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Attitude towards and Problems faced by Teachers in the Implementation of Active Learning Methodology (ALM) in Schools at the Upper Primary Level in Dharmapuri District

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Abstract

The present study investigates the attitude towards and problems faced by teachers in the implementation of ALM in schools at the upper primary level in Dharmapuri district. Survey method is used to select a sample of 315 teachers from the upper primary level in Dharmapuri district. Attitude of Teachers towards Implementation of ALM Scale and Problems faced by Teachers in Implementation of ALM Scale developed for the present investigation are used to assess the attitude and the problems faced by teachers in implementing ALM. The results of the statistical analyses show a significant negative correlation between attitude towards implementation of ALM and problems faced by teachers in implementation of ALM. No significant difference is observed between the male and female teachers in government and government-aided schools at the upper primary level in Dharmapuri District pertaining to attitude towards and problems faced implementation of ALM.

Keywords: *attitude, problems and implementation of ALM*

1. Introduction

School is structured around transacting subjects, in the way knowledge has been organized through history. The Industrial Revolution made many things possible. It also brought in mass schooling that was built around the dominant view of the time that students are like empty vessels and knowledge has to be poured into them. Elementary education is the first stage of the school education ladder, which sets the foundation for the rest of school education and all higher education. Our education system, therefore must build in students the essential skills and knowledge base that will enable cognitive growth and development through using these essential skills. These basic skills are reading, writing, listening, communication, mathematical skills and observation skills (NCF-2005). One major aspect of high quality in education is attainment of high learning outcomes in the various academic skills and knowledge and when such education is able to include students with disabilities as much as students without disabilities irrespective of their socio-economic and cultural backgrounds.

2. Need for the Present Study

Active Learning Methodology is a new concept in school education initiated by Rajya Shiksha Kendra Chennai, (Tamil Nadu) in India. ALM is different from other traditional methodologies. It is a very friendly and joyful methodology. While traditional methodologies are teacher-centered, ALM is student-cantered, in which the teachers are facilitators, guiding students for better learning. As this methodology is very innovative and useful to teachers and students, a need is felt to investigate the attitude towards and the problems faced by teachers in implementation of ALM at the upper primary level, especially in a semi-rural area like Dharmapuri District, where both the infrastructural and instructional facilities are less compared to schools in urban areas.

3. Review of Related Literature

For any researcher, it need not be emphasized that the review of studies related to his area of investigation is essential, but providing information of what has already been done in the field gives direction to the present study. The purpose of the investigation is to study the attitude towards and problems faced by teachers in the implementation of ALM in schools at the upper primary level in Dharmapuri district. Studies reviewed pertaining to the present study have been compiled and presented below.

3.1 Studies Related to Activity Learning Methodology (ALM)

In the state of Tamil Nadu, the active learning method of instruction in elementary schools was introduced as an innovation by the Sarva Shiksha Abhiyan of Tamil Nadu to improve the quality of teaching in government schools and promote universal education in India. It began as a pilot project with 13 Chennai corporation schools in 2003, was extended to 264 corporation schools in Chennai in 2004 and then upscaled to nearly 40,000 government schools in the state of Tamil Nadu. Numerous studies have shown evidence to support active learning, given adequate prior instruction. The studies have been compiled and presented hereunder.

In *Does Active Learning Work? A Review of the Research*, Prince (2004) found a broad but uneven support for the core elements of active, collaborative, cooperative and problem-based learning in engineering education.

Michael (2006), in reviewing the applicability of active learning to physiology education, found a growing body of research within specific scientific teaching communities that supports and validates the new approaches to teaching that have been adopted.

Similarly, Hoellwarth and Moelter (2011) showed that when instructors switched their Physics classes from traditional instruction to active learning, student learning improved 38 percent points, from around 12% to over 50%, as measured by the Force Concept Inventory, which has now become the standard measure of student learning in Physics courses.

In a 2012 report titled *Engage to Excel*, the United States President's Council of Advisors on Science and Technology (PCAST) described how improved teaching methods, including engaging students in active learning, would increase student retention and improve performance in STEM courses. One study described in the report found students in traditional lecture courses to be twice as likely to leave engineering and three times as likely to drop out of college entirely compared with students taught using active learning techniques. In another cited study, students in a Physics class taught by active learning methods learned twice as much as those taught in a traditional class, as measured by test results.

3.2 Critique

The above discussed studies indicated that the active learning method of instruction in elementary schools was introduced as an innovative method in Tamil Nadu to improve the quality of teaching in government and government aided schools. Studies pertaining to the attitude towards and problems faced by teachers in the implementation of ALM in schools at the upper primary level in Dharmapuri district based on gender difference are not clear and necessitated further investigation.

4. Statement of the Problem

The review done from the available relevant literature, relating to the present research area, led the investigator to conceptualize the problem in an attempt to fill in the lacunae found.

