability among the Upper primary Students of Kottayam district. A sample of Four hundred Students of Standard Five from different schools, both Aided, Government and Unaided schools of Kottayam District belongs to both Rural and Urban area is taken. Two tools namely Numerical Ability Test and Parental Motivation Inventory are used to collect data. The study reveals that Upper Primary school students posses moderate Numerical ability and majority of the students are getting moderate Parental motivation. The numerical ability of Upper Primary school students differ significantly with respect to gender, locale and type of management. Findings of the correlation shows a very high positive correlation between Numerical Ability and Parental Motivation. The study points out to the need of giving more Parental motivation for developing Numerical ability among Upper Primary school students.

Key Words: Parental motivation, Numerical ability, Upper Primary School students, etc.

Introduction

Education is a constant process for the development of innate powers of man which are natural, harmonious and progressive. Education as a system can be called the brain of any society. At any time, education aims at the progressive development of the society. Education develops the individuals like a flower which distributes fragrance all over the environment. According to Rabindranath Tagore "The aim of education is to develop the sense of unity in this world and promote the growth of a balanced and integrated personality of the child". All over the world education is highly acclaimed as the most pre requisite for human development.

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Mathematics in a real sense is a science of space and quantity that helps in solving the problems of life needing numeration and calculation. It provides opportunities for the intellectual, of the man's inherent power. Teaching of Mathematics essentially helps the students in acquiring essential Mathematical knowledge, skills, interest and attitudes. Mathematics education trains students to make and use measurements and includes the study of computer programming, algebra, statistics, geometry and calculus.

Mathematics has to be given prominent position in teaching learning process in the secondary school curriculum. Society expects individuals to be able to use mathematics in functional way. The pupil needs to develop knowledge and skills to perform well in achieving objectives. Utilitarian ways of mathematics in society involves every day computations necessary in purchasing food, clothing, utility services, water and shelter. Since mathematics enhances the child's resources to think and to reason, to visualize and handle abstraction, to formulate and solve problems, it requires Numerical Ability.

Every society has developed a number of agencies like school, home, peer group, community and religion to carry out the functions of education. Since education is the transmission of knowledge from one generation to another, family is one of the fundamental agencies of education in society.

The home and parents occupy the most important position in child's educational environment. Parental involvement at home can include activities such as discussion about school, helping with homework and reading with children. Involvement at school may include parents volunteering in the class room, attending workshop or attending school plays and sporting events.

Parents play a very significant role in the life of an individual. Parents who are the cause of the very existence of the child in the world are the most concerned people for the wellbeing of their child. Home is the first school of social life and a primary institution that play a vital role in the development and growth of the child, the major part being played by parents.

The many experiences of children in their school life, they form with their fellow pupils and their teachers, their degree of participation and level of performance in schoolwork and activities, the extent to which they benefit from the opportunities and facilities offered in the school clearly depend in large part upon the family background from which children come and context of family life within which they live throughout their school course. The family is itself an educative group of very great importance and the links between home and school are of the most crucial kind of the personal life and the educational progress of the individual child. For securing good academic achievements for the children the parents should motive them. This kind of motivation should improve the Numerical Ability.

Need for Numerical Ability among the Students

The main goal of mathematics education in schools is the mathematization of the child's thinking. Clarity of thought and pursuing assumptions to logical conclusions is central to the mathematical enterprise. There are many ways of thinking, and the kind of thinking one learns in mathematics is an ability to handle abstractions and an approach to problem solving.

According to George Polva, we can think of two kinds of aims for education: a good and narrow aim, and a higher aim, that of developing the inner resources of the growing child. With regard to school mathematics, the former aim specifically relates to numerical ability. Numerical ability is the ability to handle basic arithmetic, number sequence and simple mathematics. Primary schools teach numbers and operations on them, fractions, percentages and ratios. All these are important for Numerical ability in developing child's inner resources, the role that mathematics plays is mostly about thinking. For achieving this aim, children should develop the Numerical Ability.

In the Indian context, the universalization of schooling has two important implications for the discussion on curriculum, especially in mathematics. Firstly, schooling is legal right and mathematics being a compulsory subject of study, access to quality mathematics education is every child's right. Keeping in mind the Indian reality, mathematics education should be affordable to every child and at the same time, enjoyable. Secondly, in the country nearly half the children dropout of school during the elementary stage. So mathematics curricula cannot be grounded only on preparation for higher secondary and university education. It is certainly true that most of the skills taught at the primary stage are useful in everyday life. Because Mathematics is a core subject in the school curriculum.

Numerical Ability is the base of mathematics learning. Proper training in

Numerical Ability of the students makes mathematics learning more joyful. By considering the importance of Numerical Ability, the investigator decided to make a study about Numerical Ability of the Students of Standard Five in Kottayam District.

Need for Parental Motivation among the Children

When parents are involved in their children's education at home, they do better in school. The positive and negative reinforcements that the growing child receives at home determine, in large measure, his behavior tendencies, his personality, characteristics and his general orientation towards life. Father, mother, brothers and sisters all have the opportunity to reward, ignore and punish the child's response.

Studies of programs in early childhood, elementary, middle and high school indicate that efforts to improve student outcomes are more effective when the family is actively involved. Variables such as time spent on home work, school retention and educational aspirations are all indicative of how much students value education and how motivated they are to succeed academically. The parents have an important mentoring role by actively participating in learning activities with their children, by providing knowledge and by instilling within them a desire to learn. Children learn better when their parents and other family members are interested in and involved in education

Students who know that their parent finds their school work important and interesting are more likely to feel more motivated to strive to do better in school. For low achievers, having parent to sit down with them to go over more difficult home work can be very helpful. Some extra attention from a parent could make a difference between a child staying a low achiever and becoming an average achiever. Parental Motivation should improve child's Numerical Ability also.

Parental encouragement to achieve more and their interest in school performance are significantly related to school motivation and school achievement of the students. The way a child is treated in their home can affect the child's cognitive and social competence and in turn academic achievement, through their behaviors involved in parenting. The socio economic status of parents, their education and the contacts they made with schools affect how they encourage child's development and progress in school.

Parents can engage them in mathematical investigations, problem situations in which students conduct research. explore multiple strategies and engage in open-ended enquiry. Since this period is marked with the advancement of science and technology in future, these students can also contribute new knowledge in mathematics. Parents can serve as a role model for learning, determining the educational resources available in the home and hold particular values and attitudes towards education.

Parents may assist the students to complete the home work and arrange a suitable place to do home work. Parents need to instill good attitudes in mathematics by speaking favorably about each curriculum area.

Significance of the Study

It is generally believed that Mathematics is an exceptionally difficult subject and hence its study requires special ability and intelligence. It is also seen that more than ninety percent of failure at the secondary level due to poor performance in Mathematics. However several research studies reveal that learning of Mathematics can be made easier and enjoyable through the coordinated efforts of teachers, students, parents, educational researchers, psychologists and mathematicians.

People in all walks of life utilize the knowledge of mathematics in one or other way. People can go through without their mother tongue but not without calculations. Everyone in the world use Mathematics directly or indirectly in their day to day life. Realizing the significance of mathematics as a subject of study various commissions and committees treated it as an integral part of the school curriculum up to secondary level.

The NPE (1986) has also considered the importance of Mathematics in general education and suggests that mathematics should be visualized as a vehicle to train the child to think, to reason, to analyze and to articulate logically. Ignorance of Mathematics is a formidable obstacle in the way of a country's progress. The knowledge of its fundamental processes and skills to use them are preliminary requirement of a human being these days. According to Locke "Mathematics is a way to settle in mind a habit of reasoning". It trains or disciplines the mind. It should be frankly admitted that the present day teaching of Mathematics is far from being satisfactory. It is not the

classroom instruction alone that influences the behavioral changes of a child.

The parents play a very significant and important role in the life of an individual. Parents who are the cause of the very existence of the child in this world are the most concerned people for the well being of their child. The role of family and the specific interactions between a child and a parent have been determined to be the powerful indicators of development. Some specific interactions include regular family discussion, encouragement, limit setting, warmth, daily routine, praise and intellectual stimulation.

Home provides the child with all sorts of learning experiences and enables him to become a better citizen. In the home the child learns to walk, talk, demand and cooperate and many other conditions. What he learns in the home is the foundation and starting point from which later learning proceeds. It is usually permanent of all learning experiences because it is primary and basic. However it should be borne in mind that this permanent learning takes place only if the parenting is favourable.

Parental Motivation in the present study revolves around parents. Parents can have a very strong influence on their children's motivation to learn mathematics.

Statement of the problem

"A study on the relationship between Numerical Ability and Parental Motivation among the Students of Standard Five of Kottayam District".

Objectives of the Study

1. To study the distribution of scores on Numerical Ability among the Students of Standard Five of Kottayam District.

- 2. To study the distribution of scores on Parental Motivation among the Students of Standard Five of Kottayam District.
- 3. To study the significant difference if any between the Means of scores of Numerical Ability among
 - a) Boys and Girls of Standard Five of Kottayam District.
 - b) The Students of Standard Five of Government, Aided and Unaided schools of Kottayam District.
 - c) The Students of Standard Five of Rural and Urban area schools of Kottayam District.
- 4. To study the Relationship between Parental Motivation and Numerical Ability among the Students of Standard Five of Kottayam District.

Hypotheses of the Study

- 1. There exists a significant difference between the Means of scores of Numerical Ability among Boys and Girls of Standard Five of Kottayam District.
- 2. There exists a significant difference between the Means of scores of Numerical Ability among the Students of Standard Five of Rural and Urban area schools of Kottayam District.
- 3. There exists a significant difference between the Means of scores of Numerical Ability among the Students of Standard Five of Aided, Government and Unaided schools of Kottayam District.
- 4. There exists a significant correlation between the scores on Numerical Ability and Parental Motivation among the Students of Standard Five of Kottayam District.

Methodology for the study

The present study used descriptive Survey method for the collection of data on Numerical Ability and Parental Motivation among the Students of Standard Five of Kottayam District.

Population of the study

The population of the study consists of all the Government, Aided and Unaided school students of Standard Five of Urban and Rural Schools of Kottayam District

Sample of the Study

The investigator selects the sample from the Students of Standard Five of Kottayam District. The sample taken had been stratified with regard to Gender, Locality and Type of Management. The stratified random sampling

Analysis and Interpretation of Data

technique is used for the study. A sample of Four hundred Students of Standard Five from different schools, both Aided, Government and Unaided schools of Kottayam Districts belongs to both Rural and Urban area is taken. Both Boys and Girls are included in this study.

Tool used in the study

Tool 1: "Numerical Ability Test" - A test to identify the Numerical Ability of the Students of Standard Five will be constructed by the researcher.

Tool 2 : "Parental Motivation Inventory" - It will be constructed by the researcher and used to measure the Parental Motivation among the Students of Standard Five of Kottayam District.

Table 1

	Classification	of tl	he Total	Sample	with	respect to	their	Numerical	Ability
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Levels of Numerical Ability	Range	Number of students	Percentage
High Numerical Ability	\geq M+1 σ	94	23.5
	≥ 26		
Average Numerical Ability	Between M+1 σ and	222	55.5
	M-1σ		
	Between 26 and 12		
Low Numerical Ability	\leq M-1 σ	84	21
	≤12		
Total		400	100

From the Table the investigator observes 94 Students of Standard Five having scores above 26, constituting 23.5 percent of the total sample. They have High Numerical Ability. There are 222 Students of Standard Five who have score between 12 and 26. They have Average Numerical Ability. There are 84 Students of Standard Five who scored below 12. They constitute 21 percentage of the total sample .They have Low Numerical Ability. So the majority of the Students of Standard Five have Average Numerical Ability.

Table 2

Classification of the Total Sample with respect to their Parental Motivation

5 5			
Levels of Parental	Range	Number of	Percentage
Motivation		students	
High Parental Motivation	\geq M+1 σ		
	≥145	68	17
Moderate Parental			
Motivation	Between M+1 σ and M-1 σ	255	63.75
	Between 145 and 103		
Low Parental			
Motivation	\leq M-1 σ	77	19.25
	≤ 103		
Total		400	100

From the Table, The investigator observes 68 Students of Standard Five having scores above 145, constituting 17 percent of the total sample. They have High Parental Motivation. There are 255 Students of Standard Five have score between 103 and 145. They have Moderate Parental Motivation. There are 77 Students of Standard Five scored below 103. They constitute 19.25 percentage of the total sample. They Have Low Parental Motivation. So the majority of the Students of Standard Five have Moderate Parental Motivation.

Table 3

Significance of the difference between the means of scores of Numerical Ability among Boys and Girls of Standard Five

Variable	Category	Ν	Mean	S.D.	d.f	t value	P value	Remarks
Numerical	Boys	198	17.45	7.236				Significant
Ability	Girls	202	20.54	6.076	398	4.63	0.00	at 0.01 level

From the Table the investigator observes that the obtained 't' value 4.63 is greater than 2.58 at 0.01 level of significance. It shows that Means of scores on Numerical Ability among Boys and Girls of Standard Five of Kottayam District differs significantly. So the null hypothesis "There exists no significant difference between the Means of scores on Numerical Ability among Boys and Girls of Standard Five of Kottayam District" is rejected. Hence the research hypothesis "There exists significant difference between the Means of scores on Numerical Ability among Boys and Girls of Standard Five of Kottayam District" is accepted.

The investigator concludes that there exists significant difference between Boys and Girls of Standard Five of Kottayam District in the level of Numerical Ability. The Means of scores on Numerical Ability among Girls is 20.54 and Boys is 17.45. So the Girls are having high Numerical Ability than that of Boys.

among Rural and Urban school students of Standard Five
Significance of the difference between the means of scores of Numerical Ability
Table 4

Variable	Category	N	Mean	S.D.	d.f	t value	P value	Remarks
Numerical	Rural	202	18.27	7.17				Significant
Ability	Urban	198	19.77	6.43	398	2.20	0.03	at 0.05 level

From the Table the investigator observes that the obtained 't' value 2.20 is greater than 1.96 at 0.05 level of significance. It shows that Means of scores on Numerical Ability among the Students of Standard Five of Rural and Urban area schools of Kottayam District differs significantly. So the null hypothesis "There exists no significant difference between the Means of scores on Numerical Ability among the Students of Standard Five of Rural and Urban area schools of Kottayam District" is rejected. Hence the research hypothesis "There exists significant difference between the Means of scores on Numerical Ability among the Students of Standard Five of Rural and Urban area schools of Kottayam District" is accepted.

The investigator concludes that there exists significant difference between the Students of Standard Five of Rural and Urban area schools of Kottayam District in the level of Numerical Ability. The Means of scores on Numerical Ability among Rural area is 18.27 and Urban area is 19.77. So the Urban area students having high Numerical Ability.

Table 5

Comparison of means of scores of Numerical Ability with regard to Type of management

Variable	Group	Sum of	d.f.	Mean	F value	P value	Remarks
		square		square			
Numerical Ability	Between groups	2740.34	2	1370.17	34.11	0.00	Significant at 0.01 level
-	Within groups	15949.62	397	40.18			
	Total	18689.96	399				

From the Table it is evident that the calculated F value 34.11 is greater than the table value 4.66 at 0.01 level of significance with degrees of freedom 397. So the obtained F value is significant at 0.01 level. It shows that the Means of scores on Numerical Ability among the Students of Standard Five of Aided, Government and Unaided schools of Kottayam District differs significantly. Thus the null hypothesis "There exists no significant

difference between the Means of scores on Numerical Ability among the Students of Standard Five of Aided, Government and Unaided schools of Kottayam District" is rejected. Hence the research hypothesis "There exists significant difference between the Means of scores of Numerical Ability among the Students of Standard Five of Aided, Government and Unaided schools of Kottayam District" is accepted. The investigator used multiple comparisons for the different pairs of Numerical Ability test scores with respect to Type of management. Since there is a significant difference in the Means of scores on Numerical Ability among the Students of Standard Five of Aided, Government and Unaided schools of Kottayam District. The investigator used LSD method for pair wise comparison..

The result of Multiple comparison of different pairs of Numerical Ability is

- 1. There is no significant difference in the Means of scores on Numerical Ability among the Students of Standard Five of Government and Aided schools of Kottayam District.
- 2. There is significant difference in the Means of scores on Numerical Ability among the Students of Standard Five of Unaided and Aided schools of Kottayam District.

3. There is significant difference in the Means of scores on Numerical Ability among the Students of Standard Five of Government and Unaided schools of Kottayam District.

The investigator concludes that there is a significant difference in the Means of scores on Numerical Ability among the Students of Standard Five of Aided. Government and Unaided schools of Kottavam District. The Unaided school students have comparatively High Numerical Ability than the Government and Aided school students. The Government school students have comparatively Low Numerical Ability than the Unaided and Aided school students. The Aided school students have High Numerical Ability than Government school students and Low Numerical Ability than Unaided school students.

Table 6

Relationship between Numerical Ability and Parental Motivation

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Variable	Number	Degrees of freedom	ʻr' value	P value	Remarks	
Numerical Ability					Significant	
	400	398	0.91	0.00	at 0.01	
Parental Motivation					level	

From the table the investigator observes that 'r' value obtained is 0.91 which shows a very high positive correlation between Numerical Ability and Parental Motivation. The calculated 'r' value 0.91 is greater than the tabled 'r' value 0.128 at 0.01 level of significance with degree of freedom 398. This indicates that there exists a significant Correlation between Numerical Ability and Parental Motivation among the Students of Standard Five of Kottayam District. In the view of the result, the null hypothesis "There exists no significant Correlation between the scores on Numerical Ability and Parental Motivation among the Students of Standard Five of Kottayam District" is rejected. Hence the research hypothesis "There exists significant Correlation between the scores on Numerical Ability and Parental Motivation among the Students of Standard Five of Kottayam District" is accepted. The investigator concludes that there exists a significant very high positive Correlation between Numerical Ability and Parental Motivation among the Students of Standard Five of Kottayam District. The study reveals that when the Parental Motivation increases the rate of Numerical Ability also increases.

Major findings of the study

- Majority of the Students of Standard Five of Kottayam District possess moderate (55.5%) Numerical Ability.
- Majority of the Students of Standard Five of Kottayam District are getting moderate (63.75%) Parental Motivation.
- There exists significant difference in the Means of scores of Numerical Ability among Boys and Girls of Standard Five of Kottayam District. Girls have High Numerical Ability than that of Boys.
- There is significant difference in the Means of scores of Numerical Ability among Students of Standard Five of Rural and Urban area Schools of Kottayam District. Urban area students have High Numerical Ability than that of Rural area schools, though both the groups are significantly equal.
- There exists significant difference in the Means of scores of Numerical Ability among Students of Standard Five of Aided, Government and Unaided Schools of Kottayam District. The Unaided school students have comparatively High Numerical Ability than the Government and Aided school students. The Government school students have comparatively Low Numerical Ability than the Unaided and Aided school students.

• There exists a significant high positive correlation between Numerical Ability and Parental Motivation among the Students of Standard Five of Kottayam District.

Educational Implications of the Study

The investigator has listed below a few educational implications based on the research findings.

- Parents are responsible for helping the students to improve their Numerical Ability. They should provide opportunities and different techniques of motivation to improve the Numerical Ability.
- Motivation is an indispensible factor for learning. For the development of Numerical Ability, it is an important factor. So the learners must be motivated for better achievement.
- Parents should provide best opportunities possible to encourage and motivate the curiosity of children. Parents can provide essential books and materials to the children according to their age.
- Parents need to instill good attitude in Mathematics by speaking to the child favorably about the subject. Parents can encourage children to watch T.V. shows related to Mathematics.
- Parents can and should play a vital role in shaping and building the career of the children. They can tell their children to participate in mathematical quizzes and exhibitions to create interest in Mathematics.
- Parents should provide home practice opportunities for their children in many school related activities. Parents should

spend some time with their children by playing Mathematical puzzles and problems to motivate them.

