



Availability and Utilization of Community Resources in Teaching Science At Secondary Level in Thoothukudi District

KEYWORDS

availability, utilization, community resources, teaching science

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ABSTRACT *The main objective of the study was to find out the level of awareness of availability of community resources and its utilization in teaching science at secondary level. The investigator has adopted survey method. Population consists of all secondary level science teachers and students of IX and X standard in Thoothukudi District. The sample constitutes 100 science teachers, 715 students of IX and X standard from 30 schools. Four tools developed by the investigators were used to study the variables. The major findings are sixty-eight percent of secondary level science teachers have adequate level of awareness of availability of community resources. Sixteen percent of secondary level science teachers have high level of utilization of community resources in teaching science. There is significant difference among Government, Aided, and Matriculation school science teachers in their (i) awareness of availability of community resources and (ii) utilization of community resources in teaching science.*

Introduction

Man is born in the community and he has to pass his life in the community. An individual can learn very little by himself. The individual and community both react upon each other and have a mutual relationship. It is an account of this factor that this interaction becomes an important topic of study in the domain of education. Further schools are the mirrors of the community. It should not be isolated from world around. The community by no means is away from learning environments. There are many resources available in neighborhood called Community Resources.

Community Resources

When we teach science, we use resource materials of the environment, which consist of family, house, school, neighborhood, earth, sky, and body. These materials as well as some people we can get from the community can help us a lot to teach science. Therefore, our community is full of People, Materials, and Places. These are our community resources.

Utilization of Community Resources

A teacher should identify and utilize the resources available in his environment. This state of affairs definitely necessitates a departure from the conventional mode of organizing teaching – learning process. The teaching learning activities should create interest among the pupils to learn more. The community is an epitome of the world and it provides instances of every fundamental process. The science classroom is as big as the community, if teachers and pupils take advantage of that the world outside the school has to offer. The wise use of community resources is a boon for vitalizing the teaching of science. Therefore, every teacher should find out the alternative resources available and its utilization in the teaching learning activities.

Significance of the Study

Teaching of Science aims at enabling the child to understand and appreciate the living and non-living things found around his/her environment. This state of affairs definitely necessitates a departure from the conventional mode of organizing teaching – learning process. The education from the community resources is not only different in nature but also an interesting and valuable supplement to formal school experiences. Out of classroom experiences promote learning, enhance the units taught in the classroom and provide learning experience not gained in the classroom (Lambeth & Virgil

2000). In this concern, this study has taken to find out the alternative resources available and its utilization in the classroom activities.

Statement of the Topic

Availability and Utilization of Community Resources in Teaching Science at Secondary level in Thoothukudi District.

Objectives

To find out the level of secondary level science teachers regarding their (i) awareness of availability and (ii) utilization of community resources in teaching science.

Hypotheses

1. There is no significant difference between secondary level science teachers in their (i) awareness of availability of community resources and (ii) utilization of community resources in teaching science with reference to gender, and locality.
2. There is no significant difference among secondary level science teachers in their (i) awareness of availability of community resources and (ii) utilization of community resources in teaching science with reference to type of management.
3. There is no significant association between secondary level science teachers in their (i) awareness of availability of community resources and (ii) utilization of community resources in teaching science and their participation in in-service trainings.

Methodology

The investigator has adopted the survey method to study the variables. The population of the study consists of all secondary level science teachers and students of IX and X standard in Thoothukudi District. The sample constitutes 100 secondary level science teachers, 715 students of IX standard and 715 students of X standard from 30 schools. Multistage random sampling technique was used. A checklist and a questionnaire constructed and validated by the investigators was used to find out the awareness of availability of community resources, utilization of community resources in teaching science. Arithmetic mean, Standard deviation, 't' test, ANOVA, Post-Hoc test, and Chi-square analysis were used for the present study.

Analysis and discussion

Table 1 Level of awareness of availability of community resources of secondary level science teachers

Dimensions	Inadequate	Adequate
	No & %	No & %
Plant resources	47	53
Water resources	37	63
Animal resources	41	59
Health resources	28	72
Chemical resources	33	67
Energy resources	37	63
Physics resources	34	66
Human resources	31	69
Community resources	32	68

It is inferred from the above table that 32 percent of the secondary level science teachers have inadequate, and 68.00 percent of them have adequate level of awareness of availability of community resources.

