

'Being a Competent Medical Teacher'



BLDE Deemed to be University
Shri B. M. Patil Medical College Hospital
and Research Centre Vijayapura
Medical Education Unit

Editor

Dr Tejashwini Vallabha



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Office No.1, Krishnasagar Society,
Nr. Shivsagar sharda Mandir Road,
Ahmedabad-380007

✉ mahibookpublication@gmail.com
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1 SYSTEM APPROACH TO MEDICAL EDUCATION

Dr. Vidya A. Patil

Professor, Anaesthesiology, BLDE(DU)Shri B.M.Patil. Medical College, Hospital and Research Centre, Vijayapura

What is a system?

In a layman's language it is a collection of organized things working together. Ex – The Solar system.

All the planets, stars, sun & moon work in tandem to produce day & night, different seasons, climate & weather changes.

Thus, a system is a conglomeration of a set of interacting, inter related & interdependent components (subsystems). The functioning of these subsystems is synergistic, orderly & in harmony. They work towards achieving common goal/goals.

Input → Process → Output

If the same understanding is extrapolated or deduced in a medical college, then that medical college is a conglomeration of functioning subsystems i.e. departments which work in tandem. They are interdependent, interrelated & work towards a common goal of producing competent qualified medical professionals.

Learner → Process Competent, qualified, medical Professional
Systems are of 2 types –

1. Open System, 2. Closed System.

Open System:

It is open to changes. It adapts to changes in the environment it exists & is functioning.

ex – a running car is subject to changes like humps & bumps, curve & other vehicles on the road.

Closed System:

It is the one which will not respond to changes in the environment, ex- a Diwali rocket (cracker) once ignited it will just strike in the air & burst.

The systems environment can be conducive or nonconductive (congenial/ noncongenial) i.e. favorable or unfavorable & this can affect the outcome.

Input → Process → Output



Conductive/ Nonconductive environment.

The output can be expected one or actual (which is different)

When an Education system is open to changes, it is influenced by external factors which constitute the system environment of the college. The social, political & economic factors constitute the system environment of the college. These factors produce conducive or non-conductive environment that helps or hinders its functioning & thereby influence the character and quality of the medical professional produced.

Let us expand this equation, 'Input → Process → Output',

Further, in relation to medical education, and understand what is the input?, what constitutes the process?, & what are the factors that determine the characters of the output?.

INPUT:

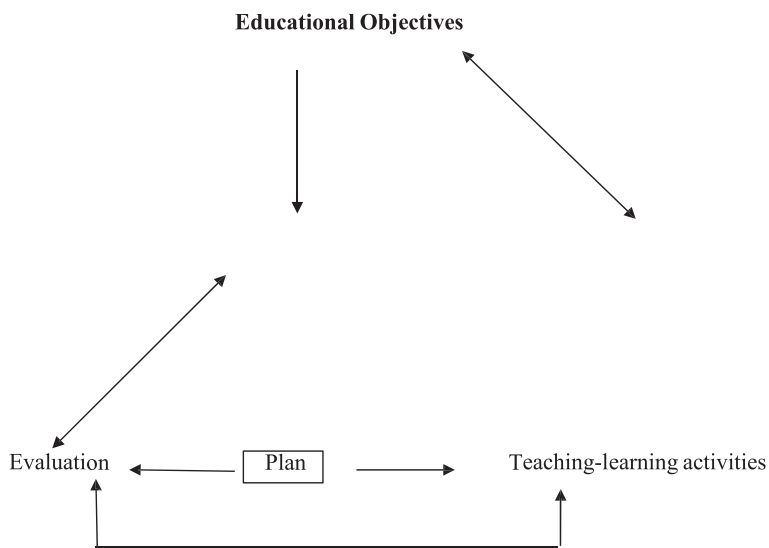
- 1. The Learner.**
- 2. The teaching-learning resources**

- a) Human resource (Man) - M
- b) Hardware & Software (Material) - M
- c) Finance (Money) - M
- d) Time (minutes) - M

PROCESS–

The education process is cyclical & consist of three steps.

