



UTILIZATION OF SCIENCE LABORATORY RESOURCES AMONG THE FACULTY MEMBERS AND B.ED STUDENTS – A STUDY IN SRI BHARATHI COLLEGE OF EDUCATION

Dr.S.Malathi*

Asst.Professor in Education, Department of Education, DDE, ALU, Karaikkudi.
*Corresponding Author

R.Rohini

Research scholar, Department of Education, Alagappa University, Karaikkudi.

ABSTRACT This paper analyzed the utilization of science laboratory resources among the faculty members and B.Ed students – A study in Sri Bharathi College of Education, Kaikkurichi, Pudukkottai District, Tamilnadu State. The sample consisted of 8 Faculty members and 80 B.Ed Students. Survey method was used to collect the data. Mean, SD, 't' test and percentage analysis were used to analyse the data. It was found that the Physical science and Biological science faculty members and B.Ed students utilize the laboratory resources are more and effectively used.

KEYWORDS : Science laboratory resources, Utilization, Science teacher educators, Science B.Ed students.

INTRODUCTION

We live in a world of science and technology; throughout our lives human beings encounter issues and problems that have their root in science. Science and technology have become critical factor of economic and social development. Through science resource of nature have been well utilized and transformed into meaningful resource for a better living in the world.

Adequacy of laboratory facilities and students academic performance, the teaching and learning experience centre on the extent of adequacy of laboratory facilities in science B.Ed students and the teacher educators effectiveness in the use of laboratory resources with the aim of facilitation and providing meaningful learning experiences in the learners. Hager (1974), based on the instructional theory of learning interaction, hypothesized that the laboratory had a direct effect on both student attitudes and academic performance. It is generally believed that constant practice leads proficiency in what the learner learns during classroom instruction; hence, the dictum 'practice make perfect'. This has given rise to the expectation that laboratory resources should be adequately provided to B.Ed colleges for effective teaching and learning.

NEED & SIGNIFICANCE OF THE STUDY

The study will give immense help to good number of B.Ed colleges. This is because it encourages them to develop and equip science laboratories in B.Ed colleges having seen its needs and innovative ideas applied for effective and efficient laboratory service in the B.Ed colleges. This study will help the teacher educators to demand for the improvement of the laboratories, so that teacher educators and B.Ed students can benefit from it.

The teaching and learning enhanced only the proper use of laboratory. Hence the investigation undertook a case study to know how far the faculty members and B.Ed students use their laboratory resources.

OBJECTIVE OF THE STUDY

- To find out the level of utilization of laboratory resources among the faculty members and B.Ed students in terms of background variables.
- To find out the significant difference between the faculty members and B.Ed students in the utilization of laboratory resources.

HYPOTHESES OF THE STUDY

- There is no significant difference between physical science faculty members and physical science B.Ed students in the utilization of laboratory resources.
- There is no significant difference between biological science faculty members and biological science B.Ed students in the utilization of laboratory resources.

RESEARCH METHOD

This study adopted a descriptive survey method. In this study the data was collected from the physical science & biological science faculty members and physical science & biological science B.Ed students with the view of ascertaining utilization of laboratory resources in Sri Bharathi College of Education, Kaikkurichi at Pudukkottai District.

RESEARCH TOOL

The investigator constructed a research tool on utilization of science laboratory resources among the faculty members and B.Ed students. In this study the investigator used questionnaire to collect data from the respondents. The questionnaire consisting of two sections. Section 'A' was used to collect the demographic characteristics of the respondents, section 'B' consisted ten items on a 3-point Likert type responses rating scale Low, Moderate and High.

SAMPLE AND SAMPLING TECHNIQUE

In this study, the investigator selected 80 B.Ed students of whom 50 from physical science and 30 from biological science and 8 faculty members of whom 4 from physical science and 4 from biological science. Cluster sampling technique was adopted for collecting data.

STATISTICAL TECHNIQUE

The investigator used the statistical techniques as Mean, SD, 't' test and percentage analysis were used to analyze the data.

RESULT AND DISCUSSION

Table 1: Distribution of percentage scores indicating the level of utilization of laboratory resources among the faculty members and B.Ed students in terms of background variables.