Table 2 Level of utilization of community resources in teaching science of secondary level science teachers

Dimensions	Low	Moderate	High
	N & %	N & %	N & %
Plant resources	17	62	21
Water resources	15	77	8
Animal resources	17	66	17
Health resources	16	64	20
Chemical resources	15	61	24
Energy resources	20	65	15
Physics resources	17	65	18
Human resources	17	67	16
Community resources	15	69	16

It is inferred from the above table that 15 percent of the secondary level science teachers have low, 69 percent of them have moderate and 16 percent of them have high level of utilization of community resources in teaching science.

Table 3 Difference between secondary level science teachers in their (i) Awareness of availability (ii) Utilization of community resources in teaching science with reference to gender and locality

Variable	Group	N	Mean	S D	't' value	Re-marks
Awareness of CR	Male	27	121.56	23.66	.521	NS
	Female	73	117.88	33.70		
	Rural	73	114.48	34.35	2.364	S
	Urban	27	130.74	15.71		
Utilization of CR	Male	27	310.70	46.23	.735	NS
	Female	73	303.27	44.36		
	Rural	73	298.56	47.07	2.534	S
	Urban	27	323.44	32.00		

(At 5% level of significance, for 98 df the table value of 't' is 1.984)

It is inferred from the above table that there is no significant difference between secondary level science teachers in their (i) awareness of availability of community resources and (ii) utilization of community resources in teaching science with reference to gender but there is significant difference with reference to locality.

Table 4 Difference among Government, Aided and Matriculation school secondary level science teachers in their (i) awareness of availability and (ii) utilization of community resources

Variable	Group	Sum of Squares	df	Mean Square	'f' value	Re-marks
Awareness of CR	W/G	6594.54	2	3297.27	3.553	S
	B/G	90022.76	97	928.07		
Utilization of CR	W/G	15027.00	2	7513.50	3.975	S
	B/G	183363.15	97	1890.34		

(Table value of 'f' for v1= 2 and v2= 97 at 5% level of significance is 3.09)

It is inferred from the above table that there is significant difference among Government, Aided, and Matriculation school secondary level science teachers in their (i) awareness of availability of community resources and (ii) utilization of community resources in teaching science.

Table 5 Association between participation in in-service trainings of the secondary level science teachers and their (i) awareness of availability and (ii) utilization of community resources

Variables	Degrees of freedom	Calculated 'c' value	Remarks
Awareness of availability of Community Resources	2	4.345	NS
Utilization of Community Resources	4	6.632	NS

(At 5% level of significance, for 2 & 4 df the table value of 'c' are 5.991 & 9.488)

It is inferred from the above table that there is no significant association between participation in in-service trainings of the secondary level science teachers and their (i) awareness of availability of community resources and (ii) utilization of community resources in teaching science.

Findings and Conclusion

1. Sixty eight percentage of secondary level science teachers have adequate level of awareness of availability of community resources.
2. Sixteen percentage of secondary level science teachers have high level of utilization of community resources in teaching science.
3. 't' test results reveals that, male secondary level science teachers (mean - 121.56, 310.70) are better than female teachers (mean - 117.88, 303.27) in their awareness of availability of community resources and utilization of community resources in teaching science. This may be due to the fact that, male teachers by their very nature are highly independent, social and daring to try out novel ideas in teaching than female teachers.

4. 't' test results reveals that, urban school secondary level science teachers (mean - 130.74, 323.44) are better than rural teachers (mean - 114.48, 298.56) in their awareness of availability of community resources and utilization of community resources in teaching science. This may be because urban school teachers can access resources more easily than rural school teachers.
5. The ANOVA test result reveals that Matriculation school science teachers (mean - 132.14, 327.29) are better than Government school science teachers (mean - 110.95, 294.77) in their awareness of availability of community resources and utilization of community resources in teaching science. This may be due to the interest and involvement of the Matriculation schoolteachers in teaching learning activities.
6. Chi-square test result reveals that attending in-service training did not affect the awareness of availability of community resources and utilization of community resources in teaching science. This may be because, in-service trainings regarding availability and utilization of community resources not organized.

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