THE ELEMENTS OF AN INSTRUCTIONAL SYSTEM

Looking at an instructional or educational system, there are ten elements that must operate within the system.

A teacher should be able to monitor the "**entering behaviour**" of the students; in other words, he or she should know what each student brings with him to the course. A course should be planned to meet the level of an average student, in order to be able to reach students both above and below average. This can be done by designing a pre-test, to test the general achievement of a class before the course starts. The test should reveal to what extent the student knows the terms, concepts and skills which are part of the course to be offered.

It is important for a teacher, to determine "**instructional strategies and techniques.**" A strategy is a teacher's approach to using information, selecting resources, defining the role of students, and specific practices used to accomplish a teaching objective. In the instructional sense, your method is defined as a systematic plan for presenting information. The major instructional strategies are the **expository approach** and the **inquiry approach**.

Any organization of students into groups is determined by the "**specific objectives.**" When objectives have been well stated and refined content selection made, criteria of satisfactory performance identified and entering behavior measured, then the following questions can be answered:

- Which objectives can be achieved by the learners by themselves?
- Which objectives can be achieved through interaction among the learners themselves?
- Which objectives can be achieved through formal presentation by the teacher? Which ones will be achieved through interaction between learners and teachers?

Many variations may be suggested in "**classroom organization**," but in practice a decision about dividing children into groups must depend on the objective in question. Some objectives require small groupings while others require large ones. You must also take account of the characteristic of the content. Some of the materials you teach may require about 40% of the time to be allocated to group work, while some require 50% face-to-face discussion.

Current instructional planning and design calls for an "**individualized approach to learning,"** in order to take account of the entry level and skills of the individual learners and the speed with which each is capable of learning. Depending on the learning styles of the individual students, some may reach a given objective efficiently through independent study, while others my reach it most efficiently through formal oral presentations. Some students may need a tutor nearby for guidance over difficulties.

The strategies and techniques used in various groups entail a decision about the use of time. The plan for use of time will also depend on the subject matter, objectives, space availability, administrative patterns, and the abilities and interests of the

students. The best determinant of "**time allocation**" is the teacher's own analysis of the above three issues. Decision about time is usually dictated by the objectives and activities planned the use of groups and size of the class. A teacher must therefore ask, '*How can I best attain the objectives with the time constraints imposed on me? What groupings, what space utilization, what teaching strategy, what resource are most compatible with the time allocation patter that I must use?*' Our school day is usually divided into periods of 40 to 50 minutes controlled by bells. This makes it rather difficult for the teacher to schedule time allocations, but you can still plan your approach in the context of such a pattern.

Many classes are taught in classrooms equipped with 50 student desks, a teacher's desk, and built-in teaching tools like chalkboards and bulletin boards. To some teachers, this kind of arrangement is unhelpful, while to others it is a traditional approach to be retained. The classroom space can be arranged for different purposes into: large group spaces, small group spaces, and independent study spaces. The "**allocation of learning space**" must be based on learning objectives. Teaching becomes more effective once you begin to group learners in relation to the objectives you wish to achieve.

You need to decide on the "**content**" of your teaching before you can select instructional materials or determine your objectives. The teacher selects the approach and techniques appropriate to the objectives for each lesson, group size and time to be spent on the lesson. Media selection should be in terms of the responses desired by the teacher from learners and not in

terms of stimuli alone. From this point of view, the term "**learning resources**" should be applied instead of 'teaching' or 'instructional resources.' There is no one instructional medium which is categorically better than another. The choice of an individual instructional medium must be based on its ability to contribute to the learning activities planned.

Performance is the interaction between teacher and the learners, between learners or between the learner and an instructional medium. It is during the performance that stimuli are presented and responses are made. Performance covers both the act of teaching and the act of learning. It cannot be contained by time, although its "**evaluation**" does occur at many points even though there is also a cumulative sequence during which many varieties of performance learning can be measured or evaluated. Performance is the focal point of learning. All the objectives designed and the planning that has been done become significant at the time when performance is evaluated. The most important parts of instruction are the entering and terminal behaviour. Evaluation of performance is one of the later elements of the instructional system and one of the first concerns of the teacher in answering the question, 'has the terminal behaviour been manifested at the level specified? Under the conditions stated?

Feedback is the final element.