



Dept. of Education, Patna University
EDUCATIONAL TECHNOLOGY & ICT

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SYSTEM APPROACH

Contents:

1. Objective
2. Introduction
3. Systems approach to Educational Technology
4. Key Points
5. Advantages
6. Limitations
7. Self-check questions
8. Suggested Reading

OBJECTIVES

After going through this topic, students will be able to :

- Justify why there is a need to use systematic approach in teaching
- The significance of using a systematic approach to teaching
- Construct a diagram that will show the systematic approach to teaching

INTRODUCTION

Educational technology classified into two categories based on:

"Applicability and Approach".

Each category can further be divided as follows:

On the Basis of Applicability

1. Teaching technology
2. Instructional technology
3. Behavioral technology

On the basis of approach

There are three types of technology on the basis of approaches. They are:

1. Hardware approach;
2. Software approach; and
3. **System approach.**

The **system approach** is an effective approach of educational technology. System approach was introduced during Second World War. Since then it has particularly influenced the management decisions of industry, government, military and business sectors. System refers to a fixed method. In fact, system approach is a thorough analysis of a system or subsystem. This term is system analysis .

There are three important things in system analysis -

1. System thinking
2. system analysis
3. system

System has three parts -

1. **Goal** - It give the knowledge of what to do and why.
2. **Process** - It consists of various and activities.
3. **Contents** - It is related to sub- parts of a system.

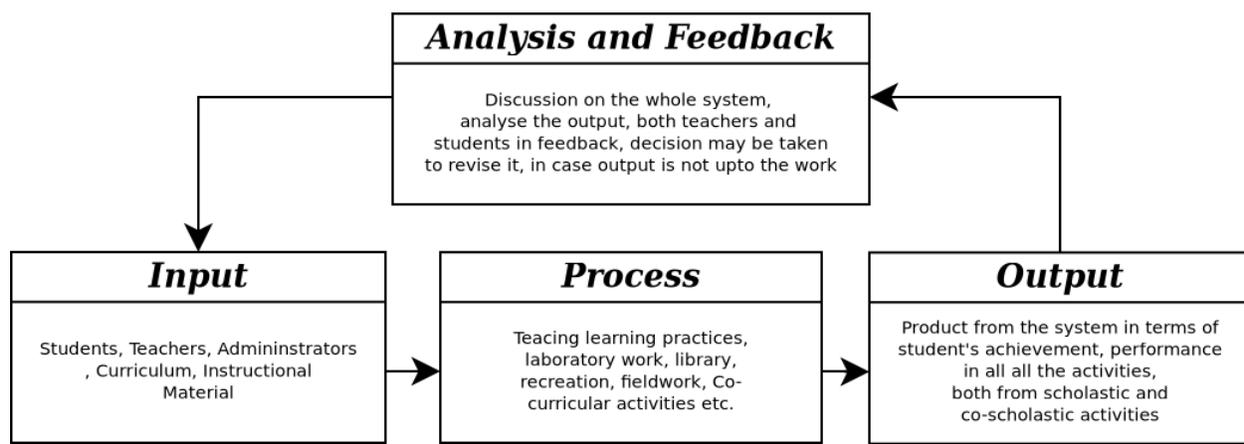
1. SYSTEMS APPROACH TO EDUCATIONAL TECHNOLOGY

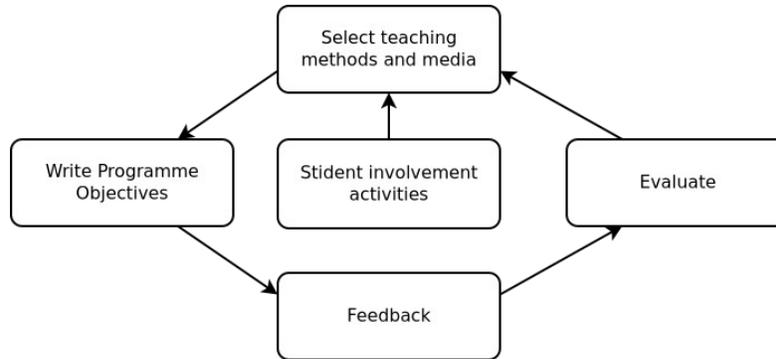
System approach is the modern approach. It acts as link between hardware and software approach. 'It is also known as Management technology'. It has brought to educational management a scientific for solving educational administrative problems.

Teaching learning is a complex process and in which systematic planning is necessary to achieve pre- fixed objectives. To streamline the teaching- learning process we use the systems approach which is concerned with systematic planning, designing, construction and evaluation of the education system. System approach is applied to develop, implement and evaluate the educational system, sub-system, and curriculum or, for designing an individual lesson. If hardware can be said to form the body of a computer system, then software is its mind. Software refers to computer programs, procedures and documentation that perform certain tasks on a computer system.