- Parents should serve as role models encouraging their children to have high educational aspirations. They can tell the stories of great mathematicians and the importance of Mathematics in their lives.
- Parental Involvement helps to bridge the continuity gap between the school and the home.
- The personality of the parents plays a very important role in the life and education of the child. Children tend to identify themselves with such personalities. So parents should be their role model.
- Special orientation programmes should be conducted for the parents to educate them and to motivate them in their role.
- Students who are identified as having low Numerical Ability should be given special assistance to improve their ability.
- Curriculum must include contents and activities that help to improve Numerical Ability of the students. Mathematics club should be started in schools and programmes should be organized for the promotion of arithmetical skills. Teacher should give individual attention to the students.Parents should maintain a positive relationship with the teachers

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DESIRED ATTRIBUTES OF BETTER LEARNERS IN THE $21^{\mbox{st}}$ CENTURY

Dr. Prasanth Mathew* Ms. Liya T. Jose**

Abstract

The educational scenario has taken a great leap from teacher centered to learner centered and finally learning centered in this 21st century. The socio-political, economical especially technological changes that happened till now has directly reflected in each dimension of man's life, which in turn has caused revolutionary changes in the process of learning too. Initially, it was a banking system where teacher deposited knowledge in students' brain. When constructivism occupied the space it encouraged mutual interaction of students with environment and more able members of the society for searching out the best learner, who has the ability to take in and give out maximum information. But 21st century has taken a great deviation from the concept of best learner to better learner, who are navigators of knowledge, who find, identify, manipulate and evaluate information and knowledge. To become better learners one should adopt a multisensory approach in the travel for knowledge. For this, one should possess certain desired attributes that enable him/her to integrate knowledge in his/her world of work and life, to solve problems and to communicate knowledge to others. In this paper, the author presents the desired attributes of better learners in the present learning situation.

Key Words: Learning, Learner, Better learners, etc.

Introduction

Educational practices are continually subjected to renewal. Initially, learning was behaviorism oriented where teacher was considered as the center of the teachinglearning process, a strong shift brought constructivism in practice. It highlighted the importance of learners actively constructing their own knowledge.

Our educational system has undergone dramatic changes from a phase where learners are spoon feeded to a phase where

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they become the center of learning. Today learning process is more important and learners are expected to be explorers of learning.

In this new paradigm, education activities are planned and executed from a learning perspective. So, the focus is on how learning can be optimized. In pursuing learners as active constructors of their own knowledge, others will not take the responsibility of one's learning. Today's learning breaks the traditional teaching learning style and seeks self capability of learner in regulating learning process. Learner takes the **ownership of learning**. For meaningful processing of knowledge, the learner has to apprehend certain attributes to become better learners of the 21st century.

Information navigation is considered to be the main form of literacy for 21st century. Brown (1999) describes "I believe that the real literacy of tomorrow will have more to do with being able to be your own private, personal reference librarian, one that knows how to navigate through the incredible. confusing, complex information spaces and feel comfortable and located in doing that. So navigation will be a new form of literacy if not the main form of literacy for the 21st century." Passive learners feel hard to retain a space in this self equipped world. So learners should adapt certain attributes that make them better learners in the present education system.

Learning and Learner

Learning is a process of active engagement with experiences. It is what people do when they want to make sense of the world. It may involve the development

or deepening of skills, knowledge, understanding, awareness, values, ideas and feelings and an increase in the capacity to reflect. Effective learning leads to change, development and the desire to learn. It is really distressing that only a few, bridge with meaningful learning. Others show least dedication in engaging for learning. The consequences of not engaging students in learning are reportedly dire (Tapscott, 1998; Prensky, 2001; Willms, 2003; Gilbert, 2007; Claxton, 2007). Some educationists consider engaging disengaged pupils to be one of the biggest challenges facing educators, as between 25% and over 66% of students are considered to be disengaged (Harris, 2008,).

Better Learners

Authentic learning describes learning through applying knowledge in real-life contexts and situations. For this, the learner should be a better learner who explores, discusses, and purposefully constructs knowledge.

Authentic learning results from

- 1. Curious interaction with real world problems.
- 2. Open ended inquiry, thinking skills and meta cognition
- 3. Engagements in discourse and social learning in a community of learners
- 4. Directing one's own learning.

Maryellan Weimer (2014) in his Blog proposed 7 characteristics of good learners as:

- 1. Good learners are curious
- 2. Good learners pursue understanding diligently
- 3. Good learners recognize that a lot of learning isn't fun

- 4. Failure frightens good learners, but they know it's beneficial
- 5. Good learners make knowledge their own
- 6. Good learners never run out of questions
- 7. Good learners share what they've learned.

Background

The present paper is an outcome of the research project undertaken by Bethlehem Educational Research Foundation, (BERF is a Non- Governmental Organization of a team of educational researchers and an institutional member of World Council for Curriculum and Instruction) to identify the desired attributes of better learners and the active discussions carried out in the Department of Physical Science, PKM College of Education, Madampam, Kannur.

Desired Attributes of Better Learners

Based on the discussions, the researcher operationally define a better learner as "One who curiously explores the mysterious world by the process of learning in all life contexts with his tools sharpened, using values, such as questioning, capturing, organizing, integrating, disseminating, applying and creating. He constantly engages in intelligent and critical analysis and reflections to fulfill his strong desire."

The researcher proposes 10 desired attributes of better learners:

1. Desire to learn

Dream takes the form of desire when it disturbs the equilibrium of the learner, giving him a realization on necessity of self regulated learning, which in turn seeks his readiness to involve in the art of learning. Strong desires always keep the learner unsaturated in his learning. For this, learners should have:

- 1. a self realization of the outcome they expect from learning,
- 2. self motivation
- 3. good role models in life.

2. Curious to learn

Better learners should have quest for new ideas and information. This quest evolves out as curiosity in the learners. Curiosity, a state of arousal involving exploratory behaviours leads to thinking and thinking culminates in learning. Curious learners will not be satisfied with what they already know or have figured out, but they take part in lifelong learning process.

In order to cultivate curiosity in learners, the learners should:

- 1. involve in interactions to all kinds of learning environments.
- 2. ask higher order questions.
- 3. keep an open mind and holistic view.
- 4. explore by actions
- 5. enjoy the art of learning.
- 3. Learn from context

Learners are believed to be enculturated into their learning community based on their understanding, through their interaction with the immediate learning environment. Learning is considered to be largely situationspecific and context-bound activity (Eggen and Kauchak, 1999; Woolfolk, 2001; McInerney and McInerney, 2002).

Better learners find opportunity to learn from their life context, even when it is risky or challenging. They find every situation as contributing to a learning environment. For fostering the attitude to learn from context, provide opportunities for:

- 1. critical and intellectual analysis of context
- 2. experiential learning that demand complete involvement and dedication.

4. Value Knowledge

The important elements that make learners better learners are values, attitudes, and beliefs. Better learners always find worth and values in a subject and activity and respects all sources that became his master.

This can be developed through:

- 1. self encouragement that creates an appreciable attitude in the learners.
- 2. life history of legends that motivate and give in insight values in learning.
- 3. an optimistic attitude, open mindedness and attitude to use failure as opportunities to learn.

5. Generate/Create Knowledge

Generating new knowledge is the heart of learning. Better learners continually work for generating and broadening their knowledge. They engage in the process and product aspect of learning.

For fostering creativity provide opportunities for:

- 1. interaction to all valuable sources around
- 2. creative thinking techniques such as **Brainstorming**, **Thinking Hats** etc.
- 3. experimenting the ideas he learnt.
- 4. lateral thinking to come out of the box.
- 5. asking open-ended questions such as 'What if...?' and 'How might you...?'

6. sharing ideas with others and talking about their progress with able members of the society.

6. Organize knowledge

Organization of knowledge mould meaningful learning.

Graphical organizers, the figurative language and mnemonics are good tools in structuring knowledge.

7. Integrate knowledge

Better learners should be able to properly integrate his knowledge asset. This integration can be in different ways:

- 1. integration of knowledge to what is already learned
- 2. integration to future predictions and expectations
- 3. inter subject integration
- 4. integration of learning and practical life

8. Apply knowledge

Better learners are always in action of transferring learning .Transfer of learning is the term used to describe application of what one has learned in a particular situation to another in a different context. For this, learners should practice experiential learning and make use of his holistic view. The attribute of Application of knowledge can be developed through:

- 1. maximizing initial learning
- 2. activating prior knowledge
- 3. deliberate practices
- 4. simulations
- 5. group learning
- 6. analogizing and metaphorizing

9. Disseminate knowledge

Better learners give and take knowledge through the process of dissemination. Vygotskian constructivism states the reality that by interacting with more able members of the society, the learners cross their zone of proximal development and become better learners.

Collaborative space in learning facilitates mutual sharing of knowledge, ideas and best solution to problems. Collaboration is viewed as the process of building and maintaining a shared conception of a problem (Roschelle &Teasley, in press).

Essential conditions required for dissemination of knowledge:

- 1. better knowledge sources
- 2. means of transfer
- 3. willingness to give and take knowledge.
- 4. awareness of different knowledge sources.
- 5. respectful attitude to sharing sources.

10. Metacognitive knowledge

Better learners constantly analyze the strategies of learning through self reflective practices and retain an evaluation of their progress in learning and diagnose the intervening variables. This thinking about thinking process enable the learners to perceive their merits and vulnerabilities.

To develop this quality, various reflective practices can be used such as a personal diary, self tests and feed backs.

Conclusion

Learning-centred education paradigm of 21st century demands certain basic attributes from the learner who takes part in the learning

process. Only when learners get equipped with these attributes, ther act of learning become optimized and the learners develop in to better learners. A simple learner gets challenged in coping with the current overflow of information but a better learner intelligently processes all available sources and actively participates in the learning process.

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SOCIAL EQUITY AND JUSTICE THROUGH THE EDUCATION OF TRIBAL PEOPLE

Fr. James Joseph, * Dr. P.P Shajimon**

Abstract

National development is the all inclusive development of a nation. It will be possible only through the promotion of social equity and social justice by imparting proper education to all, especially the marginalized sections in the society including scheduled tribes. The socio-economic and educational conditions of scheduled tribes in India are very low compare to the national average. The major reason behind this backwardness is the lack of proper education. Many of the superstitions, cast problems and other social issues were caused by the absence of education. Thus comes the need of giving proper education to the tribal people. For this purpose it is important to make more effective policies from the part of government and ensure its implementation.

Key Words: Tribal people, National Policy on Education, Education, Marginalization, Social Transformation, Social Equity, Social Justice, Social Status, Economic Status, Governmental Policies, Literate, Illiterate, Drop-out, etc.

Introduction

Social equity is essential for the development of an egalitarian society. Education is the powerful instrument in the process of overcoming inequalities accelerating social transformation and achieving economic progress. It leads us to darkness to light. Education has become a fundamental right. This means that no person should be denied education at any cost. The National Policy on Education implies that up to a given level, all students irrespective of caste creed, location or sex have access to education of a comparable quality. To promote equality, it will be necessary to provide for equal opportunity to all especially for the marginalized in the society. In our national perception, education is essential for all. This is fundamental to an all-round

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development, material and spiritual. The states commitment towards the well being of the disadvantaged and marginalized sections of the society is evident from the special constitutional provisions made in favor of these groups. Article 14 of the Constitution of India guarantees that no persons will be denied equality before law .In spite of provision of free and compulsory education to all children up to the age of 14, a large chunk of children with special needs does not get meaningful qualitative education.

Education is a unique investment in the present and future. Every Country develops its system of education to express and promote its unique socio-cultural identity and also to meet the challenges of the time. Education in India stands at the cross roads today. India's political and social life is passing through a phase which possesses the change of erosion to long accepted values. The goals of secularism, socialism, democracy and professional ethics are coming under increasing strain. The National Policy on Education gives special stress on education social transformation. for Social transformation means standing for human rights, communal harmony, protection of the environment, structural changes and liberation of women, Delits, Tribals and other oppressed groups.

Importance of Social Euity & Justice

Social equity implies fair access to livelihood, education and resources; full participation in the political and cultural life of the community; and self determination in meeting fundamental needs. As Martin Luther King observed, where there is injustice for one, there is injustice for all. **Social justice** on the other hand is the justice in terms of the distribution of wealth, opportunities and privileges within the society. The Vienna Declaration and Programme of Action consider social justice as a purpose of human rights education.

The term 'equity' signifies development aimed at reaching the most marginalized and deprived population first. The genesis of equality and equity as concept of social Justice arose from a history of evolving philosophies of social organization and distribution of wealth and services. From the natural law to the modern concept of rights, this socially just distribution continues. Poverty exists at record-high levels in absolute terms, disproportionately affecting the most marginalized groups in societies across the world. Equity involves trying to understand and give people what they need to enjoy full, healthy lives. Equality in contrast, aims to ensure that everyone gets the same things in order to enjoy full, healthy lives.

Social Status of Tribal People

When we speak about the social context of our country, we should go through a particular problem in our country. There is a culturally rooted belief in our society that there is a division between people who work with their minds and others who work with their hands. The former are created superior and to rule, while others to remain subjects and be ruled. For good measure, a divine sanction was also attributed to this society engineered caste hierarchy so that the socalled upper and lower spectrums of society internalized it as the will and design of god

When we come to the social context of Kerala, the seven decades of development

after independence has brought about spectacular changes in the political, economic and cultural scenario of Kerala. The state has retained a unique status in its achievements in the field of education since independence. But it seems that the largest section of tribal population in Kerala was neglected in the educational field, despite of the governmental initiatives for welfare and progress in this matter. The Economic and social backwardness of Tribal people are basically a product of its educational backwardness. Many of the superstitions and caste problems and other social issues were caused by the absence of education. Promotion of primary, secondary, higher and technical education only will lead to the development of tribal's in India.

Economic Status of Tribal People

The population growth rate is substantially higher than the economic growth of the community. In Scheduled tribes, the working force participation rate for both males and females was higher than total population. But these were employed in labor, wood gathering, hunting, forest meal collection etc. A comprehensive scheme of welfare embracing every sphere of life, economic, educational and social can be effectively implemented largely through tribal's own institution like Forest Labour Comprehensive Societies. The economic uplift through co-operatives, forest development and cottage industries etc should precede the far reaching measures of social welfare like education, Wealth and clothing.

The earlier tribal traditional civil society was largely egalitarian and the caste

hierarchy was non-existent among the Tribals. If one tribal family had four fruit trees, other had three or five; one family had four cows, another had two or three. Thus inequalities were marginal or minimum. However the present situation is different. The tribal traditional homogenous society is increasingly becoming a class society. Some of them have entered in to government job and few have become professional.

Economically policies should be implemented in tribal areas that the people of different tribes get the opportunity to attain economic betterment. Efforts should be made to remove their poverty and the sense of deprivation. They should be made economically self sufficient. The economic conditions of trebles are low. The government should provide proper educational facilities to Tribals in several areas along with the medical services. Proper training programmers and agricultural extension services are necessary to the tribal's.

Education of Tribal People

The National Policy on Education 1986, when speaks on the education of scheduled tribes says "The Curriculum at all stages of education will be designed to create an awareness of the rich cultural identity of the tribal people as also of their enormous create talent. Role of Education is important in the development of human beings especially in the case of SC, ST and Backward Communities. Article 21 a (part III of the fundamental rights) ensure that state provides free compulsory education to children in 6-14 age group. Besides article 45in part IV of the directive principles is modified to enable the state to try and provide early childhood care and education for all children up to 6 years.

For the development of the tribal community, education is the most important element. It is powerful instrument to change the values and attitude of the people and create in them the urge of necessary motivation to achieve social mobility and social ascendancy. The overall development of Tribals should include their empowerment in education. Knowledge is power and knowledge comes through well defined educational supervision and percepts translate to educational policies "Essentially education is expected to infuse nature and develop a lasting desire to respect others and acquire the social skills to deal together.

Education is critical factor in all round human development. It is an area that the tribal communities lag far behind the national literacy level. The literacy rate of scheduled tribes, according to the 2011 census is 68.5% for men and 49.4% for women, which is far from the national average of 82.14% for men and 65.46% for women. The statistics with regard to the female literacy among the scheduled tribes is the more appalling with only 49.4% as against the national average of 65.46%.

Tribal education should be completely work oriented. The progress of education and training must not end with school, but lead to employment and services needed in the area. For this, a kind of education dealing with farming and small industrial establishment has been given. There are many difficulties in the promotion of education among Tribals. One of the most difficult problems is the fact that the tribal dialects are innumerable and teachers in different dialects are not readily available. The poverty and unwillingness of the parents to send their children to school due to economic consideration are other problems of Tribals. Tribal education is not opposed to main stream education. The general notion is that the tribal child needs to be motivated to attend the school. Both the parent and child need to be convinced that schooling is learning.

The dropout rates are high and level of enrollment is very low in Central Tribal Belt of India. This is due to the poverty in which their parents place greater pressure on the younger family members to start earning money at an early stage to support them. Administrative initiative should focus on the improvement of quantity as well as the quality aspect of tribal education ; production of study and reading materials locally and revamping tribal education to make in an effective instrument of building and sustaining partnership between the tribal community and the rest of the community including the government.

Governmental Policies

Government of India constituted Ministry of Tribal Affairs in October 1999 to give more focused attention to the development of the scheduled tribes. Further, National Commission for scheduled areas and tribes was set up to report on administration of the scheduled tribes followed by National Policy in Tribals, which seek to bring scheduled tribes to main stream. The draft policies focus on education, health, reservation of cultural and traditional knowledge.

The Indian states have adopted preferential policies and programmers for

educational development of scheduled tribes since independence with the express purpose not only to bring socio-economic transformation in the tribal societies, but also to reduce the gap between the Tribals and the non Tribals. The main purpose of these programmers is to remove or minimize social, economic disabilities of Tribals and to bring them at par with other sections of the Indian societies.

The Panchayat Extension Act 1996 gave increased power and Jurisdiction to democratically elected bodies representing the tribe. It gives power to the Grama Sabha in both matters relating to protection of tribal custom and development work and regulations of mining of minor minerals, water bodies prohibition, minor forest produce, land alienation, money-leading etc.

Certain Recommendations

Based on the above studies I have come through certain conclusions and recommendations.

- Government and private agencies should take special effort for the high level of enrollment of Tribal children in Schools.
- Drop-out rates of Tribal children should be reduced by giving special incentives to the Tribal children and their parents.
- More teachers from the Tribal communities should be trained who can handle their own Tribal Dialects.
- There should be more awareness programmes among the Tribals to reduce unwillingness of parents to send their children to school
- Tribal education should be more work oriented.

- The Reservations given to the Tribals by the Constitution of India and by the various orders should be preserved and they should be given awareness about their rights.
- They should be given more opportunities in the political and administrative fields.
- There is a need of more Tribals schools in Tribal areas especially for girl children.
- Special economic policies should be made for the benefit of Tribal population
- The government should see that, proper policy implementation are done for the betterment of Tribals.

Conclusion

The Integration of Tribals in to the national mainstream, it is necessary to revisit the history of development aimed at tribes and their implementation. Lack of education is strumbling block to the Tribals in attaining a higher standard of life. Even though from the first five year plan on wards government showed special interest for the development of Tribals, it is widely noted that the government failed to bring positive changes in the overall development of Tribals in India. The marginalization of the Adivasis in India has not occurred due to their geographical isolation but because of their exclusion from the structures and institutions of power in India. To conclude, social equity and social justice in India will be possible only through giving proper education to the marginalized especially the tribal population of India.

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EFFECT OF COMPUTER SUPPORTED COOPERATIVE LEARNING ON ACHIEVEMENT IN CHEMISTRY

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Abstract

The present study aimed to investigate the Effect of Computer Supported Cooperative Learning on Achievement in Chemistry among Secondary School Students when compared to Existing Method of instruction. The design selected for the study was experimental, pre-test post-test non-equivalent groups design. The sample selected included 60 eighth standard school students. Descriptive statistics mean and Standard deviation and the inferential statistics ANCOVA were used for analyzing the data. The tools used in the study were test on Achievement in Chemistry and lesson transcripts based on Computer Supported Cooperative Learning and Existing Method developed by the investigator. The study revealed that Computer Supported Cooperative Learning is effective to develop Achievement in Chemistry among Secondary School Students when compared to Existing Method of instruction.

