An Evaluative Study of Physics Curriculum At +1 Stage Prescribed By Himachal Pradesh Board of School Education (HPBSE)

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Abstract

The modern world is the world of physics, when a student enters in the senior secondary school stage, he wants to gain maximum knowledge so good quality text books are required. Quality text books are can be improved if these are evaluated from time to time and at regular intervals. Evaluation is basically needed for incorporating latest topics and delegating those topics which have become obsolete. The evaluation is defined as the process of determination of extent to which in structural objectives are achieved by pupils.

KEYWORDS: Study of Physics, Himachal Pradesh Board of School Education (HPBSE)

INTRODUCTION:-

The man is curious being by nature. He has been engaged in the process of discovery by unveiling the mysteries of the nature since the drawn of civilization. This has led to an accumulation of a body of knowledge about the nature through experiments and reasoning called Science."The word Science has it is origin from Latin word “Scientia” which means to know. Therefore, an organized effort to know about the things and happenings in the nature is science.

‘Science is the systematized body of knowledge ‘Science is nothing but the search of truth’ Science is the systematic study and it is not the study of one day. The total outcome of various fields of science are the effort of the scientists. As to rise up the hill, we have to start from the bottom and a successful person achieving the goal always start from the lower level and gradually moves up. Science has not only brought green revolution but white (Milk and Cotton) revolution as well. The progress of a country depends upon to what extent it is developed in the field of science, the use of natural resources. Better living conditions are given by the proper use of science.

In Education physics enjoys a district place and without it, it is very difficult to lead an easy life. Concerning to physical text books. Firstly text book is a widely used education instruments. A teacher plans his instructions so as to enable the students grab the subject matter of the text book. A text book can be a very effective instrument of learning, if provided for self-instructions with minimum help of the teacher. The phrase “Covering the Course”, then can acquire new meaning and dimensions. It enables the teacher to elevate more time to complex parts of the course content leaving the rest of
student to master through self study the general objective of a physics text book is to explain what physics is about and to develop an understanding of the concept and principles of physics.

Curriculum has to play an important role in preparing the pupils for assuming their roles as constructive and responsible citizens. The school curriculum should reflect the major issues facing the world today such as disarmament, avoidance of nuclear war, prevention of violation of human rights. While the curriculum reflects the educational intent, it is equally concerned about its effective implementation. Curriculum is structured series of intended learning outcomes. Curriculum is variously defined as subject, projects, ‘areas of the study’ it is an organized pattern of educational programme which tries to answer what, how and when. Thus curriculum of instructional of life curriculum prepares the grounds by which the pupil and teacher are able to reach the goal of objective of education.

In every walk of life the process of evolution takes place in one or the other form. If the evolution process is eliminated from human life then perhaps the aim of life may be lost. It is only through evaluation process that one can find out what a good thing is and which is bad. In society, it is only through evaluation that one can discriminate between good and bad hence evaluation included both individual and society itself; our education also gives importance to both these.

NEED OF STUDY: Physics has been an inseparable part of school education since the beginning of formal education and it has paid a predominant role not only in the advancement of civilization but also in the development of physical sciences and other disciplines. As curriculum renewal is a continuous process, physics curriculum has undergone various types of changes from time to time in accordance with the changing needs of the society. Teachers of the subjects often complained that the provision curriculum of physics provides guidelines on the subject only and they provided guidelines on the subject only and they provided guidelines on the subject only and they did not define the depth of the subject at various levels and also there is no syllabus in a logical manner for practice

OPERATIONAL MEANING OF THE TERM USED

1. Evaluation
   (i) The process of ascertaining or judging the value of amount of something by careful approval.
   (ii) The process of determining the relative significance of phenomenon of some sort in terms of some standard
   (iii) Consideration of evidence in the light of value standards and in terms of particular situation and the goals which the group of the individual is striving to attain.

2. Physics
   Physics is a scientific study of properties of matter and energy and relationship between them, starting from as early as 16th century with invent of Newton laws up to the latest concept of super component and super conductively etc. it is
regarded as great benefactor of humanity. But it is also responsible for the
destruction of humanity.

Objectives of the study:
The present study had been conducted to achieve the following objectives:

To critically examine the opinion of teachers teaching of XIth class, regarding different
aspects of the physics as given.

(a) Aims of teaching physics textbook
(b) Organization of subject matter
(c) A selection of contents language and printing material of physics textbook.
(d) Illustration given in physics text book.
(e) Exercise given in physics textbook
(f) Social and moral concept development in students through physics textbook
(g) Physics aspects of physics textbook for class XI

Sample of the study:
The investigator used the method of incidental sampling for the study almost all the 35
schools were selected. They were all Govt. Sr. Sec. Schools a sample of to lecturer
teaching Sec. Classes in the school was selected. Qualification of the lecturer varied from
M.Sc. to M.hil, B.Ed. the experience of lecturers ranged from 10 years to 30 years.

Tools used
Investigator used self-prepared questionnaire as a tool for data collection. The
questionnaire was constructed on a five point scale. On the right hand side of each
statement 5 columns viz. ‘Most useful’, ‘
Useful’, ‘Undecided’, ‘useless’ and ‘most useless’ were given the respondents were
asked to put a tick marks (√) an any one of the following against each statement for the
end of the questionnaire, some probing questions were also asked. In the starting of the
questionnaire the personal data was asked.

