

DOCUMENT RESUME

ED 417 663

HE 031 119

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TITLE Instruction in Higher Education.
PUB DATE 1997-00-00
NOTE 9p.
PUB TYPE Opinion Papers (120)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *College Instruction; Creative Thinking; Critical Thinking;
*Educational Principles; *Higher Education; Problem Solving;
Student Attitudes; *Student Motivation; Teaching Methods;
Thinking Skills

ABSTRACT

This paper addresses the improvement of instruction at the higher education level by the application of nine principles of learning by the instructor. These are: (1) the instructor should secure the interests of students in teaching and learning situations; (2) the instructor must guide students to perceive meaning in what is being learned; (3) good sequence in planning learning helps students relate new knowledge to previously acquired knowledge and skills; (4) students should be challenged with assignments and experiences that encourage intrinsic motivation; (5) students need to perceive purpose in learning; (6) students need to develop positive attitudes toward the content and skills being taught; (7) instructors should help students identify and solve problems with the subject matter and skills being taught; (8) students need ongoing experiences which develop critical thinking skills; and (9) students need experiences which develop creative thinking skills. The paper concludes that these principles promote all-around student development and are most effective when the instructor knows the individual student and can integrate individual student interests into instruction. (DB)

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Instruction in Higher Education

Marlow Ediger

Instructional procedures in higher education need to be evaluated and necessary improvements made. Too frequently, teaching and learning are appraised through the development of syllabi and outlines for each course, especially when accreditation teams arrive on the university campus. But little attention, if any, is paid to improving the curriculum through quality in the actual instructional arena. Priority must be given to improving the quality of teaching and learning situations. Each student should be assisted to achieve as optimally as possible. Instructors in higher education need to choose the best objectives possible in any course taught. Learning opportunities should be demanding and challenging. Evaluation procedures used should be valid and reliable to determine how much each student has learned. Videotaping of an instructor's teaching should be done frequently. Peers may assist in evaluating the quality of teaching on the video-tape. Diagnosis of weaknesses should be noticed and remediation stressed. With remediation, improved performance in teaching university students should be an end result. Instructors then need to be well versed in the psychology of education in implementing desired principles of learning.

The Instructor and the Principles of Learning

Which criteria then should be used by the instructor to increase learner achievement? I would suggest that instructors study and implement those principles of learning that assist students to attain as optimally as possible. These principles of learning cut across all academic disciplines and guide students intrinsically to attain as much as possible on an individual basis as well as in collaborative endeavors.

First, the instructor should secure the interests of students in teaching and learning situations. Otherwise, the instructor and students are wasting each other's time in class. The students and the curriculum should become one, not separate entities. With being interested in subject matter presented, students will achieve more optimally and

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retain knowledge and skills longer. Materials of instruction to achieve objectives need to emphasize student acquisition of specific knowledge and skills. What is stressed in learning materials is goal centered, not random achievement of content and abilities.

The student also has a vital role here in becoming interested in goal attainment. The instructor cannot do all of assisting student achievement. Students who come to class tired cannot learn as much as feasible. Nor can students who are not properly nourished. I believe these factors of instruction, adequate sleep and rest as well as nourishment, should be mentioned to students. Instructors should realize that university students are not of public school age, but still there are rudimentary factors that all of us should be reminded of and that is to take care of physiological needs in order to develop, achieve, and learn throughout one's lifespan.

Second, the instructor must guide students to perceive meaning in what is being learned. Too frequently, instructors teach in a way that stresses survey approaches. Rather, depth teaching is necessary. Subject matter and skills become meaningful when involving depth experiences for students. Meaning in learning then tends to accrue. Instructors should never stop with the recall level of teaching, but also stress that what is learned must make sense. Thus, the student can say or write in his/her own words what has been learned. Too often survey learning involves students receiving hazy, unclear ideas. For each concept or generalization taught, I recommend strongly that students learn in depth what otherwise might have been learned for immediate recall only. Using acquired learnings assist in better retention. When use is made, the acquired subject matter and skills are being rehearsed so that application can be made. How can the instructor assist students to apply that which has been learned? For example, within discussion groups, be it the class as a whole or within a committee setting, students make application of previously acquired learnings. Term papers or written summaries of journal articles read and appraised by the instructor emphasizes that these projects require students to use what was stressed in classroom learning activities. There needs to be a