Key Words: Cooperative Learning, Computer Supported Cooperative Learning, Achievement

Introduction

Science education is the most potent instrument to cope with the greatest challenges of the country. Teaching is an important part in the process of Science education. Nowadays, the educational scene is changing. The central point is the pupil, not the teacher. The task of education is not to pour information into pupil's head but to engage pupil's mind with useful concepts. Cooperative Learning involving student's participation in group learning that emphasizes constructive interaction. It is a strategy by which small teams each with students of different levels of ability are engaged in learning activities to improve their understanding of a subject. The advent of the new technological era has redefined the very parameters of today's work places and consequently of the school education

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process. Computer Supported Cooperative Learning incorporates the merits of Cooperative Learning and the possibilities of ICT and helps the teacher in shifting his role from the 'sole provider' of knowledge to facilitator.

Need and significance of the study

One of the important functions of our present educational system is promoting quality and excellence among students in order to meet the challenges of Science and technology. Hence we should promote wider opportunities for promoting the human potential to its full extend. In the present days, with a rapidly changing educational scenario, the role of teacher and teaching are changing fast wherein pupil enriched with the responsibility of promoting fruitful learning and stimulating the students by adopting apparatus strategies.

The present system of education in our country, we follow the large group instruction method. In this case a heterogeneous group is taught using the same method of instruction. If Science especially Chemistry is partly taught and badly learned, it nothing more than burdening the mind with dead information and it could degenerate even into new superstitions. Teaching dominated by excess of same learning strategy is dull, uninteresting and abstract. Learning can be enriched and made more effective by the appropriate utilization of different learning strategies within the same environment. Recent years have witnessed the widespread acceptance of the significant role of various leaning methods, as an aid in educational field. There is an urgent need to raise the quality of Science teaching to promote the deepening of understanding of basic principles, to develop problem, solving and analytical skill and to promote the spirit of enquiry, experimentation and accurate observation.

Information and communication technology has brought new possibilities in to the classroom. Information and communication technology exemplified by the internet and interactive multimedia and obviously of great significance for teachers and students. It needs to be effectively integrated in to the formal classroom and learning condition. The introduction of technology in the education field has made the process of learning and knowledge sharing for filled activities. The computer offers an interactive audiovisual media. Power point presentation and animation software can be used to render information to the students in an interactive manner. The visual effects provided by the animation and presentation enhance the learning. The audiovisual teaching aids have brought about marked improvement in students attention and attentiveness (Srinivasan, 1998).

An important use of technology is its capacity to create new opportunities for shaping the curriculum and teaching by bringing real-world problems into the classroom for students to explore and solve. Computer animations, videos, diagrams, thought provoking images can be the best mode which is useful for improving the thinking power of the students. They are the important tool for student's conceptual understanding.

India is a land of immense diversity. It has been a challenge for the Indian education
system to take into fold its people belonging to different religious, castes, varying economic, linguistic and cultural backgrounds. The differences in gender, physical and mental abilities also add to the diversity of learner groups. Cooperative Learning can help to reduce the problems associated with social disparities (Johnson and Johnson, 1994).

Without cooperation of its members society cannot survive, and the society of survived has because man the cooperativeness of its members made the survival possible. It was not only advantageous for the individual here and there who did so, but the group as a whole. In human societies the individuals who are mostly likely to survive are those who are best enabled to do so by their group. Cooperative Learning Strategy is an instructional strategy that promotes cooperation (Darsan, 2007).

Computer Supported Cooperative Learning instructional approaches provide opportunities for a learner to interact with other learners in the class. They enable all the learners in the classroom to work together and arrive at the final solution on the basis of teamwork. This promotes participation of all learners in the process of learning. They not only contribute to intellectual development of the learners but also equally contribute to social and psychological development of the learners unlike other methods of instruction(Johnson and Johnson, 1994).

The use of Computer Supported Cooperative Learning approaches in the classroom help the teacher in achieving the overall goals of education because they incorporate intellectual, social and psychological aspect of education and develop interpersonal relationships among learners. The social environment provided by Cooperative Learning enables learners to appreciate the presence of pupils hailing from different social, ethnic, religious, linguistic, caste and class backgrounds. Here the pupils encourage, help and care more about each other (Johnson and Johnson, 2000).

In order to maximize the effectiveness of ICT use in formal educational contexts teachers need more than just the requisite technical skills. The success of ICT use depends upon familiarity with good practice firmly rooted in an understanding of how students learn. Complementing this, reflection on its use as a base for pedagogic innovation beyond the incorporation of ICT into prevailing traditions of classroom practice is also necessary. Thus, the effectiveness of ICT in the learning process depends upon the teacher to "locate computer-based learning in a context of interpersonal support" (Crook, 1994).

Science education is the most potent instrument to cope with the greatest challenges of the country. Since Science, especially Chemistry has many theoretical and abstract concepts which are difficult to understand by students they need some visual materials in order to learn these theoretical and abstract concepts. It is important that all educational efforts should end up in the achievement. So the investigator feels the need and importance of studying about this aspect. In the present study, the investigator is trying to find out the effect of Computer Supported Cooperative Learning on Achievement in Chemistry among Secondary School Students.

Objectives of the Study

- 1. To study the distribution of the pretest and posttest scores on Achievement in Chemistry among the Secondary School Students of the experimental and control groups.
- 2. To find out the effect of the Computer Supported Cooperative Learning Strategy when compared with the Existing Method on the posttest scores on Achievement in Chemistry when the effect of pretest scores on Achievement in Chemistry is controlled
- 3. To find out the effect of the Computer Supported Cooperative Learning Strategy when compared with the Existing Method on the posttest scores on the components of Achievement in Chemistry, when the effect of pretest scores on Achievement in Chemistry is controlled

Hypotheses of the Study

- 1. There is significant effect of the Computer Supported Cooperative Learning Strategy when compared with the Existing Method on the Posttest Scores on Achievement in Chemistry when the effect of the pretest scores on Achievement in Chemistry is controlled
- 2. There is significant effect of the Computer Supported Cooperative Learning Strategy when compared with the Existing Method on the Posttest Scores on the components of Achievement in Chemistry, when the

effect of the pretest scores on Achievement in Chemistry is controlled

Methodology

The study was experimental in nature. The design selected for the study was Pretest – Posttest – Nonequivalent groups design.

The independent variable was the treatment variable which had two levels. The treatment using Computer Supported Cooperative Learning to the experimental group and instructions based on the Existing Method to the control group. The dependent variable of the study was Achievement in Chemistry.

Sample of the Study

The population of the study consisted of the students of Standard Eight studying in schools following the curriculum designed by Board of Secondary Education, Kerala State. The sample consisted of 60 students with 30 students in the experimental and control groups each.

Tools used:

In the present study the investigator uses the following tools:

- Achievement Test in Chemistry prepared by the investigator.
- · Lesson transcripts based on Computer Supported Cooperative Learning prepared by the investigator.
- Lesson transcripts based on the Existing Method prepared by the investigator.

Analysis and interpretation of the results

Objective 1-Distribution of the Scores on Achievement in Chemistry among the Secondary School Students of experimental and control groups

Distribution of the Pretest Scores on Achievement in Chemistry among the Secondary School Students of experimental and control groups

The first objective was to study the distribution of the Scores on Achievement in Chemistry among the Secondary School

Students of experimental and control groups. The investigator collected the data pertaining to the objective by administering the self constructed tool titled "Achievement Test in Chemistry" on sixty pupils of Standard Eight. Table 1 and Table 2 show the distribution of Pretest Scores on Achievement in Chemistry among the Secondary School Students of experimental and control group

Table 1

Distribution of the Pretest Scores on Achievement in Chemistry among the students of experimental and control group

Class interval	Experime	ental group	Control group		
	Frequency	Percentage %	Frequency	Percentage %	
0-5	03	10	02	6.7	
5 - 10	12	40	14	46.7	
10 - 15	12	40	09	30	
15 - 20	02	6.7	04	13.3	
20 - 25	01	3.3	01	3.3	
Above 25	-	-	-	-	
Total	30	100	30	100	

From the table the investigator observed that the highest frequency of Achievement in Chemistry of experimental group is 12 corresponding to the class intervals 5-10 and 10-15 respectively and that of the control group is fourteen corresponding to the class interval 5 - 10. It is interpreted from the table that most of the pupils scored more than 5 and no one scored above 25.

Table - 2

The Group, Mean and Standard Deviation of the Pretest Scores on Achievement in Chemistry among the Secondary School Students of experimental and control groups

Variable	Group	N	Maximum	Mean	Standard
	-		Scores		Deviation
Achievement Test in	Experimental group	30	36	10.77	4.09
Chemistry	Control group	30	36	10.90	3.58

From the table the investigator observes that the Means of Pretest Scores on Achievement in Chemistry among the Secondary School Students of experimental and control groups are 10.77 and 10.90 respectively. The Standard deviation of Pretest Scores on Achievement Test in Chemistry among the Secondary School Students of experimental and control groups are 4.09 and 3.58 respectively. The control group Scores higher than that of experimental group.

The distribution of the Posttest Scores on Achievement in Chemistry among the Secondary School Students of experimental group

Table 3 and 4 describes the frequency distribution of the Posttest Scores on Achievement in Chemistry among the Secondary School Students of experimental group.

Table 3

Frequency Distribution of the Posttest Scores on Achievement in Chemistry among the students of experimental group and control group

Class interval	Experime	ental group	Contro	ol group
	Frequency	Percentage %	Frequency	Percentage %
16 – 19	02	6.7	06	20
19 – 22	01	3.3	14	46.7
22 - 25	05	16.7	06	20
25 - 28	09	30	04	13.3
28-31	09	30	-	-
31 - 34	04	13.3	-	-
34 +	00	00	-	-
Total	30	100	30	100

The investigator observes from the table that the highest frequency of Posttest Scores on Achievement in Chemistry of experimental group is 9 corresponding to the class interval 22 - 25 and 28 - 31 respectively and that of the control group is 14 corresponding to the class interval 19-22. It is interpreted from the table that most of the pupils scored more than twenty five and only four students scored above thirty one.

Table 4

Variable, Maximum and Minimum Scores, Mean and Standard Deviation of the Posttest Scores on Achievement in Chemistry among the Secondary School Students of experimental and control groups

Variable	Group	Ν	Maximum	Mean	Standard
	_		Scores		Deviation
Achievement	Experimental				
Test in	group	30	36	27.3	4.62
Chemistry	Control group	30	36	19.1	3.83

From the table 5.6, the investigator observes that the Means of the Posttest

Scores on Achievement in Chemistry among the Secondary School Students of experimental and control groups are 27.3 and 19.1 respectively. Therefore the investigator interpreted that the Mean of Posttest Scores of pupils of experimental group is greater than that of control group.

Objective 2

The investigator formulated the second objective as 'to find out the effect of the Computer Supported Cooperative Learning Strategy when compared with the Existing Method on the posttest scores on Achievement in Chemistry when the effect of pretest scores on Achievement in Chemistry is controlled'. For this the investigator formulated the research hypothesis which states that 'There is significant effect of the Computer Supported Cooperative Learning Strategy when compared with the Existing Method on the Posttest Scores on Achievement in Chemistry when the effect of the pretest scores on Achievement in Chemistry is controlled'. In order to test the research hypothesis the investigator formulated the null hypothesis as, 'There is significant effect of the Computer Supported Cooperative Learning Strategy when compared with the Existing Method, on the Posttest Scores on Achievement in Chemistry, when the effect of the pretest scores on Achievement in Chemistry is controlled'.

The investigator analysed the objective using the Analysis of Covariance (ANCOVA) technique. The F value was set to 3.15 at .05 levels with degrees of freedom 1 and 59. The result of analysis of ANCOVA is in the table 5.

Table 5

The Sum of Squares, degrees of freedom, Mean Square, F Value and p Value of the Analysis of the Posttest Scores of Achievement in Chemistry when the effect of the pretest scores on Achievement in Chemistry is controlled

Source	Sum of squares	df	Mean Square	Fvalue	Pvalue
Covariate	202.94	1	202.94	68.76	.001*
Between Group	1015.32	1	1015.32		
Within Group	841.63	57	14.77		
Total	2044.98	59			

* Significant at .05 level

From Table 5, the investigator observes that the calculated F value (F $_{(1,59)} = 68.783$, p < .05) is significant at .05 level of significance. Therefore the null hypothesis which states that 'There is significant effect of the Computer Supported Cooperative Learning Strategy when compared with the Existing Method, on the Posttest Scores on Achievement in Chemistry, when the effect of the pretest scores on Achievement in Chemistry is controlled' is not accepted. Therefore the investigator concludes that the Computer Supported Cooperative Learning Strategy is effective when compared with the Existing Method in improving Achievement in Chemistry among the Students of Standard Eight.

Objective 3

The second objective was to find out the effect of the Computer Supported

Cooperative Learning Strategy when compared with the Existing Method on the posttest scores on the components of Achievement in Chemistry namely, Knowledge, Process, Creativity and Application, when the effect of pretest scores on Achievement in Chemistry is controlled. For this the investigator formulated the research hypothesis which states that 'There is significant effect of the Computer Supported Cooperative Learning Strategy when compared with the Existing Method on the Posttest Scores on the components of Achievement in Chemistry, when the effect of the pretest scores on Achievement in Chemistry is controlled'. In order to test the research

hypothesis the investigator formulated the null hypothesis as, 'There is no significant effect of the Computer Supported Cooperative Learning Strategy when compared with the Existing Method on the Posttest Scores on the components of Achievement in Chemistry, when the effect of the pretest scores on Achievement in Chemistry is controlled'. The investigator analysed the objective using the ANCOVA technique separately for each component namely, Knowledge, Process, Creativity and Application by taking Pretest Scores of each component as covariate. The F value was set 3.15 at .05 levels with Degrees of freedom 1 and 59. The result of analysis of ANCOVA is in the table 6.

Table 6

The Sum of Squares, Degrees of freedom, Mean Square, F Value and p Value of the Analysis of Posttest Scores on the components of Achievement in Chemistry using pretest scores as Covariate

Components	Source	Sum of	df	Mean	Fvalue	Pvalue
		squares		square		
Knowledge	Covariate	0.98	1	0.98	24.15	.001*
	Between Group	22.82	1	22.82		
	Within Group	53.86	7	0.95		
	Total	77.65	59			
Process	Covariate	21.89	1	21.89	65.39	.001*
	Between Group	166.73	1	166.72		
	Within Group	145.34	57	2.55		
	Total	330.58	59			
Creativity	Covariate	0.06	1	0.06	18.41	.001*
	Between Group	5.98	1	5.98		
	Within Group	18.51	57	0.33		
	Total	24.58	59			
Application	Covariate	32.13	1	32.13	28.01	.001*
	Between Group	135.03	1	134.03		
	Within Group	276.81	57	4.86		
	Total	443.93	59			

* Significant at .05 level

From the table 6, the investigator observes that the calculated F Values 24.15, 65.39, 18.41 and 28.01 for the components Knowledge, Process, Creativity and Application respectively are significant at .05 level of significance. Therefore the null hypothesis 'There is no significant effect of the Computer Supported Cooperative Learning Strategy when compared with the Existing Method on the Posttest Scores on the components of Achievement in Chemistry, when the effect of the pretest scores on Achievement in Chemistry is controlled' is not accepted. Therefore it is concluded that the Computer Supported Cooperative Learning is effective than the Existing Method in improving Achievement in Chemistry among the among the Students of Standard Eight with reference to components namely, Knowledge, Process, Creativity and Application.

Major Findings of the Study

- 1. Computer Supported Cooperative Learning Strategy is effective when compared with the Existing Method in improving Achievement in Chemistry among the Students of Standard Eight.
- 2. Computer Supported Cooperative Learning is effective than the Existing Method in improving Achievement in Chemistry among the Students of Standard Eight with respect to its components namely, Knowledge, Process, Creativity and Application

Conclusion

The present investigation opens doors and paves way for further research in the area of Computer Supported Cooperative Learning and teaching of Chemistry. The findings of the study will lead to better ways of teaching, learning process and will help the students to learn in an interesting manner. Also the curriculum makers can design a new framework and design including more interesting methods to motivate the learners to learn and the researcher to undertake further studies.

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EFFECT OF VALUE DISCUSSION MODEL FOR DEVELOPING THE AFFECTIVE DOMAIN COMPETENCIES OF STUDENTS AT SECONDARY LEVEL

Dr. Manju Joseph*

Abstract

In Education is a man making process. It not only provides knowledge and skills, but also inculcates values, training of instincts, fostering right attitude and habits. The behaviour of any person is a reflection of his values. Values Education intended for modifications in the individual's behavioural patterns. The major objective of the study is to examine the effective of Value Discussion Model for developing the affective domain competencies of students at secondary level. Experimental method with pretest post-test non-equivalent group design was used for the study. The study was conducted on a sample of 97 students of which 52 under experimental group and 45 under control group. Findings revealed that Value Discussion model is more effective than the conventional lecture method for developing affective domain competencies of students at secondary level.

Key Words: Value Discussion Model, Affective Domain Competencies, Education, values, Morality, etc.

Introduction

"Education should contribute to every person's complete development – mind and body, intelligence, sensitivity, aesthetics, appreciation and spirituality" (UNESCO, 1996).

One of the basic goals of education is to produce the intellectually, mentally, spiritually, emotionally, ethically and morally sound human person. An essential component of this soundness of the human personality is the acquisition of human values and virtues. This soundness must provide the basis for a civilized, good and happy life both at individual and at societal level.

Value means literally something that has a price, something precious, dear, worth while, and hence something one is ready to suffer

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and sacrifice for a reason to love and a reason to die for, if necessary. Values give direction and firmness and bring to life the important dimension of meaning without values, one float like a piece of driftwood in swirling waters. That is why values are central to one's life. Since they are normative in all one's actions and undertakings, they bring quality to life. Through the process of valuing, the affective domain competencies of the individual is enhanced. The affective domain contains learning skills that are predominantly related to emotional (affective) processes. The learning processes in the affective domain include being open to experience, engaging in life, cultivating values, managing oneself, and developing oneself.

Background of the Study

Science based technology has bought spectacular advances in various fields of human endeavor. Ascent of market economy and the growth of consumerism has resulted in the emergence of the economic man, the material man, the man of transience. A code of morality based on what works, what profits, what is convenient or what is pleasant has emerged. Due to this, Shrinkage hascome about in the Multi-Dimensional man. His spiritual dimension, his humaneness and his linkage with fellowmen has give way to a brutishly selfish attitude, Money and what money can buy have gained the highest value for many and have become the operating principle.

In the society the future that is emerging and whose frontiers remain largely unknown it is not possible to provide a package of values to the students for use in his later life. Unlike in the past, the degree of confrontational and conflictual situations has largely increased. There is marked erosion of personal freedom brought about by mass hysteria induced by the powerful electronic pint media. To maintain one's selfhood and personal choices and decisions will become one of the major problems.

Young people need help and guidance in the development of their values and value system, today more than ever before. They are confronted by many more crises than the previous generations. They are surrounded by a bewildering array of alternatives. Educators today have a responsibility of guiding and helping students to develop a sound value system based on our cultural heritage and values, and that demands a value based educational system.

Affective domain competency

The taxonomy in the affective domain contains a large number of objectives in the literature expresses as interests, attitudes, appreciation, values, and emotional sets or biases. The descriptions of step in the taxonomy was culled from Kratwohl's Taxonomy of Affective Domain. Taxonomy means 'a set of classification principles', or 'structure', and domain simply means 'category'.