THE STATISTICAL PROCEDURE:
The data obtained from the questionnaire was analyzed by making use of percentage.
For addition to this, Rank order correction statistical Technique was used in the
statements comprising fine point scale viz. “Most Useful”, “Undecided” “Useless”, Most
Useless”, Total scores of each and the score thus obtained were ranked for lecturer only.

CONCLUSION AND SUGGESTIONS
Drawing conclusions after analyzing the data formed an important part of research
procedure. Conclusions are based on the analysis of the data. Suggestions are put forth in
the light of conclusions arrived at. The curriculum of +1 Class physics was evaluated
with the help of survey method using questionnaire as a tool for collection of data.
Responses physics of lecturers: Regarding the existing Physics curriculum at +1 state, response of the lecturers of schools is as under:-

**TOPIC-1**

**Most Useful:-**

1. The topic includes concepts related to error of instruments/ Uncertainty of equation, which can be of help in the vocational life of a child. Do you think they should have been more elaborated?
2. The definitions of different standard units have been includes in this standard also. They have been studies in previous standards also. Do you really think there was need to include these?
3. It is compulsory to teach mathematical tools before the introduction of this chapter?
4. Certain numerical problems are practically related to common life e.g. finding size of nucleus/ distance between planets, from sun. Should there have been more of such numerical at this level.
5. Certain topics do not correlate and do not have any practical value in the near future also. Should they be deleted from the course?

**General:-** This Topic should be increased.

**MOST USELESS:-**

1. Equation of motion with same old derivation as a have been done in lower classes have again been included. Do you think this was putting as additional burden on the child?
2. Concepts such as Limit/ Derivatives have been taken up in 12th class. Do you think it is justified to use symbols and concepts without any previous knowledge or hint of the?

**General: - It should remain as it is.**

**TOPIC – III**

Most Useful:-

1. Are the symbols used adequately and properly defined in the topic?
2. Are the numerical problems according to the caliber of the children?
3. Are the derivations clearly explained in the topic?
4. Does this topic have any correlation to the previously acquired knowledge?
5. Does it have any practical application from the vocational point of child in the near future?

**General: - It should be decreased.**
TOPIC – IV

MOST USEFUL

1. Do you find any topic which should not have been introduced to the children at this level?
   General:- It should remains as it is.

TOPIC – V

MOST USEFUL:

1. At this level the concepts are easily understood by the children?
2. Are the theorems/subtopic elaborated the exactly related to the main topic?

General- It should remains as it is.

TOPIC – VI

MOST USEFUL:-

1. This topic does not have any reference in the previous classes do you think it sis justified to introduce this topic at this level?
2. Can these topics provide any vocational help to the children in the future life?
3. The study of adiabatic and isothermic types of system has been taken up. Do you think these are of any help to the children?

General: It should be increased.

TOPIC – VII

MOST USEFUL:-

1. The various laws have been elaborated at this level. Do you think they were really required to know the mathematical representation of these laws?
2. Do you find my practical applicability of elaborating these laws?
3. Some concepts can help the child in future studies. Could they have been provided with more exposure to these topics at this level?
4. Do you think this topic should have been introduced at higher levels or is it OK to introduce at this stage?

General: - it should be increased.

TOPIC - IX

MOST USEFUL:-

1. Does it have any practical applicability in the future life of the child?
2. Do you find the topic interesting from the point of the child?

General:- It should be increased.
TOPIC – X

Most Useless:-

1. Do you find any sub-topic which should be deleted from the curriculum?

General:- It should remains as sit is.

SUGGESTIONS

TOPIC – I Units and Measurements.

1. The topic error of instrument and uncertainty of equation should have been more elaborated.
2. It should be compulsory to teach mathematical tools before the introduction of this chapter.
3. Some more numerical should be added to this topic.
4. Certain topics which do not have any practical value should be deleted.

Topic II: Kinematics

1. Certain topics from previous classes which are related to this class also should be repeated.
2. Use of symbols should be taught separately


1. Derivations should be explained clearly.
2. This topic should to teach with the help of more practical.

Topic IV:- Law of Motion

1. Some more topics should be added to make this topic more interesting.
2. Practical applicability of laws of motion should be taught to the children’s.

TOPIC- V. Rotation Motion

1. Some definitions which are newly added and simply increasing the content matter should be decreased.


1. Laws of thermodynamics should have been taught in the previous classes also.

TOPICVII Gravitation

1. Mathematical representation of all laws should be taught.
2. Certain topics such as launching of satellites should be more elaborated.

TOPIC VIII:- Mechanics of Solids and fluids.
1. Some concepts can help the child in future study they should have been provided with more exposure.
2. This topic should have been introduced at higher level.

**TOPIC – IX: Waves and Motion**

1. The subject matter is correlated to 12th class so more emphasis should be give.
2. This topic should be taught with the help of more practical.

**TOPIC – X Oscillation**

1) This topics helps the child in his vocational development so more emphasis should be given

**SUGGESTIONS FOR FURTHER STUDY**

Research is every containing and ever expending. Every research study is therefore open ended. It can be perceived as well as followed by more and more research. Here below are given a few suggestions for carrying out the further research in this area of curriculum.

1. Similar study can be conducted on the large sample.
2. Similar study can be conducted to evaluate the text book of other subjects.
3. Similar study can be conducted on text books of other class.
4. Comparative study between physics and chemistry curriculum with a view to improve them.
5. Development of suitable curriculum for Sr. Sec. Classes.
6. A study of Sr. Sec. Class curriculum of some foreign countries.
7. A comparative study for curriculum of Sr. Sec. Classes is used in different states of India.

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