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ABSTRACT

In this paper the most effective use of instructional time is discussed. In evaluating the efficient use of teaching time, the following questions are examined: (1) Is the instruction process proceeding toward a perceivable objective? (2) Is the instructional objective at the right level of difficulty for the learners who are investing time? (3) Is there constant monitoring of the degree of achievement of the objective so redundancy or acceleration can be built into the instructional process if either is indicated? (4) In which ways are the time and energy expended by the learner and teacher consonant with principles of efficient and effective learning? and (5) Is there dissonance between time and energy expended and principles of learning? (JD)

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## APPRAISING THE INSTRUCTIONAL PROCESS

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Clouds of mysticism have shrouded the process of instruction, obscuring cause-effect relationships. Attempts to pierce this veil have been resisted by some who would retain the mystery and rely on intuition to guide instruction. Others of us, impatient with unnecessary learning failures, are seeking ways to bring predictable learning success under our span of instructional control. As a result, a Teacher Appraisal Instrument (T.A.I.) has been developed which makes successful learning predictable and successful teaching explainable.

Two basic generalizations, free from informed contradiction, guided our search. These generalizations constitute invariant principles which are applicable to all learning situations regardless of content, the learner's age, previous experience, ethnic or socioeconomic derivation.

The first generalization is related to the incremental nature of learning. Learnings are built one on the other with basic learnings supporting and making possible more complex learnings. It is impossible for a learner to achieve a higher order learning, without also having achieved the subordinate learnings which support it.

The second generalization which focused our efforts, is related to the factors affecting learning which are accepted and validated as basic principles by all learning theorists regardless of their particular conceptual orientation. These factors respond to instructional manipulation and affect a student's motivation to learn, the rate and degree of his learning, his retention of that learning, and his ability to transfer that learning to new situations where

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it is applicable. While these factors may take different form with individual learners, as principles they are invariant to all learners.

As we at UCLA began to apply these two basic generalizations to the appraisal of the instructional process, a third encompassing insight into the teaching-learning process emerged as critical. We learned that time is the coin of teaching and it is expected to "purchase" learning. Like all currency it can be expended wisely or frittered away with nothing to show for its use. Wise investment of instructional time to produce efficient and effective learning is determined by the valid implementation of the two basic generalizations. Wasteful squandering of instructional time is the result of actions which are in violation of these two generalizations. Consequently, any evaluation of the instructional process must be based on the investment of the learner's time to determine whether such investment is consonant or dissonant with current knowledge related to human learning, in terms of the following questions:

1. Is the instructional process proceeding toward a perceivable objective, or is it a meandering path where time is dissipated without appropriate learning gain? Additional learnings which are complementary to the target learning are encompassed in the term "appropriate," but learnings that are interfering, tangential or antithetical to the objective are deemed inappropriate. In this way, learning time is focused and effectively used rather than being happenstance, random or diffused with little or no desirable learning return for the time and effort of student and teacher.

A positive answer to this first question in no way eliminates creativity or imposes rigidity. If a tangential or nonrelated learning objective emerges from the student, the original objective may be altered to accommodate it or the tangential learning may be referred to a future instructional episode.

2. Is the instructional objective at the right level of difficulty for the learners who are investing time? This implies that the particular learning step being taken toward the objective is an achievable one by these learners--not an objective that is so difficult its achievement is impossible or one so easy it requires no learning effort or it has already been achieved.

3. Is there constant monitoring of the degree of achievement of the objective so redundancy or acceleration can be built into the instructional process if either is indicated? "Dip sticking" is the term which indicates that "soundings" are taken at frequent intervals to validate learning achievement before moving ahead as well as to avoid investing time on a learning that already has been accomplished.

These first three questions are related to content--the "what" of learning.

The next two questions used to appraise the instructional process involve the "how" of learning, or the congruence of the learner's activity and effort to principles which research has demonstrated to be facilitating or accelerating to learning. For convenience, these principles have been categorized into four groups: (1) those principles that affect the learner's motivation; (2) those that affect his rate and degree of learning; (3) those that influence his retention of what he had learned; and (4) those that contribute to his ability to transfer the learning he achieved to new situations where that learning is applicable.

Based on these categories of learning principles, the fourth and fifth appraisal questions are asked:

4. In which ways are the time and energy expended by learner and teacher consonant with principles of efficient and effective learning?

5. Is there dissonance between time and energy expended and principles of learning? If so, which principles are being violated?

The T.A.I. is similar to the evaluation of the nutrient qualities of food regardless of the particular menu or the way it is served, for any appraisal of the instructional process must focus on the invariant "nutrients" which promote human learning.

As a result, the T.A.I. is applicable regardless of whether a teacher is working with one learner, with a small group or with a total classroom, to any instructional process when a learner is working by himself, with a friend, with an instructional module, programmed instruction, textbook or worksheet, to the self-contained classroom, team teaching, open structure, individualized instruction, nongraded or whatever organizational program is in effect.

The T.A.I. is only in its infancy, but it is a robust infant that has promise of growing into a curriculum guide for the preparation of teachers, a diagnostic instrument to direct staff development and a valid instrument for evaluation of professional performance in the classroom.