Like those within the other domains, affective domain learning objectives are organized in a hierarchy that was described in "Taxonomy of Educational Objectives: Volume 2" (Krathwohl,1973). Each level is built upon competencies in the levels below and the behaviours grow more complex as you ascend the hierarchy. The five levels in the hierarchy, from lowest to highest, are: Receiving, Responding, Valuing, Organization, and Characterization.

- 1. Receiving is being aware of or sensitive to the existence of certain ideas, material, phenomena and being willing to tolerate them.
- 2. Responding is committed in some small measure to the ideas, materials, or phenomena involved by actively responding to them.
- 3. Valuing is willing to be perceived by others as valuing certain ideas, materials, or phenomena.
- 4. Organization is to relate the value to those already held and bring into a harmonious and internally consistent philosophy.
- 5. Characterization by value or value set is to act consistently in accordance with the values he or she has internalized. Examples: To revise, To require, To be rated high in the value, To avoid, To resist, To manage, To resolve.

Krathwohl's affective domain taxonomy is perhaps the best known of any of the affective taxonomies. "The taxonomy is ordered according to the principle of internalization. Internalization refers to the process whereby a person's affect toward an object passes from a general awareness level to a point where the affect is 'internalized' and consistently guides or controls the person's behavior (Seels & Glasgow,1990)

Need and Significance of the Study

The affective domain competencies describe learning objectives that emphasize a feeling tone, an emotion, or a degree of acceptance or rejection. It is far more difficult domain to objectively analyze and assess since affective objectives vary from simple attention to selected phenomena to complex but internally consistent qualities of character and conscience. Nevertheless, much of the educative process needs to deal with assessment and measurement of students' abilities in this domain. It is often heard that certain people are "schooled" but not "educated". This simply refers to the fact that much of the processes in education today are aimed at developing the cognitive aspects of development and very little or no time is spent on the development of the affective domain.

The importance of affect in human behaviour

Affect or emotion influences one's awareness of important sensory and situational changes, and motivates action. One indication of the increasing attention paid to affective skills is the work of Lopez and Snyder (2003), as described in their presentation of measurement options for positive psychology. Another is Goleman's (1997) popularization of the finding that "emotional intelligence" is often a better predictor of individual success than general intellectual ability as measured by most IQ tests.

Individuals who learn to recognize and engage their emotions are ready to "grow" affectively so that they can respond to challenges appropriately and explore their values. At higher levels in the affective domain classification, growth involves managing oneself, managing one's performance, and making commitments. Maslow (1970) calls this "self-actualization". Peterson and Seligman (2004) have prepared an important resource for the affective domain in their comprehensive scholarly review of what they refer to as "character strengths and virtues" in the categories of wisdom and knowledge, courage, humanity, justice, temperance, and transcendence.

Yoder D Janice(1999) stated by quoting Eccles, that gender difference in attainment values is rooted in differing family, work mandates for women and men. Men can fulfill their family role through successful employment; for women, work and family are separate, and sometimes conflicting, spheres. Consistent with this reasoning, men are more likely than women to report single minded devotion to one specific role. In contrast, women seem to value competence in a wider range of activities.

Statement of the Problem

The present study aims at preparing and experimenting the instructional materials of value education content based on Value Discussion Model for developing the affective domain competencies of secondary school students. Therefore the topic selected for the study is entitled as "Effect of Vale Discussion Model for developing the Affective Domain Competencies of Students at Secondary Level."

Definition of Key terms

Value Discussion Model: it is a model based on Koblberg's cognitive theory of moral development. This model aims to enhance the state of moral reasoning of students. Side by side the model is also useful in improving the listening skills, self esteem, attitude towards school and knowledge of key concepts. Affective Domain Competencies: The Affective Domain (Krathwohl, Bloom and Masia, 1973) includes the manner in which we deal with things emotionally such as feelings, values, appreciation, enthusiasms, motivations and attitudes. The affective domain describes the way people react emotionally and their ability to feel another living thing's pain or joy. Affective domain competencies typically target the awareness and growth in attitudes, emotion and feelings.

Objective of the Study

• To compare the effect of value discussion model over the conventional lecture method for developing the affective domain competencies of students at secondary level.

Hypothesis of the study

• Affective Domain Competencies of secondary school students taught through Value Discussion Model is significantly higher than that of the students taught through conventional lecture method.

Methodology

In the present study experimental method was used to find out the effect of value discussion model or the conventional lecture method of teaching for developing the affective domain competencies. Under the experimental study non-equivalent pretest-post test group design was used.

Pre-test administered to students of experimental and control groups. The treatment given to the secondary school students under the experimental group in the form of 10 sessions of 45 minutes each

Dilemmatic Situation Analysis Test

The collected data analysed using mean, median, standard deviation, *t*-test, Anova and

administered

Statistical Procedures

Results and Discussion

investigator

Dilemmatic Situation Analysis Test to experimental and control groups after the

experiment. The investigator compared the

means of post-test scores on Economic Way

of Thinking of undergraduate students in

experimental and control groups using test

of significance of difference between means.

Table 1 presented the details of the analysis.

using value discussion model and for the control group 10 sessions of 45 minutes each was given under conventional lecture method. The post test given to all the groups after the treatment.

Sample

The study administered on a sample of 97 students of secondary school of which 52 under experimental group and 45 under control group.

Tools

- 1. Instructional materials based on Value Discussion Model
- 2. Instructional materials based on Conventional Lecture method

Table 1

Test of significance of difference between the means of post-test scores on affective domain competencies of experimental and control groups

3.

Ancova

The

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Groups	Ν	Mean	S.D	<i>t</i> - Value	Level of significance
Experimental	52	18.46	3.93	5.0	P<0.01
Control	45	13.17	4.78	5.7	1 \0.01

From Table 1, the obtained value of t (t = 5.9) is significant at .01 level of significance. The mean post-test scores of experimental group that was taught through value discussion model was found to be higher than that of the control group which was taught through conventional lecture method (M₁=18.84, M₂=13.37). It can be interpreted that taught through value discussion model is effective than conventional lecture method for enhancing affective domain competencies of students at secondary level.

The analysis of post-test scores of the students in experimental and control groups showed that there is significant difference in affective domain competencies of the two groups. But the two groups selected for the present study were non-equivalent intact classroom groups and differed slightly in the means of their pre-test scores. So it become necessary that the scores be analyzed using the technique of Analysis of Covariance (ANCOVA) for comparison by removing the difference in the initial status of the groups.

The statistical procedure given by Garrett (1981) is strictly followed. The procedure followed is given below:

- 1. Summary of Analysis of Variance
- 2. Summary of Analysis of Covariance
- 3. Calculation of Adjusted Means

Total sum of squares, mean square variances and F ratio of the post-test scores of affective domain competencies of the experimental and control groups were computed. The data and result of ANOVA are presented in Table 2

Table 2

Summary of Analysis of Variance (ANOVA) score of the post-test scores of students in experimental and control groups

Source of variation	df	SSx	SSy	MSx(Vx)	MSy(Vy)
Among means	1	0.04	721.76	0.04	721.76
Within groups	95	15.27	1840.06	0.16	19.37
Total	96	15.31	2561.83	0.20	741.13

The analysis of variance of pre-test and post-test scores of students in experimental group and control group showed in Table 2 that there is significant difference between the two groups (Fy=37.26, P<0.01). This also vouches the advantage of teaching through value discussion model over the conventional lecture method. This data was again subjected to Analysis of Covariance.

Table 3

ANCOVA of pre-test and post-test scores on affective domain competencies of experimental and control groups

Source of variation	Df	SSx	SSy	SSxy	SSyx	MSyx	SDyx	Fyx	Level of significance
Among means Within groups	1 94	0.04 15.2	721.76 1840.1	5.55 71.25	668.99 1507.6	13.46 18.74	4	41.7	P<0.01

Analysis of covariance of pretest and posttest scores of students in experimental group and control groups showed that there is significant difference between the two groups (Fyx=41.7, P<0.0.1). Table 3 implies that the experimental group excels control group in affective domain competencies.

Table 4

Consolidated Results of Analysis of Adjusted Means of the post test scores of experimental and control groups

Groups	Ν	Mx	My	Myx	t	Level of significance
Experimental	52	0.59	18.84	18.74	6 17	D <0.01
Control	45	0.54	13.37	13.46	0.47	1 <0.01

The 't' value for adjusted mean of affective domain competencies of experimental group and control group ('t'= 6.47; P<0.01) was found to be significant at 0.01 level. This reflects that the adjusted

mean affective domain competencies scores of the group taught through value discussion model differ significantly from the adjusted mean of affective domain competencies scores of group taught through conventional lecture method. The adjusted mean of affective domain competencies of the experimental group is 18.74, which is significantly higher than that of the control group, whose adjusted mean affective domain competencies is 13.46. Thus the students of the group taught through value discussion model gained significantly higher scores than those taught through conventional lecture method. This confirms the supremacy of teaching through value discussion model over the conventional lecture method. From the above discussion it can be concluded that taught through value discussion model is effective than conventional lecture method for developing affective domain competencies students at secondary school level.

Major Findings of the Study

The mean of post-test scores of experimental group that was taught through value discussion model was found to be higher than that of the control group which was taught through conventional lecture method (M_1 =18.84, M_2 =13.37).

The *t* value (t = 5.9), showed that there exists significant difference in the means of post-test scores on affective domain competencies of experimental and control groups.

The analysis of variance of the pre-test and post-test scores showed that there was no significant difference between the means of pre-test scores of the experimental groups and control groups. But there was significant difference between the means of the post test scores of the groups ($F_y = 37.26$), which is significant at .01 level of significance.

While comparing the experimental and control groups with respect to post-test scores using ANCOVA. The significant F_{yx} value ($F_{yx} = 41.7$, p < .01) indicated that the experimental and control groups differ significantly in their post-test scores after they have been adjusted for pre-test scores on affective domain competencies for the total sample. The difference in adjusted means for post-test scores of the experimental and control groups is tested for significance and is found to be significant (t = 6.47) at .01 level of significance. Since the mean scores of experimental group is higher than that of control group in affective domain competencies, it is concluded that value discussion model is more effective than conventional lecture method for developing the affective domain competencies of students at secondary level.

Educational Implications of the Study

The implications are outlined below.

From this study it is clear that the Direct Instruction of Teaching values do not have any significant effect in developing the affective domain competencies of students. While the Value Discussion Model has a significant effect upon developing the affective domain competencies of students. So prospective teachers as well as teachers in service could make use Value Discussion Model in strengthening the character of their students. The training in Value Discussion Model using different strategies can be made use for moulding various affective domain competencies of the students. Parents and teachers must encourage children to think of alternate ways in a conflicting situation. Also they must help the students to find out the positive and negative consequences of each alternative. The results of the study can be extended to the whole of India, since pupils of all states share the traditional values of India. The study showed that dilemmatic situations involving values are an indispensable part of life and everyone should strive to overcome those difficulties and arrive at a proper decision. Attitudes, values and skills cannot be developed by forcing students to memorise words, and also not by impositions. Experiences and opportunities must be given to internalise such attitudes and values, which can be sustained in the long run. The children should be given training from childhood itself to make decisions when confronting dilemmatic situations. The person trained in this model may think for a second time before committing any wrong acts. Also this model help students to think of positive long term effects that will urge them do good to others as well as society.

Conclusion

Value education is important to help everyone in improving the value system that he/she holds and put them to use. Much of the great literature of the world - from Bhagavad Gita to Socrates to Hamlet - has dwelled on value choices and moral dilemmas that are bound to occur when values are clearly defined. Values do conflict. Making value choices is not easy, but it is this very thing we must confront and make part of our lives if we are to be truly creative human beings. Value conflicts are the strongest test of character. Confucius once said " If a man carefully cultivates values in his conduct, he may still err a little but he won't be far from the standard truth". It is time to clarify these values that we speak of. It is up to each one of us to determine the society we will create by deciding upon the values we will emphasize today. Introduction of this values-based pedagogy should be accompanied by curricular reforms which were directed at providing learning support for each student, including students with special needs, for their personal and academic development. Hence, the environment created by the values-based pedagogy is conducive not only for the personal and social development of students but also their academic diligence.

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RESILIENCE, MENTAL HEALTH, AND FRUSTRATION TOLERANCE OF PROSPECTIVE TEACHERS – A CORRELATIVE STUDY

V. Girija* Dr. S. Mani**

Abstract

In The psycho-socio characteristics of Prospective teachers in Colleges of education are considered under the variables; Resilience, Mental Health, Frustration, Tolerance, etc are taken for this correlational study. All the Prospective teachers doing B.Ed. degree programme in Colleges of education in Kanchipuram and Thiruvallur Districts bordering Chennai forms the population of the study. 3 - 5% of the population chosen randomly will constitute the sample of the study. The tools used for this study are; Resilient Behaviour Scale, Mental Health Scale and Frustration Tolerance Scale, etc. The correlative analysis of the data generated reveals that the psychological characteristics Resilience, Mental health, and Frustration tolerance are interrelated as a positive significant correlation is found between Resilience and Mental health; Resilience and Frustration tolerance; Mental health and Frustration tolerance.

Key Words: Resilience, Mental Health, Frustration, Tolerance, Prospective Teachers, Education, etc.

INTRODUCTION

Researchers in the field of education have touched upon almost all sections of population functioning at the core and peripheral areas of academic and academic oriented activities. A random collection of such studies will show the larger interest of the researchers on student population ranging from kinder-garten to higher, technical, and professional education. Of which, the category of students at the entry point of a profession is likely to be the one subjected to investigation of different kinds to sustain

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** Professor and Head, Department of Educational Planning and Administration, Tamilnadu Teachers Education University, Chennai – 600 097. and promote the efficiency of the concerned professionals. In this spirit of academic oriented studies, what appears on the first line of preference are the students in the making of a teacher. The researcher hopes that the present study stated will go along with this trend to better the functioning of teachers.

Background

There is no dearth of studies on any of the psycho-socio characteristics of Prospective teachers in Colleges of education doing B.Ed degree programme in the existing literature. However, what remains uninvestigated can be identified only when the Researcher starts probing for getting some more light about the anticipated causes felt by him / her instrumental for such problem. Aided by such theoretical understanding of the causative factors, the Researcher designs the study to answer the questions not yet investigated.

A large number of studies have investigated the role of Mental health in teachers and Prospective teachers in the context of stress, stress coping, teaching competence, administrative behaviour, etc (Cefai Carmel et al, 2015; Nielsen Line et al, 2015; Askell Williams et al, 2013; David Elise et al, 2012; Joseph et al, 2014). Another factor Frustration tolerance has been studied in the context of school pertaining to the activities of teachers, teacher trainees, school administrators, etc (Li-qin Yao, 2010; Srijna Kaur Sodhi, 2009; Jerry Wilde, 2012; Ting Sheng Weng, 2015; Bosky Jadav, 2015).

Similarly, the psychological characteristic Resilience has attracted the researchers in the field of education and as such, presently it has become a subject of investigation to find answer for questions regarding the behaviour of learners, teachers, Prospective teachers and all those responsible for imparting learning to younger generation (Bowes et al, 2010; Nolan et al, 2014; Thompson, R. Bruce, 2013; Abarbanel Janice, 2009; Sprague, Caryll M, 2015). Therefore, the interactive nature of all these characteristics in giving rise to a mode of behaviour in the target group is worth studying.

Review

Rossen Eric and Cowan Cakatherine (2015) in their study entitled "Improving Mental health in schools", have stated that mental health services is good for students, their families, educators, the community, and society at large. Until the role of Mental health in learning is taken seriously, the school reform efforts, largely focusing on teacher quality and instruction will fall far short of the goal of making all students thrive in school, at home, and in life.

Marsh Robbie, J. (2016) has stated that child and adolescent Mental health is a growing concern in schools, and students suffering from Mental health conditions struggle in the school environment if their needs are not being met. He has highlighted in the study the distinctions between externalizing and internalizing behaviours related to Mental health conditions and provides teachers with an introductory guide to assist them in identifying students with Mental health issues.

Mazzer Kelly, R. and Rickwood Debra, J. (2015) have stated in their study on "Teachers' role breadth and perceived efficacy in supporting students Mental health", that teachers viewed supporting students Mental health as part of the role, though they perceived a lack of knowledge and skills in Mental health related areas. They have emphasized the need to work within a well coordinated pastoral care system. Additional trainings in Mental health and clear role demarcation within the school may assist teachers to feel better prepared for these works.

Schaubman et al (2011) in their study "Reducing teacher stress by implementing collaborative problem solving in a school setting", have stated that teachers were trained in Collaborative Problem Solving (CPS), a cognitive-behavioral model that explains challenging behaviour as the result of underlying deficits in the areas of flexibility/adaptability, and Frustration tolerance.

Portia, R (2012) in her study on "Frustration tolerance among student teachers in colleges of education in relation to their self-esteem and manifest anxiety", has reported that student teachers in colleges of education are just moderate in their Frustration tolerance as well as in its dimensions aversiveness, appraisal, and absorption. She has also reported that Frustration tolerance is significantly correlated with student teachers' manifest anxiety. Similarly, Frustration tolerance of student teachers is also stated to have significant correlation with their self-esteem. Moreover, the study has reported that both manifest anxiety and self-esteem are the significant predictors of the Frustration tolerance of student teachers.

Solomon Coralis and Barden Sejal Mehta (2016) have reported in their study "Self compassion: A mentorship framework for counselor educator mothers", that counselor educators experience high levels of stress. Mothers in academia face an additional set of emotional stressors. The authors offer a self-compassion framework for mentors to increase emotional Resilience of mothers in counselor education.

The study on "Don't sweat, the small stuff: understanding teacher Resilience at the chalk face" by Mansfiled and Caroline, F. et al (2012) have investigated how graduating and early career teachers perceive resilient teachers. Informed by survey data the study results indicates that graduating and early career teachers perceive that Resilience for teachers comprises characteristics that are multidimensional and overlapping, and the views of Resilience may develop according to teachers' career stage. To further conceptualize teacher Resilience, four possible dimensions - profession related, emotional, motivational, and social - of teacher Resilience are suggested and the aspects within these dimensions are described

On reviewing such studies on Mental health (MH), Frustration tolerance (FT), and Resilience (RE), the researcher has found that studies of this category involving Prospective teachers is somewhat rare, and involving teachers are also only in the context of students at different levels. The Researcher being a teacher educator is prompted to raise the following questions pertaining to Prospective teachers:

- Is there significant positive correlation between Resilience and Mental health, Resilience and Frustration tolerance, and Mental health and Frustration tolerance?
- Are the factors Resilience, Mental health, and Frustration tolerance capable of significantly predicting one another?

The above stated research problem being studied to answer these questions.

Objectives

- To find the significance of correlation between Resilience and Mental health; Resilience and Frustration tolerance; and Mental health and Frustration tolerance.
- To find the significance of Resilience, Mental health, and Frustration tolerance in predicting each other.

Hypotheses

- There is no significant correlation between Resilience and Mental health; Resilience and Frustration tolerance; and Mental health and Frustration tolerance of Prospective teachers.
- Resilience, Mental health, and Frustration tolerance are not significant predictors of one another.

Method

The stated problem generates quantitative data by adopting Survey method of research, suitable for correlative analysis.

Population And Sample

All the Prospective teachers doing B.Ed. degree programme in Colleges of education in Kanchipuram and Thiruvallur Districts bordering Chennai forms the population of the study.

3-5% of the population chosen randomly will constitute the sample of the study.

Research Tools

- *Resilient Behaviour Scale* prepared and validated by the Researcher.
- *Mental Health Scale* standardized by Chandrakumar, P.S and Parthiban, S. (2013).
- *Frustration Tolerance Scale* standardized by Portia, R. (2012).

Analysis of Data

Hypothesis 1

There is no significant correlation between Resilience and Mental health; Resilience and Frustration tolerance; and Mental health and Frustration tolerance of Prospective teachers.