Thus the problem is stated as here under:

Attitude towards and Problems faced by Teachers in Implementation of ALM in Schools at the Upper Primary Level in Dharmapuri District

5. Hypothesis Formulated

(i) There is a significant relationship between the select variables of teachers in government and government-aided schools at the upper primary level in Dharmapuri District.

(ii) There is no significant difference in attitude towards implementation of ALM of teachers in government and government-aided schools at the upper primary level in Dharmapuri District.

(iii) There is no significant difference in problems faced by teachers in implementation of ALM in government and government-aided schools at the upper primary level in Dharmapuri District.

(iv) There is no significant difference in attitude towards implementation of ALM of male and female teachers in government and government-aided schools at the upper primary level in Dharmapuri District.

(v) There is no significant difference in problems faced in implementation of ALM of male and female teachers in government and government-aided schools at the upper primary level in Dharmapuri District.

6. Method of Investigation

As the method of investigation is designed on the basis of the problem, objectives and hypotheses formulated, it warrants a psychometrically sound design, procedure, tools and execution. The investigation is planned to verify hypotheses using suitable tools and appropriate statistics for data processing.

6.1 Research Design

The present study deals with the analyses of attitude towards implementation of ALM and problems faced by teachers in implementation of ALM in different categories of schools, namely, government and government-aided schools at the upper primary level in Dharmapuri District.

6.2 Sample selected

The target population for the present study will be teachers in different categories of schools at the upper primary level in Dharmapuri District.

From the target population a sample 315 teachers were chosen from the upper primary level in Dharmapuri District studying in different categories of schools, namely, government and government-aided schools by random sampling technique.

The sample chosen comprised of 163 teachers from government and 152 teachers from government-aided schools at the upper primary level in Dharmapuri District.

6.3 Tools used for the study

The research tools used for the present study to analyze the attitude towards teaching and performance of teachers in different systems of education at the secondary level are Attitude of Teachers towards Implementation of ALM Scale and Problems faced by Teachers in Implementation of ALM Scale. Due to non-availability of suitable tools, both the tools were developed and standardized by the researchers.

7. Analyses of Data

The results of the analyses of data collected are compiled and presented in tables below:

Table-1: Analysis of Relationship between the Selected Variables of Teachers in Different Categories of Schools at the Upper Primary Level in Dharmapuri District

	Attitude towards Implementation of ALM	Problems faced by Teachers in Implementation of ALM
Attitude towards Implementation of ALM	1	-0.15**
Problems faced by Teachers in Implementation of ALM	X	1

**Significant at 0.01 level

From the above table (Table-1), it is evident that the variables of the present study, namely attitude towards implementation of ALM and problems faced by teachers in implementation of ALM are significantly negatively correlated with each other.

Table-2: Statistical Analysis of Means of Attitude towards Implementation of ALM of Teachers in Government and Government-aided Schools at the Upper Primary Level at the Dharmapuri District

Variable	Sample Size	Mean	SD	SEM	SED	CR
Government	163	46.36	6.76	0.53	0.77	22.56**
Government-aided	152	63.73	6.90	0.56		

**Significant at 0.01 level
SD-Standard Deviation
SEM-Standard Error of Mean
SED-Standard Error of Difference
CR-Critical Ratio

From the above table (Table-2) it is evident that the government-aided school teachers are significantly better in their attitude towards implementation of ALM compared to the government-aided school teachers at the upper primary level in Dharmapuri District.

Table-2a: Statistical Analysis of Means of Problems faced by Teachers in Implementation of ALM in Government and Government-aided Schools at the Upper Primary Level in Dharmapuri District

Variable	Sample Size	Mean	SD	SEM	SED	CR
Government	163	53.10	7.05	0.55	0.78	3.36**
Government-aided	152	50.48	6.75	0.55		

**Significant at 0.01 level
SD-Standard Deviation
SEM-Standard Error of Mean
SED-Standard Error of Difference
CR-Critical Ratio

From the above table (Table- 2a) it is evident that the government school teachers face more problems in implementation of ALM at the upper primary level in Dharmapuri District compared to teachers in government-aided school teachers.

Table-2b: Statistical Analysis of Means of Attitude towards Implementation of ALM of Male and Female Teachers in Government Schools at the Upper Primary Level in Dharmapuri District

Variable	Sample Size	Mean	SD	SEM	SED	CR
Male Teachers	82	41.60	3.89	0.43	0.74	12.84**
Female Teachers	81	51.19	5.50	0.61		

**significant at 0.01 level
SD-Standard Deviation
SEM-Standard Error of Mean
SED-Standard Error of Difference
CR-Critical Ratio

From the above table (Table-2b) the female teachers possess significantly better attitude towards implementation of ALM when compared to the male teachers in government schools at the upper primary level in Dharmapuri District.