The four elements of the systems approach are:

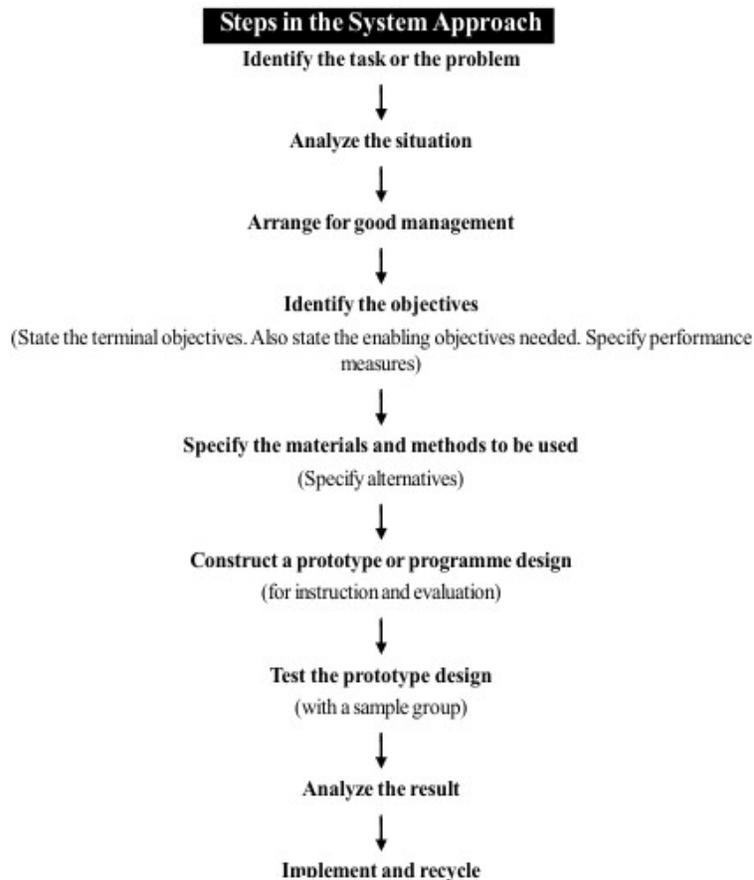
1. Input
2. Process
3. Output and
4. Analysis & feedback.





Systems approach is the systematic effort to coordinate all the components of interacting systems to achieve the specific objectives.

Steps in the System Approach shown as a flow chart as follows:



In the above figure shows discussion can be concluded that the systems approach is concerned with the systematic planning, designing, construction and evaluation of the education system.

It is applied to develop, implement, and evaluate various aspects of the education system, and sub-system. It is a problem solving method, analyzing the educational process, and making it more effective. The purpose of the systems analysis is to create an enabling learning environment for both teachers and students.

2. THE KEY POINTS OF THE SYSTEMS APPROACH USED IN EDUCATION:

1. System is a complex whole, a set of things working together as a mechanism or interconnecting network.
2. A system is an arrangement of components/elements so related or connected as to form a unity or organic whole. It is a regular, orderly way of doing things. Schools are viewed as a social system.
3. Instruction / teaching is considered to be a sub-system within the social system of the school. Classroom, faculty, student etc. are other sub-systems of a school.
4. Education is considered to be a complex organization of technical, managerial and institutional systems. It has three parts; instructor, learner, and objectives of instruction.
5. The systems approach to education, thus, considers education as an input-output system.

Advantages of System approach

- ◆ System approach helps to identify the suitability of the resource material to achieve the specific goal.
- ◆ Technological advance could be used to provide integration of machines, media and people for attaining the defined goal.
- ◆ It helps to assess the resource needs, their sources and facilities in relation to quantities, time and other factors.
- ◆ It permits an orderly introduction of components demonstrated to be required for systems success in terms of student learning.
- ◆ It avoids rigidity in plan of action as continuous evaluation affords desired beneficial changes to be made.

Limitations of system approach

- ◆ Resistance to change.
- ◆ Old ways are difficult to erase.
- ◆ Involves hard work.
- ◆ System approach requires hard continuous work on the part of school personnel.
- ◆ Some are not prepared for extra load.
- ◆ Lack of understanding. Teacher and administrators are still not familiar with system approach. Though it has been successfully implemented in industry,
- ◆ It has still to make headway in education.

REFERENCES

- [1] *Master of Arts (Education) MA (Edu) Compulsory Courses*. IGNOU, 2008
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SELF-CHECK QUESTIONS

1. What is systems approach? Describe the steps included in systems approach
2. How is systems approach used in education? Describe the important steps when approach is used.

TOPIC FOR NEXT CLASS

Some other trends in educational technology.

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