Table 1

Correlation between resilience and mental health; resilience and frustration tolerance; and mental health and frustration tolerance of prospective teachers

Variables	Resilience	Mental Health	Frustration Tolerance
Resilience (RE)	1.00	0.48**	0.51**
Mental Health(MH)	0.48**	1.00	0.49**
Frustration Tolerance (FT)	0.51**	0.49**	1.00

**significant at 1% level

Hypothesis 2

Resilience, Mental health, and significant predictors of one Frustration tolerance are not another.

Table 2

Predictive nature of resilience, mental health, and frustration tolerance of one another

Dependent	Equation	R ² Value	Variable	Coefficient	ʻp'
variable					value
Resilience	149.620+(0.054*MH)+ (0.022*FT)	0.031	MH FT	0.32 0.41	0.00* 0.00*
Mental Health	130.073+(0.100*RE)+ (0.016*FT)	0.038	RE FT	0.29 0.44	0.00* 0.00*
Frustration Tolerance	122.142+ (0.061*RE) + (0.012*MH)	0.024	RE MH	0.38 0.12	0.00* 0.28

* significant at 0.05 level

Findings

The following are the findings deduced from statistical analysis of the data:

- The correlative analysis of the data generated reveals that the psychological characteristics Resilience, Mental health, and Frustration tolerance are interrelated as a *positive significant correlation* is found between Resilience and Mental health; Resilience and Frustration tolerance; Mental health and Frustration tolerance.
- On computing multiple regression analysis treating Resilience as the dependent, and Mental health and Frustration tolerance as independent variables, it is found that both Mental health and Frustration tolerance are *significant predictors* of Resilience.
- On treating Mental health as the dependent variable against Resilience and Frustration tolerance as independent variables, the predictive analysis showed that both Resilience and Frustration tolerance as *significant predictors* of Mental health.

However, while treating Frustration tolerance as the dependent variable, and Resilience and Mental health as independent variables, the predictive analysis revealed that only Resilience emerged as the *significant predictor* of Frustration tolerance.

Discussion and Conclusion

The clarity of understanding of the researcher about the psychological characteristics Resilience, Mental health, and Frustration tolerance is very much found in the outcome of the correlative analysis. As assumed, all the three are interrelated and capable of influencing each other. It enables the researcher to state that any change in any of these three factors will naturally have its impact on the other two characteristics.

Likewise, the predictive analysis carried out on the generated data on these three characteristics has authentically brought out the fact that the inter-correlative effects among them is almost mandatory as far as similar population is concerned. The predictability of Resilience on Mental health and Frustration tolerance is a psychologically supported finding exhibiting the innate nature of Resilience. It has been reported that Resilience is a trait to some extent with which an individual is born. Meantime, it is also treated as an ability to adapt to stressful situations, that is the tendency or the capacity on the part of the individual to roll back from the negative experiences. On the basis of this, the predictive value of Resilient with regard to Mental health is found to be a theoretically as well as experimentally established fact. Since Mental health comprises the healthiness in all the three domains - cognitive, affective, and psychomotor, it is a wholesome estimate of an individual's health manifested in trialing situations. Therefore, the predictability of Resilience over Mental health is an expected outcome of the study.

The impact of Frustration tolerance on Resilience, and Mental health has also been brought out. The mental and emotional characteristic Frustration can be overcome only by the manipulation of tolerance by the individual. It also functions as a trait, but very often it has been studied as a characteristic that can be modified by adopting suitable intervention strategies influencing cognitive and affective aspects of the individual. However, the present study has revealed that only Resilience is capable of predicting Frustration tolerance. Mental health doesn't seem to have that much of impact on Frustration tolerance so as to give a measure of Frustration tolerance in future of the concerned individuals. From this, the researcher is able to arrive at the conclusion that the characteristic Resilience is of a much desired one to provide a sound Mental health as well as a higher level Frustration tolerance to Prospective teachers to withstand the stress and strain they may experience during the course of study.

Hence, the findings of the study lead to the implications that the Prospective teachers in Colleges of education are necessarily be under the watchful eyes of teacher educators to note the manipulation of the traits Resilience, Mental health and Frustration tolerance of every individual in different circumstances so as to induct them in suitable intervention programmes or involve them in personal discussions and counselling to keep up normality with regard to these supposed to be the core characteristics of a teacher.

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AWARENESS OF ADOLESCENT GIRLS ON LEGAL PROVISIONS FOR SAFETY OF WOMEN

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Abstract

Women constitute half of the total population in India. Women being a major part of a huge population clearly reflect the need of their proper education. Education helps men and women claim their rights and realize their potential in economic, political and social arenas. Awareness on Legal Provisions for Safety of Women provides with the ability to make social and family changes and to increase their control of their own lives and decision that affect them. This makes girls to understand the significance of equality, liberty, fraternity and also exploitation if any. This study was conducted on a representative sample of 360 Adolescent Girls from aided, unaided and Government Schools belong to both Urban and Rural area in Kottayam district. The Inventory on the Awareness on Legal Provisions for Safety of Women prepared by the investigator was used for data collection. The results shows that majority of the adolescent girls have moderate awareness on Legal Provisions for Safety of Women and students of Unaided Schools are having high awareness than the Students of Aided and Government School Students.

Key Words: Legal Provisions, Safety of women, Women empowerment, Indian Penal Code, Nirbhaya, Indian initiatives, etc.

Introduction

Education is a never ending process of inner growth and development. It is holistic in character; it is just like an artist who moulds the raw materials of child into a better, pure and noble person. It makes our life progressive, cultured and civilized. In fact, education is a desired modification of human behavior. Education is the most potent mechanism for the advancement of human beings. It enlarges, enriches and improves the individual's image of the future. Education emancipates the human beings and leads to liberation from ignorance.

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Women constitute half of the total population in India. Women being a major part of a huge population clearly reflect the need of their proper education. Still women are continuously denied equal opportunities in our society. Women education in India needs enlistment. In recent years, government has realized the importance of women education and has taken some steps in this direction but a lot of works has to be done to make each and every women of India educated and eventually independent. Women's education in India has also been a major concern of both the government and civil society as educated women can play a very important role in the development of the country.

Education helps men and women claim their rights and realize their potential in economic, political and social arenas. Condition of women in India has not been historically very good. As is evident from manuscript, women did not have many rights as compared to men. Further, the women are physically weaker than men and due to this fact also, they have been exploited. Due to such continuous unfavorable treatment, the social status of women has become really bad. There is no doubt that we are in the midst of a great revolution in the history of women.

Women in our society are mostly unaware of their rights because of illiteracy and the oppressive tradition. Many evils are still practiced on women such as bigamy, child marriages are still in practices, dowry demands are still on rise, and women are still harassed for dowry. Malnutrition and illiteracy are growing at an alarming rate, rape and molestation have become daily phenomenon, and moreover, still we see women as commodity.

Legal Provisions for Safety of Women

India is a country which is always known to empower women to the maximum extent. Even our seas and oceans have been named after women. We come from a country which respects mom more than god himself. But the present day scenario where rapes and murders and abductions are on an increase tells us a different story. True there are lots of laws protecting the rights of women but they are not as effective as of now just because of the simple fact that there is no such awareness amongst people and the law is not intimating enough to scare the wrong doers. Women are the wealth of the nation and it becomes our sacred duty to protect them against all harm. There are number of initiatives for the safety of women in India, some of them are;

a) NIRBHAYA Project (2013)

It is an initiative of the Kerala state government, to guarantee security for women and children. Through the innovative scheme, the government aims to rectify atrocities against women and children and make the state women friendly where women can safely travel even at midnight. NIRBHAYA (fearless) mainly focuses on a three-point agenda - prevention, prosecution and protection. In prevention, major areas of intervention lie in sensitizing society, empowering vulnerable groups, targeting contributing factors such as alcoholism, gender discrimination and consumerism. The scheme also aims at providing proper rehabilitation facilities to help the victim to heal, recover, empower and reintegrate back into society. Prosecution is another area of intervention where strong laws have to be formulated to

ensure rigorous punishment for the culprits which will be a deterrent for such criminals. The policy focuses on child abuse, commercial sexual exploitation and sex trafficking, which constitute the worst forms of sexual violence in the state.

b) She Taxi Service (2013)

An all women taxi service launched by the Government of Kerala to ensure safe travel for women at all hours. Owned and run by women the taxis will provide safe travel options at a time when violence against women is on the rise. Single women travelling late at night no longer have to worry as these taxis are available at all hours and if any problem crops up the driver can press a panic button and seek police help. Taking a ride in the security enabled 'She Taxi' along with a confident woman driver gives one the trust to board one of these even late at night.

c) Indian Penal Code and Special Laws

To uphold the constitutional mandate, the state has enacted various legislative measures intended to ensure equal rights, to counter social discrimination and various forms of violence and atrocities and to provide support services especially for working women. Although women may be victim of any of the crime such as 'murder', 'robbery', 'cheating' etc, the crimes, which are directed specifically against women, are characterized as 'crime against women'. These are broadly classified under two categories.

d) The crimes identified under the special Laws (SLL)

Although all laws are not gender specific, the provisions of law affecting women significantly have been reviewed periodically and amendments carried out to keep pace with the emerging requirements. Some acts which have special provisions to safeguard women and their interests are:

- The Employees State Insurance Act, 1948
- The Plantation Labour Act, 1951
- The Family Courts Act, 1954
- The Special Marriage Act, 1954
- The Hindu Marriage Act, 1955
- The Hindu Succession Act, 1956 with amendment in 2005
- Immoral Traffic (Prevention) Act, 1956
- The Maternity Benefit Act, 1961 (Amended in 1995)
- Dowry Prohibition Act, 1961
- The Medical Termination of Pregnancy Act, 1971
- The Contract Labour (Regulation and Abolition) Act, 1976
- The Equal Remuneration Act, 1976
- The Prohibition of Child Marriage Act, 2006
- The Criminal Law (Amendment) Act, 1983
- The Factories (Amendment) Act, 1986
- Indecent Representation of Women (Prohibition) Act, 1986
- Commission of Sati (Prevention) Act, 1987
- The Protection of Women from Domestic Violence Act, 2005

e) The crimes identified under the Indian Penal Code (IPC)

They are; Rape (Sec. 376 IPC), Kidnapping & Abduction for different purposes (Sec. 363-373 IPC), Homicide for dowry, dowry death or their attempts

(Sec. 302/304- B IPC), Torture, both mental and physical (Sec. 498-A IPC), Molestation (Sec. 354 IPC), Sexual harassment (Sec. 509 IPC), Importation of girls (up to 21 years of age), etc.

f) Rights and Privileges

The Constitution of India not only grants equality to women but also empowers the State to adopt measures of positive discrimination in favour of women for neutralizing the cumulative socio economic. education and political disadvantages faced by them. Fundamental Rights, among others, ensure equality before the law and equal protection of law; prohibits discrimination against any citizen on grounds of religion, race, caste, sex or place of birth, and guarantee equality of opportunity to all citizens in matters relating to employment. Articles 14, 15, 15(3), 16, 39(a), 39(b), 39(c) and 42 of the Constitution are of specific importance in this regard.

g) Special Initiatives for Women

(i) National Commission for Women (NCW)

In January 1992, the Government of India set-up this statutory body with a specific mandate to study and monitor all matters relating to the constitutional and legal safeguards provided for women, review the existing legislation to suggest amendments wherever necessary, etc. The objective of the NCW is to represent the rights of women in India and to provide a voice for their issues and concerns. The subjects of their campaigns have included <u>dowry</u>, politics, religion, equal representation for women in jobs, and the exploitation of women for labour. They have also discussed police abuses against women.

(ii) Reservation for Women in Local Self -Government

The 73rd Constitutional Amendment Acts passed in 1992 by Parliament ensure onethird of the total seats for women in all elected offices in local bodies whether in rural areas or urban areas. The Amendment Act of 1992 contains provision for devolution of powers and responsibilities to the panchavats, both for the preparation of economic development plans and social justice, as well as for implementation in relation to 29 subjects listed in the eleventh schedule of the constitution. Not less than one-third of the total number of seats reserved for women. One-third of the seats reserved for SCs and STs also reserved for women. One-third offices of chairpersons at all levels reserved for women

(iii) The National Plan of Action for the Girl Child (1991-2000)

The plan of Action is to ensure survival, protection and development of the girl child with the ultimate objective of building up a better future for the girl child. The policy will be widely disseminated so as to encourage active participation of all stakeholders for achieving its goals. The National Plan of Action of the Girl Child (1991-2000) is an integrated multi-sectoral decadal Plan of Action, for ensuring survival, protection and development of children with a special gender sensitivity built for girl children and adolescent girls. The increasing evidence of female foeticide and female infanticide, has lead the Government of India to adopt this National Plan which also had been the force behind the enactment of the legislation to ban sex determination to prevent female foeticide.

(iv) National Policy for the Empowerment of Women, 2001

The goal of this policy is to bring about the advancement, development and empowerment of women. Ministry of Human Resource Development, Department of Women & Child Development, Govt. of India has circulated the National Policy for the Empowerment of Women 2001 for implementation. The policy will be widely disseminated so as to encourage active participation of all stakeholders for achieving its goals.

Need and Significance of the study

This study gives an immense help to the educational experts in framing curriculum by giving equal importance to both sexes. The text book can prepare, projecting a positive image of women. New values can be incorporated by way of identifying areas of sex bias in the textual material and giving suggestions to the teacher's discussion, debates through exercises, questions, discussions, debates etc. This study may help the policy makers to improve women's opportunities outside the home and increase their bargaining power within households by training teachers, revising school curriculum and by educating parents to prevent continuing gender stereo types, boosting female enrolment rates and thus filling the gender gap.

Awareness on Legal Provisions for Safety of Women provides with the ability to make social and family changes and to

increase their control of their own lives and decision that affect them. Awareness on Legal Provisions makes the girls to understand the significance of equality, liberty, fraternity and also exploitation if any. Every day, people are undated with decisions, big and small. Understanding how people arrive at their choices is an area of cognitive psychology that has received attention. People make decisions about many things. They may take personal decisions, career decisions etc. Ouite often, the decision making process is fairly specific to the decision being made. Some choices are simple and seen straight forward, while others are complex and require a multistep approach to make the decision

A teacher makes literally hundreds of professional decisions every day. Some decisions affect classroom management, others affect instructional management. Some types of decisions occur in frequently; others occur several times each day. When trying to make good decision a person must wait for the positives and negatives of each option, and consider all the alternatives. We can conclude that if the girls get more awareness about their provisions, they will become more powerful and they can take appropriate decisions in their life. So awareness is very important in every female student.

The present paper is entitled as a study on "Awareness of Adolescent Girls on Legal Provisions for Safety of Women".

Objectives of the Study

i. To study the awareness on Legal Provisions for Safety of Women among the adolescent girls of Kottayam District. To study the awareness on Legal Provisions for Safety of Women among the adolescent girls of Kottayam District with respect to; Locality, Level of education (Secondary & Higher Secondary) and Type of management

Hypotheses of the study

- i. There exists a significant difference between the means of scores Awareness on Legal Provisions for Safety of Women among the adolescent girls of urban and rural areas of Kottayam District.
- ii. There exists a significant difference between the means of scores Awareness on Legal Provisions for Safety of Women among the adolescent girls of Secondary and higher secondary schools of Kottayam District.
- iii. There exists a significant difference between the means of scores Awareness on Legal Provisions for Safety of Women among the adolescent girls of Aided, Government and Unaided schools of Kottayam District.

Methodology in Brief

The investigator selected the Descriptive Survey Method and carried out in three phases. The first phase includes the selection of variables and preparation of the tool used in the study. In the second phase, includes selection of sample involved in the study and collection of data. In third phase, includes analysis of data using suitable statistical procedures to draw conclusion.

The study was designed with the following variable; Legal Provisions for Safety of Women, which includes the constitutional provisions for women's safety, Indian Penal Code (IPC). The Sub variables of Legal Provisions for Safety of Women are; NIRBHAYA Project, She Taxi Project, Constitutional Provisions, Indian Penal Code (IPC), National Commission For Women, State Commission For Women, etc.

In the present study the sample taken had been stratified with regard to locale, level of education and type of management. The investigator conducted the present study on a representative sample of 360 Adolescent Girls from aided, unaided and Government Schools belong to both Urban and Rural area. For the present study, the Inventory on the Awareness on Legal Provisions for Safety of Women prepared by the investigator was used for data collection. The statistical techniques used in this study are both descriptive and inferential statistics.

Analysis and Interpretation of the Data

1. Awareness on the Legal Provisions for safety of women

The investigator classified the whole sample in the classes by using the scores obtained on the tool titled "Inventory on Awareness on Legal Provisions for Safety of Women among adolescent girls" for the Adolescent girls of Standard Nine Standard Eleven. The investigator classified the whole sample into three categories; High Awareness (>M+1ó), Moderate Awareness (between m+1ó and M-1ó) and Low Awareness (< M-1ó). Here M is the Mean and 'ó' is the Standard Deviation. The classification of the sample on the basis of scores on the Legal Provisions for safety of women is given in table 1.

Table 1

Classification of the Adolescent girls on the basis of their scores on the Awareness on Legal Provisions for Safety of Women

Level	Range	Number of Adolescent girls	Percentage
High	>79.09	50	13.88
Moderate	Between 63.03 and 79.09	250	69.44
Low	< 63.03	60	16.67
	Total	360	100

From table 1, the investigator observes that 50 Adolescent girls scored above 79.09. They constitute 13.88% of the total sample. They have high Awareness on Legal Provisions for Safety of Women. There are 60 Adolescent girls scored below 63.03 constituting 16.67% of the total sample. They have low Awareness on Legal Provisions for Safety of Women. There are 250 Adolescent girls lie between 63.03 and 79.09 constituting 69.44% of the total sample. They have moderate Awareness on Legal Provisions for Safety of Women.

From the analysis of the first objective, the investigator concludes that the majority of the Adolescent girls (69.44%) have moderate Awareness on Legal Provisions for Safety of Women. 2. Awareness on Legal Provisions for safety of women among the Adolescent girls with regard to Locale, Level of education and Type of Management

The second objective of the study is "to study the significant difference between the Means of Scores on the Awareness on Legal Provisions for Safety of Women among Adolescent girls of Kottayam District with respect to; (a) Locality, (b) Level of education (Secondary & Higher Secondary) and (c) Type of management.

The Descriptive Statistics employed for the scores on Awareness on Legal Provisions for Safety of Women among the Adolescent girls according to Locale, Level of Education and Type of Management is presented in table 2.

Table 2

011 1111 611 611	ess on Legar	e constants for sujery of	, nomen	among the	
Variable	Cate	egory	Ν	Mean	S.D
Legal	Locale	Urban Rural	201 159	71.08 71.03	8.07 8.01
for safety	Level of education	Secondary Higher secondary	198 162	71.33	7.50
or women	Type of education	Aided Government	102 119 196	70.12 70.83	7.06 8.89
		Unaided	45	74.55	4.62

Variable, Category, Number of students, Mean, and Standard Deviation of the scores on Awareness on Legal Provisions for Safety of Women among the Adolescent Girls

From table 2, investigator observes that the Means of Scores on Legal Provisions for safety of women of the Urban Area students is 71.08 and Rural Area students is 71.03. The Means of Scores on Legal Provisions for safety of women of the secondary school students is 71.33 and higher secondary school students are 70.52. The Means of Scores on Legal Provisions for safety of women of the Government school students is 70.83, Aided school students is 70.12 Unaided school students is 74.55.

3. Awareness on Legal Provisions for safety for women with respect to Locality

The objective of the study is "to study the significant difference if any, between the

Means of the Scores on the Awareness on Legal Provisions for Safety of Women among the Adolescent girls from urban and rural area". For the analysis of the data the investigator has formulated the null hypothesis (H_0) as,

 H_{o} : "There exists no significant difference between the Means of Scores on Awareness on Legal Provisions for Safety of Women among the Adolescent girls from urban and rural area".

In order to analyse the null hypothesis the investigator used two tailed t- test for large independent sample. The t value set as 1.96 at .05 level of significance with degrees of freedom 358 (N=360). The data and results are presented in table 3.

