Research Paper

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# A Study of Laboratory Facilities and Conditions of Different High Schools of Chikanayakanahalli Taluk, Mysore District

Education

**KEYWORDS :** Laboratory Facilities, conditions and High Schools

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## ABSTRACT

*The study On "A Study of Laboratory Facilities and Conditions of Different High Schools of Chikanayakanahalli Taluk, Mysore District" has been dealt with in this paper. The Laboratory Facilities and Conditions Questionnaire used for data collection. 't-test' and ANOVA technique was adopted for data analysis. The findings are there is no significant difference between Rural and Urban high schools Laboratory Facilities and Conditions, there is no significant difference between different Types of (Government, Aided and Unaided) High schools Laboratory Facilities and Conditions and that there is no significant difference between different Medium of Instruction (kannada, English, Hindi and Urdu) High schools Laboratory Facilities and Conditions of Chikanayakanahalli Taluk.*

**Introduction**

Man has been trying to understand the changes going around him and has been constantly receiving a great number of impressions through his various senses such as hearing, sight, smell, taste and touch. Making an effective use of his senses and using his communicative ability he accumulated information about his surroundings, organized this information and sought regularities in it and tried to find out why the regularities exist and finally transmitted his findings to the next generation.

No course in science can be considered as complete without including some practical work in it. The practical work is to be carried out by individual in a physical science laboratory. Most of the achievements of modern science are due to the application of the experimental method. At school stage practical work is even more important because of the fact that we 'learn by doing' scientific principles and applications are thus rendered more meaningful. It is a well-known fact that an object seen from a distance or in an illustrations. Centuries of purely deductive work did not produce the some utilitarian results as a few decades of experimental work. Practical class-room experiments help in broadening pupil's experience and develop initiative, resourcefulness and cooperation. Because of the reasons discussed above practical work forms a prominent feature in any science course.

'Learning by Doing' is one of the cardinal principles of teaching science. An experiment has put many theories on a sound footing and has also resulted in the rejection of many. History the minds of the people as a result of experimentation every scientist has to put his findings to test by experimentation in order to find out their truth. The achievements of modern science are mainly due to the application of the experimental method. It is, therefore, important that practical work should form a prominent feature in any science course and the primary objective in determining a technique of instruction is to provide for a maximum of pupil activity.

For an effective and efficient teaching of science we need well equipped science, laboratories and more important them this we need well qualified science teachers. "The quality of education depends mainly upon the quality of the teacher and no on the material facilities only". An efficient and resourceful science teacher can carry on this work quite efficiently even with inadequate science facilities.

**Review of related literature:**

**Jaakkola,Nurmi,S.T. (2008.)** The results showed that the simulation-laboratory combination environment led to statistically greater learning gains than the use of either simulation or laboratory activities alone, and it also promoted students' conceptual understanding most efficiently. There were no statistical differences between simulation and laboratory environments. **Dori, Yehudit J.: (2008)** findings emphasize the educational value of combining the case-based method with computerized laboratories for enhancing students' chemistry understanding and graphing skills, and for developing their ability to bi-directionally transfer between textual and visual representations. **Gürses, Ahmet;(2007)** A statistically significant difference between the students' academic achievement and scientific process skills at $p < 0.05$ level was found. No statistically significant difference was found at the students' attitude towards the physical chemistry laboratory. **Fay Evan; (2002)** there was no statistically significant difference in attitude toward group laboratory work between the two genders, but there was a significant difference by academic discipline here. There was a significant difference between genders for the way that students were assigned to small groups.

**Objectives of the study:**

**The following objectives were framed for the present study**

1. To study the Laboratory Facilities and Conditions of Rural and Urban schools of Chikanayakanahalli Taluk.
2. To study the Laboratory Facilities and Conditions of different Types of (Government, Aided and Unaided) schools of Chikanayakanahalli Taluk.
3. To study the Laboratory Facilities and Conditions of Different Medium of Instruction (kannada, English, Hindi and urdu) of schools of Chikanayakanahalli Taluk.

**Hypotheses**

In pursuance of the objectives 1- 3 following Null Hypotheses were set up.

1. There is no significant difference between Rural and Urban High schools Laboratory Facilities and Conditions of Chikanayakanahalli Taluk.
2. There is no significant difference between different Types of (Government, Aided and Unaided) High schools Laboratory Facilities and Conditions of Chikanayakanahalli Taluk.
3. There is no significant difference between different Laboratory Facilities and Conditions of Different Medium of Instruction (kannada, English, Hindi and urdu) of High schools of Chikanayakanahalli Taluk.