Table-2c: Statistical Analysis of Means of Attitude towards Implementation of ALM of Male and Female Teachers in Government-aided Schools at the Upper Primary Level in Dharmapuri District

Variable	Sample Size	Mean	SD	SEM	SED	CR
Male Teachers	70	58.69	4.85	0.58	0.83	11.25**
Female Teachers	82	68.03	5.29	0.58		

**Significant at 0.01 level
SD-Standard Deviation
SEM-Standard Error of Mean
SED-Standard Error of Difference
CR-Critical Ratio

From the above table (Table- 2c) it is evident that the female teachers are significantly better in their attitude towards implementation of ALM in government-aided schools at the upper primary level in Dharmapuri District.

Table-3a: Statistical Analysis of Means of Problems faced by Teachers in Implementation of ALM of Male and Female Teachers in Government Schools at the Upper Primary Level in Dharmapuri District

Variable	Sample Size	Mean	SD	SEM	SED	CR
Male Teachers	82	53.08	7.87	0.87	1.11	0.03^{NS}
Female Teachers	81	53.12	6.16	0.69		

NS-Not Significant
SD-Standard Deviation
SEM-Standard Error of Mean
SED-Standard Error of Difference
CR-Critical Ratio

From the above table (Table- 3a) there is no significant difference among male and female teachers in the problems faced by them in implementation of ALM in government schools at the upper primary level in Dharmapuri District.

Table-3b: Statistical Analysis of Means of Problems faced by Teachers in Implementation of ALM of Male and Female Teachers in Government-aided Schools at the Upper Primary Level in Dharmapuri District

Variable	Sample Size	Mean	SD	SEM	SED	CR
Male Teachers	70	50.33	6.26	0.74	1.10	0.26^{NS}
Female Teachers	82	50.62	7.17	0.79		

NS-Not Significant
SD-Standard Deviation
SEM-Standard Error of Mean
SED-Standard Error of Difference
CR-Critical Ratio

From the above table (Table- 3b) there is no significant difference among male and female teachers in the problems faced by them in implementation of ALM in government-aided schools at the upper primary level in Dharmapuri District.

8. Discussion

Active learning refers to techniques where students do more than simply listen to a lecture. Students are engaged in activities that includes discovering, processing and application of information. It is important to remember, however, that lecture does have its place and that active learning cannot happen without content or objectives. Education once was thought of as a process of transmission, but now research has made abundantly clear that the quality of teaching and learning improves when students have enough opportunities to clarify, question, apply and consolidate new knowledge. However, research also indicates that by reorganizing or adapting innovative ways of presenting material to students, instructors can create an environment in which knowledge retention can be significantly increased and of course, it can be achieved only with the cooperation of the students themselves. One of best methods is to implement Active Learning Methodology that involves students directly and actively in the learning process.

In the present investigation, looking into the attitude towards and problems faced by teachers in implementation of ALM at the upper primary level in schools in Dharmapuri District, a significant negative correlation is observed between attitude and problems faced by teachers in implementation of ALM. When the attitude of teachers is better they are observed to face fewer problems in the implementation of ALM. On comparing the teachers in government and government-aided schools, it is observed that the teachers in government-aided schools are significantly better in their attitude towards implementation of ALM and so face less problems in implementation of ALM compared to teachers in government schools. The government-aided schools though receive salary aid from the State Government, unlike the government schools are governed by a private management. As a result their infrastructural and instructional facilities are relatively better than that is available in government schools, leading to better development of attitude and as result face less problems in implementation of ALM.

On comparing the male and female teachers in government and government-aided schools, it is seen that though the female teachers have better attitude towards implementation of ALM, there is no significant difference in the problems faced in the implementation of ALM between male and female teachers. Though the female teachers are better in their attitude compared to the male teachers in the same schools, as the female teachers unlike the male teachers are more serious in their teaching profession, face the same level of problems as the male teachers in the implementation of ALM.

9. Conclusion

The teacher's own role in children's cognition could be enhanced if they assume a more active role in relation to the process of knowledge construction in which children are engaged. A child constructs her/his knowledge while engaged in the process of learning. Allowing children to ask questions that require them to relate what they are learning in school to things happening outside, encouraging children to answer in their own words and from their own experiences, rather than simply memorizing and getting answers right in just one way — all these are small but important steps in helping children develop their understanding. 'Intelligent guessing' must be encouraged as a valid pedagogic tool. Quite often, children have an idea arising from their everyday experiences or because of their exposure to the media, but they are not quite ready to articulate it in ways that a teacher might appreciate. It is in this 'zone' between what you know and what you almost know that new knowledge is constructed. Such knowledge often takes the form of skills, which are cultivated outside the school, at home or in the community. All such forms of knowledge and skills must be respected. A sensitive and informed teacher is aware of this and is able to engage children through well-chosen tasks and questions, so that they are able to realize their developmental potential. This becomes possible only when the teacher develops the right attitude towards ALM and as a result perceives less problems when ALM is implemented in classroom teaching, especially in rural areas where only very minimal facilities are available.

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