Table 3

Number, Mean, Standard Deviation, and t value of the Scores on Legal Provisions for safety of women among the Adolescent girls from urban and rural area

Variable Category N Mean SD df t value p value Remain	df tvalue nvalue Remarks	10					
	ui i value p value Remarks	df	SD	Mean	Ν	Category	Variable
Legal 201 71.08 8.07 No for safety 358 0.052 0.959 Signif of women Rural 159 71.03 8.01 .05	358 0.052 0.959 Not Significant at .05 level	358	8.07 8.01	71.08 71.03	201 159	Urban Rural	Legal provisions for safety of women

From table 3, the investigator observes that the obtained t value 0.052 is less than the tabled value 1.96 at .05 level of significance with degrees of freedom 358. Also the obtained P value 0.959 is greater than the tabled value 0.05 at .05 level of significance with degree of freedom 358. It shows that the Means of Scores on Awareness on Legal Provisions for Safety of Women among the Adolescent girls from urban and rural area not differ significantly. Thus the null hypothesis H_o : "There exists no significant difference between the Means of Scores on Awareness on Legal Provisions for Safety of Women among the Adolescent girls from urban and rural area" is accepted.

The investigator concludes that Locale has no significant influence on Awareness on Legal Provisions for Safety of Women among the adolescent girls.

4. Awareness on Legal Provisions for safety of women with respect to Level of education

The objective of the study is "to study the significant difference if any, between the Means of the Scores on Awareness on Legal Provisions for Safety of Women among the Adolescent girls from Secondary and Higher Secondary Schools". For the analysis of the data the investigator has formulated the null hypothesis (H_0) as,

 H_{o} : "There exists no significant difference between the Means of Scores on Awareness on Legal Provisions for Safety of Women among the Adolescent girls from Secondary and Higher Secondary Schools".

In order to analyze the null hypothesis the investigator used two tailed t test for large independent sample. The t value set as 1.96 and P value as 0.05 at .05 level of significance with degrees of freedom 358 (N=360). The data and results are presented in table 4.

Table 4

Number, Mean, Standard Deviation, and t value of the Scores on awareness on Legal Provisions for safety of women among the Adolescent girls from Secondary and Higher Secondary Schools

Variable	Category	Ν	Mean	SD	df	t value	p value	Remarks
Legal	Secondary	198	71.33	7.50	358	0.719	0.472	Not Significant
for safety of women	Higher Secondary	162	70.52	8.66				at .05 level

From table 4, the investigator observes that the obtained t value 0.719 is less than the tabled value 1.96 at .05 level of significance with degrees of freedom 358. Also the obtained P value 0.472 is greater than the tabled value 0.05 at .05 level of significance with degrees of freedom 358.

The investigator interprets that obtained t value 0.719 is not significant at .05 level. It shows that the Means of Scores on Awareness on Legal Provisions for Safety of Women based on Level of education do not differ significantly. Thus the null hypothesis $H_{o:}$ "There exists no significant difference between the Means of Scores on Awareness on Legal Provisions for Safety of Women among the Adolescent girls from Secondary and Higher Secondary Schools" is accepted.

The investigator concludes that Level of education has no significant influence on

Awareness on Legal Provisions for Safety of Women among the adolescent girls.

5. Awareness on Legal Provisions for Safety of Women among the Adolescent girls with regard to Type of Management

The investigator sets the objective of the study as "to study the significant difference if any, between the Means of the Scores on Awareness on Legal Provisions for Safety of Women among the Adolescent girls with regard to Type of Management". For the analysis of the data the investigator has formulated the null hypothesis (H_0) as,

 H_{o} : "There exists no significant difference between the Means of Scores on Awareness on Legal Provisions for Safety of Women among the Adolescent girls with regard to Type of Management". The investigator analyses the null hypothesis using One Way Analysis of Variance (One Way ANOVA). The value of 'F' was set as 3.02 at .05 level of significance with degrees of freedom between groups as 2 and within group as 357. The data and results are presented in table 5.

Table 5

Scores on the Awareness on Legal Provisions for Safety of Women among the Adolescent girls from government, aided and unaided schools

Variable	Type of Management	Ν	Mean	SD	
Legal provisions for	Government	119	70.12	7.06	
safety of women	Aided	196	70.83	8.89	
	Unaided	45	74.55	4.62	

From table 5, it is clear that the Means of Scores on Legal Provisions for safety of women of the Government school students is 70.12, the Means of Scores on Legal Provisions for safety of women of the Aided school students is 70.83 and the Means of Scores on Legal Provisions for safety of women of the Unaided school students is 74.55. The table 5.10 also reveals that the students of Unaided school have more Awareness on Legal Provisions for Safety of Women than that of others.

The investigator presents the Number, Category, Sum of Squares, Mean Square and F value of the Scores on Awareness on Legal Provisions for Safety of Women among the Adolescent girls with regard to Type of Management in table 6.

Table 6

The variable, Category, Sum of Squares, Mean Square and F value of the Scores on Awareness on Legal Provisions for Safety of Women among the Adolescent girls with regard to Type of Management

Variable	iable Category		df	Mean	F value	Remarks
		Squares		Square		
Legal provisions	Between Group	664.0999	2	332.050	5.26	Significant
for safety of	Within Group	22535.745	357	63.125		at .05 level
women	Total	23199	359			

From table 6, the investigator observes that the obtained 'F' value 5.26 is greater than the tabled value 3.02 at .05 level of significance with degrees of freedom 357. So the obtained 'F' value 5.26 was significant at .05 level.

The investigator interprets that the Means of Scores on Awareness on Legal Provisions for Safety of Women among the Adolescent girls with regard to Type of Management differ significantly. Thus the null hypothesis H_o: "There exists no significant difference between the Means of Scores on Awareness on Legal Provisions for Safety of Women among the Adolescent girls with regard to Type of Management" is accepted.

Discussion of the Results

From the study of distribution of the scores on Awareness on Legal Provisions for Safety of Women among the Adolescent girls it is revealed that14 % of the Adolescent girls have high awareness on the Legal Provisions for safety of women, 17% of the total sample has low awareness on the Legal Provisions for safety of women and 69% of the total sample has moderate awareness on the Legal Provisions for safety of women. This result is supported by the findings of Paul (2008) who conducted a study on "awareness on legal rights among women teachers". He found that majority of the sample has moderate awareness on legal rights.

There exists no significant difference between the Means of Scores on Awareness on Legal Provisions for Safety of Women among the Adolescent girls with regard to Locale and Level of education. This result is supported by the findings of Vijayalakshmi (2012) who conducted a study on "Human rights awareness among teacher educators". She found that there is no significant difference in Human Rights awareness of teacher educators with regard to locale.

There exists a significant difference in the Means of Scores on Legal Provisions for safety of women among the Adolescent girls with regard to Type of Management. The students of Unaided Schools are having High awareness Legal Provisions for Safety of Women than the Students of Aided and Government School Students. The investigator did not find any relevant literature to substantiate this result.

There exists no significant difference between the Means of Scores on the Decision Making Capacity among the Adolescent girls with regard to Locale, Level of education and Type of Management. This result is contradicted with the findings of Karen & Rowland (2006). They found that type of school and grade levels are the significant factors to ones decision making skill.

Major finding of the study

- Majority of the adolescent girls (69.44%) have moderate awareness on Legal Provisions for Safety of Women.
- Locale has no significant influence on awareness on Legal Provisions for Safety of Women among the adolescent girls.
- Level of education has no significant influence on awareness on Legal Provisions for Safety of Women among the adolescent girls.
- Type of Management has significant influence on awareness on Legal Provisions for Safety of Women among the adolescent girls. The students of Unaided Schools are having High awareness Legal Provisions for Safety of Women than the Students of Aided and Government School Students.

Conclusion

The awareness on Legal Provisions for Safety of Women is revealed in this study. Majority of the adolescent girls have moderate awareness on legal provisions for safety of women. So the government should conduct awareness classes in schools. Majority of the adolescent girls have moderate Decision Making Capacity so proper care should be given for the development of good Decision Making Capacity. The study point out the need of psychologists and councilors in educational institutions for giving children proper training for awareness on Legal Provisions for Safety of Women. The teachers should be good role models for spreading out the awareness on Legal Provisions for Safety of Women and girl children.

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RUBRICS: A PROLIFIC TOOL FOR SELF ASSESSMENT-AN EXPERIMENTAL STUDY

Dr. Sreevrinda Nair N*

Abstract

Effective self-assessment involves comparing our work to clear standards and generating feedback for ourselves about what we need to make improvements. Rubric is a tool that can promote learning if it is used while the learning is taking place. In order to make self-assessment to be effective, students must be able to use their selfgenerated feedback to revise and improve their work. It is an essential part of performance evaluation because it's an opportunity to assess our own achievements. This article reveals the significance of rubrics as a self-assessment tool and the way of presentation in a classroom setup. The investigator felt that the experiences provided in the classroom set up created a novelty in the learning experiences of students through giving opportunities for them to become an integral part of the evaluation process. Categorization of grading scheme made them aware of the prominence of the diversified criteria and gave an important learning experience. Framing appropriate levels of quality descriptors also equipped them to cultivate selfconfidence and self-regulated behavior. This sense of self-efficacy creates motivation to become thoughtful judges of the learning task and strived to perform and maintain a deeper engagement in the process of learning.

Key Words: Self generated Rubric, self assessment, ,self efficacy, self regulation, etc.

Introduction

Self-assessment is simply a matter of having identify strengths and weaknesses in our own work and revise them accordingly. Effective self-assessment involves comparing our work to clear standards and generating feedback for ourselves about what we need to make improvements. It is a tool that can promote learning if it is used while the learning is taking place. In order to make self-assessment to be effective, students must be able to use their self-generated feedback to revise and improve their work. After students self-assess and revise their work, they can turn it in for a grade. Self-

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assessment is not a process by which students determine their own grades. It is an essential part of performance evaluation because it's an opportunity to assess our own achievements. We can make use of many formats for self-assessment. Rubrics, checklists, conferences, discussions, reflection logs are some among them. This article reveals the significance of rubrics as a self-assessment tool and the way of presentation in a classroom setup.

Key Steps for Effective Self-Assessment

1. Clarity in Performance Targets

Clear criteria for assignments that will be graded should be made available to students before work on the task begins. The assessment criteria can be created by the teacher or co-created with students. The criteria can be arranged in a simple checklist or in a rubric.

2. Monitoring Progress Toward the Targets

This is where the actual self-assessment takes place. Once students know the performance targets, they create a draft of the assignment, compare the draft to the targets, and identify areas of strength and areas for improvement.

3. Revision

Using the self-generated feedback from step 2, students revise their draft, trying to close the gaps between their work and the targets. This step is crucial. If students don't have the chance to revise and improve their work, and possibly their grades, they are unlikely to take the self-assessment process seriously.

Objectives of the study

- 1. Make the reader understand the concept of self evaluation and how it makes the students independent learners in the learning process
- 2. Make aware the students about the criteria for assessing a learning task.
- 3. Make the reader familiar about Rubrics and the steps inculcated in framing a rubric.
- 4. Help the reader to explain the differences between teacher made assessment technique and student generated assessment modalities

Rubric - What is it?

A rubric is an assessment guide that reflects content standards and performance standards. Rubrics describe the features expected for student work to receive each of the levels/scores on the chosen scale. They are perceived as an appropriate tool for assessment for learning and for improving the teaching and learning in a school based situation (Andrade& Boulay, 2003) .Student generated Rubric (SGR) is a document that articulates the expectations from learners for a performance task by listing the criteria and describing levels of quality from grade 4 to grade 1. This type of self assessment is a part of self regulated leaning strategies and educational psychology considers that' self regulated learning' is an important perspective on academic learning. It is a proven practical model for directly involving students in the assessment process and it helps them to internalize learning goals and in turn increase their learning and motivation .It embodies self-observation, self-judgment and self reaction. According to Kay, Li and

Fekete (2007) self assessment can strengthen students' Meta cognitive skills so that they become more aware of useful learning strategies of 'learning how to learn'.

Steps to create a scoring rubric

A scoring rubric is an attempt to communicate expectations of quality around a task. In many cases, scoring rubrics are used to delineate consistent criteria for grading. Because the criteria are public, a scoring rubric allows teachers and students alike to evaluate criteria, which can be complex and subjective. It can also provide a basis for self-evaluation, reflection, and peer review. It is aimed at accurate and fair assessment, fostering understanding, and indicating a way to proceed with subsequent learning/teaching.Scoring rubrics may help students become thoughtful evaluators of their own and others' work and may reduce the amount of time teachers spend evaluating student work. The steps needed for creating a rubric are given below.

- 1. A teacher could provide sample assignments of variable quality for students to review.
- 2. List the criteria to be used in the scoring rubric and allow for discussion of what counts as quality work. Asking for student feedback during the creation of the list also allows the teacher to assess the students' overall writing experiences.
- 3. Articulate gradations of quality. These hierarchical categories should concisely describe the levels of quality (ranging from beginning to mastery).
- 4. Practice on models. Students can test the scoring rubrics on sample

assignments provided by the instructor. This practice can build students' confidence by teaching them how the instructor would use the scoring rubric on their papers.

- 5. Ask for self and peer-assessment.
- 6. Revise the work based on that feedback. Revisions should be based on the feedback they receive.
- 7. Use teacher assessment, which means using the same scoring rubric the students used to assess their work.

Advantages of using a Rubric

It provides several advantages to both instructors and students. Rubrics can reduce the time spent grading by reducing uncertainty and by allowing instructors to refer to the rubric description associated with a score rather than having to write long comments. Rubrics can help instructors get a clearer picture of the strengths and weaknesses of their class. Grading rubrics are also valuable to students. A rubric can help instructors communicate to students the specific requirements and acceptable performance standards of an assignment. When rubrics are given to students with the assignment description, they can help them monitor and assess their progress as they work toward clearly indicated goals. When assignments are scored and returned with the rubric, students can more easily recognize the strengths and weaknesses of their work and direct their efforts accordingly.

Procedure implemented

In the present study, the investigator assigned the learners to write an essay and

offer opportunities for them to self assess their work with a standard format. For this purpose, learners are directed to formulate certain frameworks for developing a set of criteria related to the theme. The deep understanding of the diversified criteria towards producing an essay accompanied by proper categorization of grading scheme. It gives students more control of their learning and makes evaluation feel less punitive and it provides an important learning experience in itself. Subsequently students create appropriate levels of quality descriptors from 1 to 3 levels. After completing the rubric, it is distributed to the students for making selfjudgments. This process motivates them to become thoughtful judges of the learning task and they strive to perform and maintain a deeper engagement in the learning process.

Theoretical constructs underlying student generated Rubrics

It states the notion that assessment is not something that is done separately and apart from instruction, it must be an integral part of the learning process. This helps to promote Meta cognition among learners. SGR enables to gain a deeper comprehension into the purpose and depth of students' own understanding and demonstrates a new level of pride in their accomplishments. A consecutive inter change between participants' opinions with regard to the development of criteria initiates identifying the benchmarks and accepting responsibility for fulfilling an assigned role. These initial discourses provide them an opportunity for description of the levels of performance needed for assessing a learning task as well as the performance indicators which leads to clear and consistent target for students. Involving students in generating and using criteria for self-assessment helps them get their minds around important elements of quality and use that knowledge to improve their own performance in learning.

The process of self evaluation which is a cornerstone of meta cognition, the investigator scaffolded the students to create a framework of an assessment tool in a rubric form which includes the criterion needed for assessing the performances of a particular learning task .Administration of this tool help the students to rates the quality of his or her work. For attaining this objective, the investigator helped the learners to create stipulated standards and benchmarks for self-assessment practices. First of all, the investigator described the performance task and its purpose to students. In the present context of language learning the investigator assigned to write an essay as a task for the students. Subsequently, learners are directed to formulate certain frameworks for developing a set of criteria and gave an analytical interpretation related to the theme. By analyzing various populated essays the teacher helped the students to demarcate the various criterion needed for framing an essay. After the discussion and formulation of appropriate levels of quality descriptors and proper categorization of grading scheme learners were directed to self assess the worth of the assigned learning task. The format of ' Student Generated Rubric' developed in the classroom set up which contains the set criteria and the quality descriptors for assessing the worthiness of are given below. an essay

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Criteria for evaluation	Highly competent	Competent	Approaching competent	Not yet
Ideas and content	Clearly states an opinion and highlights the reasons for supporting statements and opposing views are addressed.	An opinion is given. But reasons are not clear and lack the details	Opinion is given and the supporting statements are weak and inaccurate.	Opinion and supporting documents are unclear and vague.
Organization of the content	Topic has a meaningful beginning and content riched middle portion and a concluding remarks	Topic has an order and makes the readers satisfied with the way of presentation.	All the areas are not systematically organized and not able to make sense.	Not keep the order at all. lack of systematic formatting of the content material
Voice and tone	The content shows the sincerity of the writer. Every part of the content reveals the writer's thoughts and feelings	Writer shows his sincerity, but here and there shows isolated ideas having no connection or thinking output.	Self- explanation of the content is lacking in the paper.	The paper doesn't have any self feelings or cues of self thought
Wordings inculcated	Meaningful words are inculcated and shows power of words in a fruitful manner	Words are incorporated correctly ,but somewhere lacked the vividness in a greater manner	In some cases words could not help to highlight the intended meaning	Incorrect usage of words made the theme vague and unclear I almost all cases
fluency of the sentence	Shows crystal clear clarity in the usage of every	Constructions of sentences are clear.	Lack of variety in the construction of sentences and	Meaningless sentences are incorporated

A sample rubric created by students towards self evaluation of an Essay Descriptive levels

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	sentences and thereby made the meaning transparent		shows some irregularity in some cases	in unsystematic way
Rules and regulations to be followed while writing	All the rules are taken into consideration. No grammatical mistakes, clear punctuation and the like	Spelling is correct ,but some errors are made in connections with grammar part	Errors make the essay irrelevant and meaningless	Huge errors made the essay hard to read

The investigator felt that the experiences provided in the classroom set up created a novelty in the learning experiences of students through giving opportunities for them to become an integral part of the evaluation process. Student Generated Rubric (SGR)enable to gain a deeper comprehension on the ways of assessment and demonstrated a new level of pride in their accomplishments. In addition to that, it helps to demystify the process of assessment. It led the learners to become equipped to the pursuit of excellence in Meta cognition and a hike in their experience in a highly appreciable manner.

Conclusion

The conclusion derived from the analysis revealed that creation of guidelines towards the assessment practices enabled the learners to build a comprehensive outlook for judging and validating the learning outcome. Categorization of grading scheme made them aware of the prominence of the diversified criteria and gave an important learning experience. Framing appropriate levels of quality descriptors also equipped them to cultivate self-confidence and selfregulated behavior. This sense of selfefficacy creates motivation to become thoughtful judges of the learning task and strived to perform and maintain a deeper engagement in the process of learning.

Rubrics are a valuable tool for selfassessment. Because rubrics not only list the success criteria but also provide descriptions of levels of performance, students are able to use them to monitor and evaluate their progress during an assessment task or activity. Teachers make certain that students have copies of the rubric prior to commencing the assessment activity and understand the terminology used in the rubric. If necessary, they provide students with models or exemplars to illustrate relevant aspects of the activity. As they work to complete the activity, students monitor their work to ensure that it demonstrates the required skills, knowledge or understanding. They reflect on their progress and evaluate what they need to do if they wish to improve their performance. This type of assessment is a part of self-regulated leaning strategies and educational psychology considers that 'self regulated learning' is an important perspective on academic learning.