Variable	Sub variable	Low		Moderate		High	
		N	P	N	P	N	P
Status	Faculty members	---	0%	2	25%	6	75%
	B.Ed students	10	12.5%	20	25%	50	62.5%
Designation	Physical Science Teacher Educators	---	0%	1	25%	3	75%
	Bio-Science Teacher Educators	---	0%	1	25%	3	75%
	Physical Science B.Ed Students	10	20%	15	30%	25	50%
	Bio-Science B.Ed students	05	16.7 %	05	16.7 %	20	66.6 %

It is inferred from the above table, 75 percentage of the faculty members responded the high use of laboratory resources while 25 percentage of the faculty members used the laboratory resources moderately.

This study reveals that 62.5 percentage of B.Ed students responded the high use of laboratory resources while 25 percentage of B.Ed students moderately used the laboratory resources and 12.5 percentage of B.Ed students responded low uses of laboratory resources.

Based on the designation, the result reveals that 75 percentage of physical science teacher educators responded high uses of laboratory resources while 25 percentage of physical science teacher educators used the laboratory resources moderately. The result also reveals that 75 percentage of biological science teacher educators responded high uses of laboratory resources while 25 percentage used moderately.

This study inferred that 50 percentage of physical science B.Ed students highly used the laboratory resources while 30 percentage used

moderately and 20 percentage responded low uses of laboratory resources.

This study also reveals that 66.6 percentage of biological science B.Ed students responded high uses of laboratory resources while 16.7 percentage used moderately and 16.7 percentage responded low uses of laboratory resources.

Table 2: Distribution of significant difference between physical science faculty members and physical science B.Ed students on utilization of laboratory resources.

Category	N	Mean	SD	't' Value	Significance level 0.05
Physical science faculty members	4	27.5	4.6	1.2	Not significant
Physical science B.Ed students	50	14.8	3.2		

Table -2 shows that at 52df; 0.05 level of significance, the calculated' value is 1.2

which is less than the table value of 2.01.

Therefore, it is inferred that there is no significant difference found in the utilization of laboratory resources among the physical science faculty members and physical science B.Ed students.

Hence it is concluded that both physical science faculty members and physical science B.Ed students are much similar in respect of utilization of laboratory resources in Sri Bharathi College of education.

Table-3 Distribution of significant difference between Biological science faculty members and Biological science B.Ed students on utilization of laboratory resources.

Category	N	Mean	SD	't' Value	Significance level 0.05
Biological science faculty members	4	25.5	4.2	1.23	Not significant
Biological science B.Ed students	30	17.3	3.8		

Table-3 shows that at 32df; 0.05 level of significance, the calculated't' value is 1.23

which is less than the table value of 2.01.

Therefore, it is inferred that there is no significant difference found in the utilization of laboratory resources among the Bio-science faculty members and Bio-science B.Ed students.

Hence it is concluded that both Bio-science faculty members and Bio-science B.Ed students are much similar in respect of utilization of laboratory resources in Sri Bharathi College of education.

RECOMMENDATIONS:

The following recommendations are made to improve the utilization of laboratory resources in the B.Ed colleges:

1. Recruitment of qualified, dedicated lab assistant to work in B.Ed college to address the problem of shortage of trained manpower in order to reduce the burden of the teacher educators and make them more effective on their job.
2. Re-orientation of Science teacher educators on the need to increase B.Ed student's exposure to hands-on Experience.
3. Professional commitment and dedication on the part of Science teacher Educators to incorporate class demonstration in to their teaching.
4. The frequency of Scheduled practical sessions needs to be increased especially for B.Ed colleges with enough qualified personnel.

CONCLUSION:

Science Laboratories as an aspect of education which provides learning resources and good environment that are flexible, dynamic and also being capable of responding to a wide variety of educational

needs. This study was specially meant to find out the utilization of laboratory resources in B.Ed colleges of Sri Bharathi College of Education at Pudukkottai Districts. Findings of this study showed that, the Physical science and Biological science faculty members and B.Ed students are utilized the laboratory resources effectively. This study also revealed that, there is no significant difference between faculty members and B.Ed students in the utilization of laboratory resources.

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