- a) Formulating aims & objectives.
- b) Planning & implementing the teaching-learning process.
- c) Planning & implementing a scheme of evaluation of the outcome of learning.



Educational Spiral

a) Aims & objectives –

These are based on the output specifications, i.e the expected characteristic of a medical professional passing out of the college. Therefore these objectives are learner oriented & not teacher oriented.

b) Planning & implementation of the teaching-learning process-

This will depend upon resources available in terms of curricular time, faculty strength & experience, teaching-learning resource material & funds.

c) Planning & implementing evaluation

It is based on its purpose--summative/formative/ practicals or theory, & the objectives to be achieved by the learners. Based on the evaluation of the 'products' (learners at the end of the study period), we can get an idea of the actual quality of the outcome of the educational process. The two-way arrows of this spiral indicate that there is mutual feedback & influence of one component over the other. For instance if it is not possible to give an adequate teaching-learning experience as adjudged by evaluation, then the objective need to be reconstructed or the teaching-learning activity needs to be improved upon.

The relationship between the three components is best depicted as a spiral & not a closed circle to show that there is a continued scope for improvement & revision of old objectives depending on the requirements of the process & the feedback obtained from earlier cycles.

OUTPUT:

The output aimed at is qualified, certified, competent health professional to provide health care in the community. If a learner's competency is less than expected, he/she will not be certified as a qualified professional.

YARDSTICKS OF A GOOD EDUCATION SYSTEM:

1. Effectiveness of the system:

If the actual outcome matches the output specifications then the process has been quite effective in achieving the desired outcome. However if there is gross discordance between the two (i.e. if most of the graduates are not competent to practice as primary health care physicians) then the education process has been ineffective. Effectiveness of a system, therefore, indicates the extent to which the desired outcome has been achieved. It is the measurement of the quality of the output.

2. Efficiency of the system:

It depends upon the cost, time & resources spent to achieve the output. A college that spends Rs 100 crores per year to educate 50 learners is less efficient than one that spends Rs 10 crores to educate 100 learners, provided the qualities of the outputs are similar. Efficiency relates to the quantity while effectiveness relates to the quality of the outcome.

3. Openness of a system

An open system responds to the environment & the outcome. If the effectiveness or efficiency is found to be unsatisfactory, then an open system will revise the whole process of education (objectives, teaching-Learning activities, and evaluation) so that the subsequent process-cycles perform better. On the other hand a closed system is non-responsive or so slowly responsive that it appears to be non-functional.

An ideal process of education is not a closed cycle but a spiral. Feedback evaluation is done, every time a batch of students complete their education & exit the system.

Based on the feedback from various sources (students, teachers, public i.e patients, academicians etc), suitable changes are made in the educational process for subsequent batches of students.

A responsive self-correcting open system is bound to succeed in its performance **with teachers as the fundamental supporting core structures of an institution.****Importance of Systems Approach for Education:**

1. Provides framework for planning, implementing plans.
2. Provides a unified focus to institutional efforts.
3. Helps to look at institution as a whole and not as parts.
4. Helps the manager to identify critical or problem shooting subsystems and take necessary steps to set them right.
5. Helps in bringing efficiency in school administration and management.

Who is a teacher?

A teacher is the one who facilitates learning by learners. An enlightened teacher is a system specialist who plans guides and implements a systematic educational process in his/her department.

What are the functions of an enlightened teacher in a Medical College?

1. Contributes to the planning & implementation of the curriculum.
2. Plans the topics & classes.
3. Plans teaching through different teaching-learning activities like

theory classes, seminar tutorials, case presentations etc.

4. While carrying out different teaching-learning activities, establishes rapport with learners.
5. Is a mentor- committed to his/her students over all development
6. Doesn't provide ready answers, but sees to it that the learner works on the problems solutions & diagnoses his/her needs.
7. Keeps himself/herself abreast of newer development in his/her specialty
8. Refreshes his/her knowledge & capabilities - thereby achieves personal, professional development.
9. Contributes to new knowledge in his/her specialty.

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