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PATTERNED VARIATIONS IN READING OF STANDARD VIII STUDENTS: A CASE STUDY

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Abstract

This is a qualitative research study conducted to find out the extent of variations possible in learners as a result of providing constant and consistent reading instruction. The significance of reading as a language skill is somehow ignored by our teachers and students alike. Case study was adopted as the method for this study. Rating scale and teacher transcript were used as the tools. The sample comprised of just five students. The study brought to light the need for providing a correct model of reading and it also shows the reading potential of students which can be bolstered by a systematic process of reading instruction. The need for motivation and interesting methods of teaching reading have also been found to be augmenting the reading habits of students. Students need to get a guidance for improving their level of performance in all aspects of learning including reading.

Key Words: Patterned variations, reading, case study.

"Reading maketh a full man, conference a ready man and writing an exact man", says Francis Bacon in his essay 'of studies'. This statement well illustrates the importance of reading in our life. To be able to read well is one of the valuable achievements of a person. It would be difficult to find any activity whether in school, at home, in business, in the professions or even in recreational pursuits that does not require at least some reading ability. In an ever widening world, often reading is an indispensable channel of communication. The prominent role of reading in the lives of people can be seen from the fact that what they do is made possible by tremendous quantities of reading matter in the form of magazines, newspapers, books, directories, pamphlets and catalogues. We read to obtain information, to buy economically, to arrive at a decision, to derive pleasure and for many other reasons.

Reading is the recognition of printed or written symbols which serve as stimuli to the recall of meanings built up through the reader's past experience. The reading

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process involves both the acquisition of meanings intended by the writer and the reader's own contributions in the form of interpretation, evaluation and reflection of these meanings.

Need and Significance of the Study

Of the four language skills, reading though a receptive skill is of utmost importance. But in our classrooms the teaching methodology does not give proper stress on the development of the reading ability of students. Teachers do not adopt interesting methods of teaching reading and there is no detection and rectification of the difficulties faced by the children while reading. Reading disabilities are sometimes the result of unrecognized, predisposing conditions within the child, but for the most part, they are caused by elements of the child's environment at home, at play, and in school. Without appropriate guidance or without proper instruction given at the right time, the child will fail to acquire the skills needed to develop normal reading ability.

Statement of the Problem

The study is entitled as, "Patterned variations in reading of Std. VIII students: A case study".

Definition of key terms

Patterned variations: The modifications in reading shown by students as a result of receiving remedial reading.

Reading: One of the four language skills.

Std. VIII Students: Students aged 12+who are in the last year of elementary education.

Case study

It is a form of qualitative analysis involving careful and complete observation of a person, a situation or an institution.

Objectives of the study

- 1. To assess the nature and extent of the reading ability of students.
- 2. To assess the reading potential of students.
- 3. To analyse the patterned variations in reading.
- 4. To analyse the student responses with regard to their reading.
- 5. To offer remedial reading for fostering sound reading habits.

Scope and Limitations

The study is conducted in the present scenario where teaching and evaluation of the language skills especially reading skillis not givenany importance. The study intends to assess the nature and extent of reading ability and reading potential of the students. It also aims at throwing a flood of light on the importance of providing remedial reading in fostering sound reading habits. It also attempts to study the patterned variations and student responses with regard to their reading. Rating scale and teacher transcript are used as the tools for collecting data.

The study will help in finding out the difficulties students face while reading and also provide teachers, certain ways of solving the difficulties. As it is a minor study the investigator has taken only 5 students as the sample and they are studied for just 5 days.

Method adopted for the study

Case study

The case study is a valuable method for obtaining a comprehensive picture of individuality. It is a form of qualitative analysis involving the careful observation of a person, a situation or an institution. It is a longitudinal approach showing development over a period of time. Case studies resemble survey studies as they are concerned with the present status of phenomena. The case study method has come to be recognized as a useful mode of investigation into the casual relationships of complex educational phenomena. For the present study five cases were selected and the investigator gathered many kinds of data in a systematic manner from many sources concerning the pupil and the particular problem.

Triangulation is the application and several combination of research methodologies in the study of the same phenomenon. It can be employed in both quantitative and qualitative studies and is an appropriate strategy for finding the credibility of qualitative analyses. Sociologists prefer this method as they can hope to overcome the weakness or intrinsic biases of the problems that come from single method, single observer, and single theory studies by combining multiple observers, theories, methods and empirical materials. There are four basic types of triangulation such as data triangulation, investigator triangulation, theory triangulation and methodological triangulation.

Tool

The tools used for the study are the rating scale and teacher transcript. Rating

scale is probably the most commonly used instrument for making appraisals. Rating implies the ability to estimate the status of a phenomenon or trait- that is to make a subjective judgement of its status.

It is a term which gives the expression of opinion or judgement regarding a situation or object. Opinions are expressed on a scale of values. The rating scale for the present study consists of a three point scale ranging from 'To a great extent' to 'To some extent' and 'not at all' with the assigned values as 1,2and 3. The students were observed and the investigator rated them on the basis of their performance. Two separate rating scales were used to rate the different aspects in reading prose and poetry.

Teacher transcript is also used as a tool in this study. It is the transcription done by the teacher or investigator by observing the student at the time of the activity itself. It is an exhaustive transcription which includes all the aspects of the observed activity.

Sample

The sample selected for the study consists of five students of Std. VIII ofPeet Memorial High School, Mavelikkara.

Analysis and Interpretation of Data

The data is analysed under the following heads:

Analysis & Interpretation of nature & extent of the reading ability of students

For the assessment of the nature and extent of the reading ability of the students, they were assigned tasks and observed for 5 consecutive days. The students were given some books for selection and were asked to read it for half an hour. Their responses were observed and were asked to narrate what they have read.

The first student Anu. B. Krishnan indulged in simple interpretive reading. But he showed regular improvement. Though looking uninterested, diffident and very slow reader on the first day, he became confident and interested and developed some speed in reading towards the end. He also learnt to narrate what he had read. He showed some interest for literary reading later.

The second student Gayathri D was observed as an analytical reader. She did interpretive reading. She showed interest in reading for information rather than entertainment. She very well narrated the matter she read with her own interpretations. Later she developed some taste for literary and critical reading.

The third student Vishak Vijayan was very quick in selecting books and was showing interest for literary reading. Vishak was able to speak fluently about the matter that he had read.

The fourth student Bissymol Babu was looking very reluctant and was just turning over the pages and looking at pictures. She couldn't read anything substantial and was also a failure when asked to recollect and reproduce orally the matter she had read. But she was showing rapid improvement and was doing interpretive reading which actually changed later to literary reading.

The fifth student Liya Jacob showed interest in reading and indulged in literary reading. It was clear that she had improved her reading speed towards the end. She concentrated on the matter while reading and was interested in attractive pictures given in the books. An interesting feature about this student was that she always selected value based books.

Analysis and Interpretation of the Reading Potential of Students

Based on the tasks mentioned under objective I, the investigator made an attempt at assessing the reading potential of the students. With the help of an unstructured questionnaire, the investigator collected details about the reading habits of these students. The investigator also interviewed the friends, parents and teachers of these children.

From the data collected, it is seen that the first student Anu.B. Krishnan, has a very low reading potential. The major reason was understood to be lack of motivation. He is academically also backward but has a taste for languages. He has improved his reading ability quickly and can achieve high reading potential by right kind of guidance and motivation.

The second student Gayathri possessed an average reading potential. She is more oriented and has not much extrinsic motivation for reading. But the high level intrinsic motivation makes her read, study and attain better academic record.

It is seen that the third student Vishak Vijayan has high reading potential in him. He has genuine interest for reading and reads voraciously. He also takes part in co-curricular and extracurricular activities though he doesn't possess a high academic record.

The fourth student BissymolBabu has a low reading potential. She reads for the sake

of it which shows her lack of interest for reading. She lacks motivation from parents and teachers. Her academic record is low and is understood to be lacking interest in co- curricular and extracurricularactivities. She wants to improve her ability and potential and looks forward to the right kind of guidance from teachers for the same.

The fifth student LiyaJacob has an average reading potential. She gets enough motivation from parents but require more of it from teachers and friends. She has an average academic record also. She wants to improve her reading potential as she improved her reading ability.

Analysis and Interpretation of the Patterned Variations in Reading

On the basis of the tasks given, the patterned variations in reading shown by the five students have been evaluated. The students were given a prose passage and a poem for reading and their behaviour was observed and recorded. They were givenbooks for selection and asked to read for half an hour. They were also assigned certain tasks to be done at home. Definitely the students showed variations as a result of the extra efforts put in by them.

The first student Anu B Krishnan was found to be a very poor reader in the beginning. But later he improved himself. He committed less number of mistakes in pronunciation and increased his reading speed. He also took care to take correct posture and also held the book correctly in his hands without folding. He started selecting books quickly and also read the matter seriously to narrate it afterwards. He was observed as doing his home assignment correctly after two days. Gayathri D while reading the prose passage committed only slight mistakes in pronunciation. She developed ability for literary reading. She was able to read without any mistakes in pronunciation towards the end. She also read poems somewhat rhythmically. She improved her reading speed very much. She gained confidence enough to respond in English as a result of the exposure to the language and also the extrinsic motivation. She was found to be very regular in doing the home assignment.

The third student Vishak Vijayan, a good reader, improved his reading speed and also developed ability for critical and analytical reading. He was able to read prose passages and poems with minimum mistakes. He was able to read prose passages and poems with minimum mistakes. He was also found to be inquisitive and used to respond in English.

The fourth student Bissymol Babu, diffident and uninterested, seriously wanted to improve her reading ability which she did by way of her sustained hard work in the classroom and at home. The varied types of games and tasks given were creating enthusiasm in the minds of all the students especially so in the case of Bissymol.

The fifth student LiyaJacob took part actively in the games and tasks gradually and was showing rapid improvement. She had increased her reading speed and also developed a sense of rhythm in reading. She reduced her mistakes in pronunciation to almost nil.

Analysis and Interpretation of the Student Responses with regard to their Reading

After having given a prose passage and a poem for loud reading, the responses were recorded on a rating scale. The student responses were then analysed on the basis of this data.

Anu B. Krishnan was found not able to read the passage with comprehension. But towards the laterstage of the study he read the passage with comprehension and also pronounced sounds and words correctly to some extent. He was able to grasp the meanings of words in context but was not able to read in thoughtful units. Though his intonation was not correct, he was taking correct posture and was holding the book correctly to some extent. Anu became confident and interested to some extent but was not able to read with correct speed. Regarding the reading of poem, he recited rhythmically after a lot of training given by the investigator. He grasped the background and the theme of the poem and the poetic significance of words to some extent. He was not at all able to quote parallel lines or collect similar poems and was not using correct gestures while reading.

Gayathri D read the passage with comprehension and grasped the meanings of words to some extent. She pronounced the sounds and words correctly to a great extent. To some extent she intonated properly and also read in thoughtful units. She took correct posture whilereading and held the book correctly to a great extent. Gayathriwas looking interested and did the reading confidently. Her speed of readingimproved and to some extent she read with correct speed.

The poem was also recited rhythmically to some extent by Gayathri. She grasped the background and theme of the poem and comprehended the poetic significance of words to some extent. To a great extent she got the tone of the poet and was able to locate the figures of speech and rhyming words used in the poem. To some extent, she quoted parallel lines and collected similar poems. She pronounced words correctly and held the book correctly to a great extent. She was not at all able to use correct gestures while reading.

The third student Vishak read the passage with comprehension and was not able to pronounce sounds and words correctly to some extent. He was also seen as intonating properly and grasping the meanings of words to some extent. He was not able to read in thoughtful units. While reading he held the book correctly and took correct posture to some extent. It can be said that he was looking interested and did the reading confidently to a great extent. Vishak also read with correct speed.

In the reciting of the poem, his performance was, more or less the same. He recited the poem rhythmically grasping the background and the theme of the poem to some extent. He also comprehended the poetic significance of words and the tone of the poet to some extent. Like the other two students Anu and Gayathri, he was also able to locate the figure of speech and rhyming words in the poem to a great extent. It was also seen that he quoted parallel lines and collected similar poems and pronounced the words correctly to some extent. He was holding the book correctly to a great extent and used correct gestures to some extent.

Bissymol Babu read the passage with comprehension grasping the meanings of the words and correctly pronounced sounds and words to some extent. She was not able to read in thoughtful hints or intonate properly. She was seen holding the book correctly and taking correct posture to a great extent. She was looking interested and confident to some extent but was not at all able to read the passage with correct speed.

She was reciting the poem rhythmically grasping the background and the theme of the poem to some extent. Though she was not able to get the tone of the poet she comprehended the poetic significance to some extent. She located the figures of speech and rhyming words to a great extent. She was seen as not at all able to quote parallel lines or collect similar poems. The pronunciation of words was also correct to some extent. Though she was holding the book correctly to a great extent, she was not at all using correct gestures while reciting the poem.

Liya, the fifth student read the passage with comprehension, grasping the meanings of words to some extent but was able to pronounce sounds and words correctly to a great extent. It was possible for her to read in thoughtful units and was intonating properly to some extent. Though she was not holding the book correctly always, she kept correct posture while reading. She was looking interested and was able to read confidently to a great extent. She was not able to read with correct speed. The poem was not always recited rhythmically by Liya. To some extent she grasped the background and theme of the poem and the poetic significance of words and was rated as grasping the tone of the poet and locating the figures of speech and rhyming words to a great extent. She was able to quote parallel lines and was able to collect similar poems to some extent. Liya could pronounce words correctly and held book correctly to a great extent. Gestures were not used correctly while reciting the poem.

Analysis and Interpretation of Remedial Reading provided for fostering sound Reading Habits

Throughout the period of the study, the investigator made efforts at providing remedial strategies for improving the reading habits of students. Apart from the suggestions and corrections during the class, the teacher transcript was of great help to the investigator.

In the beginning almost all the students were seen committing mistakes in pronunciation. They gradually started pronouncing many words correctly. Towards the end, the mistakes in pronunciation were reduced to nil.

They were instructed to hold the book correctly without folding it and also asked to take correct posture while reading.

They were given some training in how to intonate properly and how to pause while reading which will ultimately lead to correct speed in reading. They were also given instructions to refer the dictionary when they met with a difficult word. In the reading of the poem also investigator made a sincere attempt at making them read poems rhythmically. The students were taught to locate rhyming words and figures of speech in poems. It was also attempted to guide them in quoting parallel lines and also to help them collect similar poems. The students were given training in silent reading and rapid silent reading. They were also instructed to take interest in all types of reading. All the students were suggested supplementary reading and advanced reading and for both lists of suggested books were also given.

Conclusions and Suggestions

- 1. The students are found to be indulging in one or the other type of reading and are not always able to speak correctly about what they have read. The exposure to different types of books and different techniques of reading are useful in developing the reading ability of students.
- 2. The students differ in their potential from low to high level. The exposure of language, introduction to new and varied types of books and many types of reading assignments will go a long way in improving the reading potential of the students.
- 3. The students usually commit many types of mistakes in reading like wrong pronunciation, poor reading comprehension, slow reading rate etc. Some students also lack confidence and interest in reading. By giving the students ample exposure to language, by making them listen to a good model of reading and also by adopting interesting strategies of teaching reading the students definitely improve their style of reading.

- 4. Often students are not able to gasp the background and the theme of the poem, are unable to comprehend the poetic significance of words and quote parallel lines etc. The teacher's reading should be a correct model for the students to imitate and the methods of teaching should be interesting.
- 5. In schools there are students with reading difficulty and it is not properly diagnosed and rectified by teachers. An effective remedial reading programme is much useful in removing or minimizing the difficulties encountered by students in reading.

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LEARNING STYLES OF SECONDARY SCHOOL STUDENTS

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Abstract

Kolb's Learning theory (1974) pointed out four distinct learning Styles, which are based on a four-stage learning cycle. Kolb's explains that each individual naturally prefer a certain single different learning style. The social environment, educational experiences, or the basic cognitive structure of the individual .are the various factors that influence a person's Learning Style. The four different Learning Style by Kolb are Assimilating, Accommodating, Converging and Diverging Learning Styles. Teacher should assess the Learning Style of their students and adapt their classroom methods to best fit each student's Learning Style. The study aims to finds out the Learning Styles of Secondary School Students and whether the Learning Styles are significantly differ in Gender and Medium of instruction. Survey method selected for the study and Kolb's Learning Style Inventory is used for collecting data. Major findings of the study are: Students with accommodative Learning Style is comparatively higher in number in relation with other Learning Style group. Assimilative Learning Style is less preferred by Secondary School students. The Learning Style categories are not significantly differing in Medium of instruction and Gender. Educators should ensure that activities are designed and carried out in ways that offer each learner the chance to engage in the manner that suits them best. Also, individuals can be helped to learn more effectively by the identification of their lesser preferred learning styles and the strengthening of these through the application of the experiential learning cycle.

Key Words: Learning Styles, Assimilating, Accommodating, Converging and Diverging.

Introduction

"Learning is the process whereby knowledge is created through the transformation of experience" (Kolb, 1984, p. 38). Learning requires more than moving, feeling, hearing, seeing and touching to learn.

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We integrate what we sense and think with what we feel and how we behave. Active learning results in problem solving skills, synthesis, analysis, process skills than learning by hearing, reading or watching. The learner should move from passivity to activity. Students should learn to extent their experiences and see how to apply what they have done to new instances.

Learning styles are different forms of learning. They include educational methods, particular to an individual that are presumed to allow that individual to learn best. Most people favour some particular method for processing information. Based on this concept the idea of individualized learning styles originated in the 1970s. Teacher should assess the learning styles of their students and adapt their classroom methods to best fit each students learning styles. The learning styles were aligned to stages in the cycle and named Activist, Reflector, Theorist and pragmatist. David Kolb published his learning styles model in 1984 from which he developed his learning style inventory.

Kolb's experiential learning theory works on two levels: a four stage cycle of learning and four separate learning styles. Much of Kolb's theory is concerned with the learner's internal cognitive processes. Kolb states that learning involves the acquisition of abstract concepts that can be applied flexibly in a range of situations.

The Kolb Learning Style Inventory differs from other tests of learning style and personality used in education by being based on a comprehensive theory of learning and development. Experiential learning theory (ELT) draws on the work of prominent twentieth century scholars who gave experience a central role in their theories of human learning and development-notably John Dewey, Kurt Lewin, Jean Piaget, William James, Carl Jung, Paulo Freire, Carl Rogers, and others-to develop a holistic model of the experiential learning process and a multi-linear model of adult development. The theory, described in detail in *Experiential Learning: Experience as the Source of Learning and Development* (Kolb 1984), is built on six propositions that are,

- 1. Learning is best conceived as a process, not in terms of outcomes. To improve learning in higher education, the primary focus should be on engaging students in a process that best enhances their learning —a process that includes feedback on the effectiveness of their learning efforts. "...education must be conceived as a continuing reconstruction of experience: ... the process and goal of education are one and the same thing." (Dewey 1897: 79)
- 2. All learning is relearning. Learning is best facilitated by a process that draws out the students' beliefs and ideas about a topic so that they can be examined, tested, and integrated with new, more refined ideas.
- 3. Learning requires the resolution of conflicts between dialectically opposed modes of adaptation to the world. Conflict, differences, and disagreement are what drive the learning process. In the process of learning, one is called upon to move back and forth between opposing modes of reflection and action and feeling and thinking.

- 4. Learning is a holistic process of adaptation to the world. It is not just the result of cognition but involves the integrated functioning of the total person—thinking, feeling, perceiving, and behaving.
- 5. Learning results from synergetic transactions between the person and the environment. In Piaget's terms, learning occurs through equilibration of the dialectic processes of assimilating new experiences into existing concepts and accommodating existing concepts to new experience.
- 6. Learning is the process of creating knowledge. ELT proposes a constructivist theory of learning whereby social knowledge is created and recreated in the personal knowledge of the learner. This stands in contrast to the "transmission" model on which much current educational practice is based, where pre-existing fixed ideas are transmitted to the learner.

Kolb's experiential learning style theory is typically represented by a four stage learning cycle in which the learner 'touches the entire base

- 1. Concrete Experience-the learning process ideally begins with a person carrying out a specific action, undergoing a concrete experience, relating to people, and sensitivity to feelings and people, and then seeing the effect of the action in the situation.
- 2. Reflective Observation-Following the concrete experience the second step is to understand the effect of the action through reflective observation before making a judgement.