**Sample of the study:**

Sample is a true representative of the population. In the present study researcher has used the random sampling technique for drawing the sample. The sample consisted of 40 different High schools in Chikanayakanahalli Taluk. The basis of was Location (06 -urban and 34- rural), type of schools ( 15 –Government, 20 -aided and 05 -Unaided) and Medium of instruction (30-kannada and 08- English and urdu-02). The investigator himself visited each and every high school located in and around chikkanayakanahalli taluk and collected data from the teachers.

**Tool Used For Collection of Data**

Research tool used in the study was prepared by investigator. Research tool is "study of Laboratory facilities and conditions of high schools" the research tool has 44 items. The reliability of the questionnaire was identified by using the split-half method. The reliability value was found to be 0.83 which above the nor-

mal value and the test is said to have high reliability. The investigator established content validity by using scientific procedure in the present study.

**Statistical Technique Used**

't' –Test and ANOVA was used to find the significance of the High schools Laboratory Facilities and Conditions of Chikanayakanahalli Taluk With reference to Location, Types of Schools and Medium of Instruction.

**Major findings**

Table- 01 't' Test for Difference in Laboratory Facilities and Conditions of Rural and Urban High Schools of Chikanayakanahalli Taluk

| variable | N | df | Mean | SD | t-value | p-value | sign |
|---|---|---|---|---|---|---|---|
| Rural | 34 | 34 | 27.59 | 4.652 | 0.569 | > 0.05 | NS |
| urban | 06 | | 26.33 | 6.742 | | | |

The above table revels that the obtained t-value in the in Laboratory Facilities and Conditions of Rural and Urban High Schools scores are less than the tabled value (1.96) at 0.05 levels of significance. Therefore null hypothesis in this regard is accepted. It means that there is no significant difference between Rural and Urban high schools Laboratory Facilities and Conditions of Chikanayakanahalli Taluk.

**Table- 02 F- Test for Difference in Laboratory Facilities and Conditions of different types of High Schools (Government, Aided and Unaided) of Chikanayakanahalli Taluk**

| Source of variance | Sum of sources | df | Mean sum Square | 'F' Value | Level of Significance |
|---|---|---|---|---|---|
| Between Group | 14.667 | 2 | 7.333 | 0.290 | 0.05 |
| Within Group | 934.933 | 37 | 25.268 | | |

The above table revels that the obtained F-value (0.290) in the in Laboratory Facilities and Conditions of different types of High Schools (Government, Aided and Unaided) scores are less than the tabled F-value (3.23) at 0.05 levels of significance. Therefore null hypothesis in this regard is accepted. It means that there is no significant difference between different Types of (Government, Aided and Unaided) High schools Laboratory Facilities and Conditions of Chikanayakanahalli Taluk.

**Table- 03 F- Test for Difference in Laboratory Facilities and Conditions of Different Medium of Instruction (kannada, English, Hindi and urdu) of High schools of Chikanayakanahalli Taluk.**

| Source of variance | Sum of sources | df | Mean sum Square | 'F' Value | Level of Significance |
|---|---|---|---|---|---|
| Between Group | 174.34 | 03 | 58.105 | 2.698 | 0.05 |
| Within Group | 775.286 | 36 | 21.536 | | |

1. The above table revels that the obtained F-value (2.698) in the Laboratory Facilities and Conditions of Different Medium of Instruction (kannada, English, Hindi and urdu) of High schools scores are less than the tabled F-value (2.84) at 0.05 levels of significance. Therefore null hypothesis in this regard is accepted. It means that there is no significant difference between different Medium of Instruction (kannada, English, Hindi and urdu) High schools Laboratory Facilities and Conditions of Chikanayakanahalli Taluk.

**Conclusion**

The best teaching of science can only be accomplished with the best facilities. Commonly we found two types of facilities in a school situation. They are human resource facilities and materialistic resources. In human resource teacher, pupil, management, parents etc are the important aspects, where as in materialistic resources buildings, library, laboratory, play ground etc. So, to establishing of any successful educational institution these both aspects are acting as a very important role. For this reason there must be good understanding and relationship between each other aspects is very important. Because effective teaching process is not only in the hands of teachers, but they are the main pillars of this process, they required full support from other resources then only we may get positive output. But today what happened? We are only blaming towards teachers and after those students, following this society and present day system.

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