- **3.** Abstract Conceptualisation-It implies the ability to see connection between the actions and the effect. Making rules and generalisation about what to do in different situation.
- 4. Active Experimentation- Once the general principle is understood the last step is its active experimentation or action in a new situation.

Effective learning is seen when a person progresses through a cycle of four stages: of (1) having a concrete experience followed by (2) observation of and reflection on that experience which leads to (3) the formation of abstract concepts (analysis) and generalizations (conclusions) which are then (4) used to test hypothesis in future situations, resulting in new experiences.

Learning Styles

Kolb's Learning theory (1974) pointed out four distinct learning Styles, which are based on a four-stage learning cycle. Kolb's explains that each individual naturally prefer a certain single different learning style. The social environment, educational experiences, or the basic cognitive structure of the individual .are the various factors that influence a person's Learning Style. The four different Learning Style by Kolb are Assimilating, Accommodating, Converging and Diverging Learning Styles.

Whatever influences the choice of style, the learning style preference itself is actually the product of two pairs of variables, or two separate 'choices' that we make, which Kolb presented as lines of axis, each with 'conflicting' modes at either end:A typical presentation of Kolb's two continuums is that the east-west axis is called the **Processing** **Continuum** and the north-south axis is called the **Perception Continuum**.

Kolb believed that we cannot perform both variables on a single axis at the same time (e.g. think and feel). Our learning style is a product of these two choice decisions. It's often easier to see the construction of Kolb's learning styles in terms of a twoby-two matrix. Each learning style represents a combination of two preferred styles. The diagram also highlights Kolb's terminology for the four learning styles; diverging, assimilating, and converging, accommodating:

	Doing (Active	Watching (Reflective
Feeling (Concrete	Accommodating	Diverging
Experience - CE) Thinking (Abstract	(CE/AE) Converging	(CE/RO) Assimilating
Conceptualization - AC)	(AC/AE)	(AC/RO)

Significance of the Study

Knowing a person's (and your own) learning style enables learning to be orientated according to the preferred method. That said, everyone responds to and needs the stimulus of all types of learning styles to one extent or another - it's a matter of using emphasis that fits best with the given situation and a person's learning style preferences.

Here are brief descriptions of the four Kolb learning styles:

Diverging (feeling and watching - CE/RO)

These people are able to look at things from different perspectives. They are sensitive. They prefer to watch rather than do, tending to gather information and use imagination to solve problems. They are best at viewing concrete situations at several different viewpoints.

Kolb called this style 'diverging' because these people perform better in situations that require ideas-generation, for example, brainstorming. People with a diverging learning style have broad cultural interests and like to gather information. They are interested in people, tend to be imaginative and emotional, and tend to be strong in the arts. People with the diverging style prefer to work in groups, to listen with an open mind and to receive personal feedback.

Assimilating (watching and thinking - AC/RO)

The Assimilating learning preference is for a concise, logical approach. Ideas and concepts are more important than people. These people require good clear explanation rather than practical opportunity. They excel at understanding wide-ranging information and organizing it in a clear logical format.

People with an assimilating learning style are less focused on people and more interested in ideas and abstract concepts. People with this style are more attracted to logically sound theories than approaches based on practical value.

This learning style is important for effectiveness in information and science careers. In formal learning situations, people with this style prefer readings, lectures, exploring analytical models, and having time to think things through. Converging (doing and thinking - AC/AE)

People with a converging learning style can solve problems and will use their learning to find solutions to practical issues. They prefer technical tasks, and are less concerned with people and interpersonal aspects.

People with a converging learning style are best at finding practical uses for ideas and theories. They can solve problems and make decisions by finding solutions to questions and problems.

People with a converging learning style are more attracted to technical tasks and problems than social or interpersonal issues. A converging learning style enables specialist and technology abilities. People with a converging style like to experiment with new ideas, to simulate, and to work with practical applications.

Accommodating (doing and feeling - CE/AE)

The Accommodating learning style is 'hands-on', and relies on intuition rather than logic. These people use other people's analysis, and prefer to take a practical, experiential approach. They are attracted to new challenges and experiences, and to carrying out plans.

They commonly act on 'gut' instinct rather than logical analysis. People with an accommodating learning style will tend to rely on others for information than carry out their own analysis. This learning style is prevalent within the general population.

For making any change, modification and transformation in the field of education

we should start from the school education. To give training in any methodology based on the learning styles we have to start the initial preparation and training among students

Both Kolb's (1984) learning stages and cycle could be used by teachers to critically evaluate the learning provision typically available to students, and to develop more appropriate learning opportunities.

Educators should ensure that activities are designed and carried out in ways that offer each learner the chance to engage in the manner that suits them best. Also, individuals can be helped to learn more effectively by the identification of their lesser preferred learning styles and the strengthening of these through the application of the experiential learning cycle.

Ideally, activities and material should be developed in ways that draw on abilities from each stage of the experiential learning cycle and take the students through the whole process in sequence.

Objectives of the Study

- 1. To find out the different learning Styles of Secondary School Students.
- 3. To find out the significance difference if any between the Learning Styles among
- A. Boys and Girls of Secondary school students
- B. English medium and Malayalam Medium of Secondary school students

Hypotheses of the Study

The hypotheses formulated for the present study were:

- i. Secondary school students belongs to different Learning Styles
- ii. There is significant difference in Learning styles among Boys and Girls of Secondary school students.
- iii. There is significant difference in Learning Styles among English medium and Malayalam medium students

Methodology

Normative survey method is adopted for the conduct of present study. The present study consists of sample of 79 Secondary school students randomly selected out of the total population in Kottayam District. Selection of sample is according to gender and medium of instruction.

Kolb's Learning Style Inventory (KLSI) by was administered to selected samples. It differs from other test of learning style and personally used in education based on comprehensive theory of experiential learning.

The KLSI consists of 12 questions about the ways in which one learns best. Each question has four answers, which are to be ranked by individuals in terms of best fit on scale of 1-4(4 being best). Responses are organized in to bipolar concepts. Concrete Experience-CE vs Reflective Observation-(RO) and Abstract Conceptualisation-(AC) vsActive Experimentation-(AE). The numbers are summarized to give scores for CE,AC, RO and AE. To determine the learning style, take one's score for the learning phases, AC,CE,AE and RO listed on the second sheet of the questionnaire and subtract to get two combination scores.

Statistical Techniques Used

The following statistical techniques were employed for the analysis of data collection.

- 1. Mean
- 2. Standard deviation
- 3. 't' -test

Analysis and Interpretation

Table 1

The Percentage of Learning Styles of Secondary School Students

Learning Style	Percentage
Assimilation	20
Diverging	23.5
Converging	26.08
Accomodation	29.78
TOTAL	100

The first objective was to find out the Learning Style of Secondary School Students. 20% of students have Assimilative Learning Style, 23.5% of students having Divergent Learning Style, 26.08% of students having Convergent Learning Style. Accommodative Learning Style is the most preferred and Assimilative Learning Style is the least preferred.. Educators should ensure that activities are designed and carried out in ways that offer each learner the chance to engage in the manner that suits them best. Also, individuals can be helped to learn more effectively by the identification of their lesser preferred learning styles and the strengthening of these through the application of the experiential learning cycle.

Table 2

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Variables	Category	Mean	S.D	t-value	Remarks
Assimilation	Male	1.66	.493	1.65	Not significant at .05
	Female	1.33	.492		level
Diverging	Male	1.45	.522	0.70	Not significant at .05
	Female	1.62	.51		level
Converging	Male	1.53	.51	.50	Not significant at .05
	Female	1.40	.54		level
Accomodation	Male	1.71	.48	.17	Not significant at .05
	Female	1.66	.51		level

Table3

Learning Styles of Secondary School Students with respect to medium of instruction

Variables	Medium	Mean	S.D	t-value	Remarks
Assimilation	English	1.33	.49	.31	Not Significant at .05
	Malayalam	1.32	.49		level
Diverging	English	1.63	.50	.56	Not significant at .05
	Malayalam	1.50	.53		level
Converging	English	1.76	.43	1.69	Not significant at .05
	Malayalam	2.00	.41		level
Accommodation	English	1.57	.53	23	Not significant at .05
	Malayalam	1.50	.54		level

From the table it is clear that there is no significant difference between Learning Styles of Secondary School Students with respect to Gender and Medium of instruction. Out of 79 students 29.78% of students have Accommodative learning style and 20% of students show Assimilative learning style other Learning Styles like Converging and Diverging styles are in between these two. Learning Styles not depend on the Medium of instruction and Gender difference The accommodative learning style shows that the secondary school students are good at actively engaging with the world and actually doing things instead of merely reading about and studying them. So the teacher should be very conscious while selecting the teaching method and materials. All students in the class does not belongs to any one type of Learning Style hence the teacher should apply variety of learning experience to satisfy all type of learners.

Major findings of the study are: Students with accommodative Learning Style is comparatively higher in number in relation with other Learning Style group. Assimilative Learning Style is less preferred by Secondary School students. The Learning Style categories are not significantly differing in Medium of instruction and Gender.

Conclusion

Teaching students through their individual learning style is better. Teacher

should assess the Learning Style of their students and adapt their classroom methods to best fit each student's Learning Style. The learning Styles were directly aligned to the stages in the cycle and named Activist, Reflector, Theorist and Pragmatist. These are assumed to be acquired preferences that are adaptable, either at will or through changed circumstances, rather than being fixed personality characteristics.

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SOCIAL INTELLIGENCE AND AGGRESSION AMONG ADOLESCENT STUDENTS

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Abstract

Present study was conducted to find out the relationship between aggression and social intelligence among adolescents. Survey method was adopted for the study. The population of the study is the adolescent students of Kottayam district. The investigator has used stratified random sampling technique for selecting the sample. The sample consists of 1000 adolescent students studying in standard VIII and standard IX. Among them 372 are boys and 628 are girls. The correlation analysis reveals that there is significant relationship between social intelligence and aggression among adolescent students.

Key Words: Social Intelligence, Aggression, Adolescents, Social development, Education, etc.

Introduction

Education is natural and harmonious development of man's innate powers. It includes physical, mental and social development. Social development is one of the most important aim of education and a significant aspect of growth and development of personality of an individual. The adolescents have to be so educated that they should also build up their life in a way that they may successfully bring about the welfare of the society. Human being can achieve success by using his intelligence, but he may not have a great relationship with other members of the society. This kind of persons appears to be successful, but they are not aware of depriving themselves from some better successes and amenities because they have ignored or have not used usefully their social intelligence and social skills. Those whom we consider conversing and connecting with them a menace or a problematic task are more able to encourage themselves to do their works appropriately and to succeed in their works; it is possible that these persons may not have a pleasant social relation with others and also they may have poor communicative skills .Furthermore, the environment surrounding their visible successes is a dull and lifeless environment.

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Sometimes human being, especially the teenagers, resorts to the aggressive behaviors in order to secure himself from the unsafe situations. Generally speaking, there are many factors that can cause aggressive behaviors;

Social intelligence

Mainly Social intelligence is comprised of two words 'Social' and 'Intelligence'. 'Social' is related to society as a system of common life. It is the society that makes an individual cultured. Almost everything that he learns is acquired from the society only the capacity of learning is his own. It is in society that his ego develops whereby he is called a human being. Social intelligence describes the capacity to effectively navigate complex social relationship and environment.

According to Thorndike, 1920 Social intelligence is the ability to understand and manage men and women, boys and girls, to act wisely in human relations; it is equivalent to interpersonal intelligence, it deals with knowledge of social situations and more properly called social cognition. Thorndike (1920) believed there are three kinds of intelligence: Social intelligence, Concrete intelligence, Abstract intelligence.

Social intelligence is a mental ability distinct from abstract and mechanical intelligence (Thorndike, 1920). Social Intelligence provides a highly accessible and comprehensive model for describing, assessing, and developing social intelligence at a personal level. Dealing with social situations depends upon the person's ability. It is the capacity o know oneself and to know others is an inalienable a part of the human conditions as is the capacity to know objects or sounds, and it deserves to be investigated no less than these other "less charged" forms. It is difficult to lead a successful life in a society without social intelligence. Social intelligence helps an individual to develop healthy co-existence with other people. Socially intelligent people behave tactfully and prosper in life. Social intelligence is useful in solving the problems of social life and help in tackling various social tasks. Thus social intelligence is an important developmental aspect of education.

Aggression

Bernstein, Penner, Clarke-Stewart & Roy (2006:721) defined aggression as "an act that is intended to cause harm to another person". In his own definition, Colman (2003:18) defined aggression as "a behaviour whose primary or sole purpose or function is to injure physically or psychologically". Myers (2005) in his own submission defined aggression as "physical or verbal behaviour intended to hurt someone". Also Brehm, Kassin & Fein (2005:398) saw aggression as behaviour that is intended to harm another individual. Based on the above definitions. aggression refers to any act that hurts, harms or destroys which must be intended or deliberate. This presupposes that injuring someone accidentally or for the person's wellbeing cannot be construed as aggressive behaviour. Words uttered to offend someone amount to aggressive behaviour. It should be noted that extreme acts of aggression are referred to as violence. It is intended to hurt and kill. Aggression is a broader concept, involving efforts to harm or control another person; it is manifested quite early in childhood; it then typically undergoes changes in its forms and functions. Aggression is a

bio-psycho-social phenomenon having biological, cognitive, psychodynamic, and social causes. Aggression is an action that inflicts pain, anxiety, or distress on another and is in the service of hostile motive or of the emotion of anger.

During adolescence the aggression takes on different manifestations and functions. Adolescents' self- absorption and prickly sensitivity to the views of others means that acceptance by a peer group takes on increased acceptance, as does their own position within the status hierarchy of that group. In addition adolescence is a period when transitions to larger, more complex social environments take place. These settings may involve greater diversity and competition than the adolescent previously encountered.

Aggression is just one of the several known categories of conduct problems. The behavioural cases related to aggression can be divided into two broad groups- physical, and verbal.

Verbal aggression includes acts such as insulting with bad language, displaying anger, threatening, swearing, and being sarcastic, all in order to cause emotional and psychological pain. Physical aggression aims to cause bodily damage including bullying, destructing, vandalism, fighting, and gangsterism.

Schools not only supplement the normative pattern of the familial training but also reinforce the content and mode of training. First experience of the child with aggression is clearly from his home. Similar experiences are there in schools. If a child receives punishment from parents and teachers to instill discipline he learns that aggression is a desired characteristic to achieve goals.

Significance of the study

The prime importance of today is the capacity of individual to interact effectively with his environment. During developmental phase adolescents experience a few barriers of flexibility and range in norms, laws, societal customs and rights allow them to argue for such variations – an act of aggression, but at the same time learn to control emotions in order to find out acceptable solutions. In daily life situations, it is being observed that adolescents are deviating from common accepted social and constitutional norms showing aggressive behavior in most of the situations. Aggressive behaviour among students is closely related with social intelligence of them. Many studies have proven the relationship between these two variables. Social intelligence is the ability to understand the society, and its heartbeats for fruitful and effective involvement in the circulatory process of society like oxygen in human body. The other side of social intelligence is not empty. It is comprised of confusions, chaos, problems, aggressions, and agitations. Aggression is one of the opposites of social intelligence and is any form of behaviour directed towards the goal of harming or injuring another living one who is motivated to avoid such treatments.

Observations in daily life situations indicate that many a time adolescents are deviating from social and constitutional norms, finding hard to develop conducive interpersonal relations, having low patience to accept the changes and showing aggressive behavior to achieve objectives in most of the situations. Many adolescents understand the consequences of aggression and channelize it to lead a balanced life in social set up. This made curious to study aggression in relation to social intelligence among adolescents in order to suggest educationists and policy makers to develop social skills for better future citizens.

However, those having middle cognitive intelligence along with high social intelligence can have a good relationship with others, feel sympathy and understand the others. Therefore, friendly relations can improve our behaviors and can be effective in evaluating the culture. Aggression in different forms would have negative effects even if it is used in reacting against the students' aggressive behaviors. Generally speaking, based on what was mentioned above, it can be said there could be a relationship between the social intelligence and aggressive behaviors. Therefore, this study aimed at investigating the relationship between the social intelligence and aggression among the high school students in Kottayam

Statement of the problem

Social Intelligence and Aggression among adolescent students at Kottayam

Objectives

- 1. To find out the level of social intelligence of Adolescent students at Kottayam
- 2. To find out whether there is any significant difference between adolescent boys and adolescent girls in their social intelligence.
- 3. To find out whether there is any significant relationship between social intelligence and aggression among adolescent students.

Hypotheses

- 1. There is any significant difference between adolescent boys and adolescent girls in their social intelligence.
- 2. There is any significant relationship between social intelligence and aggression among adolescent students.

Method

The method adopted in the present study is survey.

Population

The population of the study is the adolescent students of Kottayam district. The investigator has used stratified random sampling technique for selecting the sample. The sample consists of 1000 adolescent students studying in standard VIII and standard IX. Among them 372 are boys and 628 are girls.

Tools

The following tools are used for data collection.

The first tool was a *Social Intelligence Scale* constructed and validated by Chandha & Ganesan (2004). The scale measures five dimensions of intelligence namely patience, co-operativeness, confidence, sensitivity, recognition of social environment, tactfulness, sense of humour, and memory. Aggression scale constructed and validated by. Mathur & Bhatnagar (2004). Aggression scale is a five point rating scale, consists of 55 items.

Statistical techniques used

The major statistical techniques used were Mean, Median, Standard Deviation, 't', and Product moment Correlation

Analysis of data

Table 1

Dimension	Low		Moderate		High	
	No	%	No	%	No	%
Social intelligence	176	17.6	688	68.8	136	13.6

It is inferred from the table 1 that 17.6% of the students have low, 68.8% of them have moderate and 13.6% of them have high level

of social intelligence. This shows that majority of students having moderate social intelligence.

Table 2

Difference between adolescent boys and girls in their social intelligence

Dimensions	girls	5	boys	С	alculated	Remarks level of
Mean	SD	Mean	SD	ť Value	;	significance
Social Intelligence	25.53	6.52	24.56	6.90	2.21	0.05

It is inferred from the table 2 that there is significant difference between

at boys and girls in their social en intelligence.

Table 3

Relationship between social intelligence and aggression among adolescent students

Dimension	Σx^2	Σy^2	Σxy	Calculated 'γ'Value	Remarks	level of Signi.	
Social Intelligence	8313	841109	108687	12256540	3087455	0.077	0.05

(For 998 degrees of freedom at 5% level of significance, the table value of ' γ ' is 0.062)

It is inferred from the table 3 that there is significant relationship between social intelligence and aggression among adolescent students

Findings and Conclusion

Findings reveal that only 13.6% of adolescent students have high level of social intelligence. While comparing the mean scores of adolescent boys and girls in their social intelligence, girls (mean = 25.53) are better than boys (mean = 24.56) in their social intelligence. The correlation analysis reveals

that there is significant relationship between social intelligence and aggression among adolescent students.

Education Implications

Results of this study may help the educators and policy makers to harness aggression and develop social intelligence skills among adolescents for wellbeing of society through organizing youth festivals and participating in cultural activities, participation of student unions in various programme in institutions, seminars, conferences and workshops on social norms, interpersonal relations, awareness on law and regulations of the country, etc The results also show that the more students' social intelligence is, the less their aggressive behaviors become. Therefore, to decrease the students' aggressive behaviors, their social intelligence should be improved. Of the measures that can improve the social intelligence, appropriate curriculum planning, holding in-service education programs, and educational workshops for the principals can be mentioned. Furthermore, there are many methods to control and to prevent the aggressive behaviors; this study emphasizes on the educational and psychological methods including improving a pleasant relationship between the parents and children, training how to control oneself, changing cognitive constructs, and preventing the children from watching aggressive movies

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