relationship between the term project and ongoing activities in the classroom. In teacher education classes, students may make teaching aids, as a part of course requirements; classroom activities should relate with teaching aids made. These teaching aids may be used later in the internship experience. The instructor needs to think of and implement the many ways that students in class may use knowledge and skills presented so that increased depth learning may accrue (Ediger, 1996).

Third, quality sequence in learning needs to be in the offing for students. Good sequence is necessary so that students may relate previously acquired knowledge and skills with new objectives to be achieved. The relationship of ideas is very important to students. Not only are related ideas retained longer, but also the previously acquired content/skills are perceived as providing readiness for new objectives for student achievement in ongoing lessons and units of study. Thus, to understand the new knowledge and skills, students need readiness or previous content and skills to achieve sequentially. Ideas presented in an unconnected way are difficult to understand. Logically, subject matter and skills should follow each in an ordered manner. Isolated concepts and generalizations presented by the instructor fail to show a connection that is so necessary to make for comprehension and understanding (See-Piaget, 1971).

Fourth, instructors need to challenge students with assignments, projects, field work in schools, and preteaching experiences that motivate and provide for intrinsic motivation. A motivated learner has a desire to learn and to achieve. The instructor is the model and the challenger of students to desire to learn at an increasingly higher level of cognition. There should be feelings of wanting lifelong education. The motivation has been increased in a desire to excel individually as well as for the group or committee as a whole. A motivated student has much energy to accomplish, to achieve, and to learn. The instructor needs to determine what motivates learners individually and collectively. By studying human behavior in general and students individually, the instructor may become knowledgeable about problems of motivation and

achievement. A study of the psychology of learning provides instructors with ways of motivating learners to attain more optimally.

Fifth, students need to perceive purpose in learning. There will be students who already perceive much purpose in learning. Others will need guidance and assistance to understand purposes of a class and how it fits into a larger whole to become good public school classroom teachers. Thus, for each class, the instructor needs to guide students to perceive reasons for learning. Thus, the instructor should make clear at the beginning and throughout the class sessions reasons for stressing selected concepts and generalizations. Too frequently, students are not clear as to the reasons for taking a class. The goals lack clarity and reasons are lacking for goal attainment within the class. Certainly, students should also have input in terms of what they wish to learn that is directly related to the objectives of the class. If students have input, purpose for learning should increase and goals attainment should be more in the offing (Ediger, 1994).

Sixth, students need to develop quality attitudes toward content and abilities being emphasized. Quality attitudes assist students to achieve an increased number of knowledge and skills objectives. Negative attitudes toward what is being studied hinders students in wanting to learn. On the other hand, positive attitudes guide learners to achieve well in total development. Thus, students need to achieve well in problem solving, human relations, civic responsibility, the economic arena, physical development, and in charitable endeavors. Good attitudes may be developed within students through helpful instructor assistance. If students have problems or have a necessity to talk to someone, there is an open door to the instructor's office. The instructor desires students to be successful in university course work as well as at the work place upon graduation. He/she is friendly, polite, and knowledgeable in guiding students to do well in class and maintains contact with former students after they have graduated. The quality of instruction offered has much to do with attitudinal development of students.

Seventh, instructors need to assist students to identify and solve

problems dealing with subject matter and skills being taught. Students need to feel free to discuss, think, and inquire so that problems may be chosen in a stimulating environment. Problems selected need to possess clarity and be adequately delimited. Adequate reference sources need to be available to obtain information in answer to the problem area. The student individually, or when working collaboratively, needs to develop an hypothesis directly related to the problem area. After an hypothesis has been developed, it needs to be tested in a variety of ways. One way is to gather more information to test the hypothesis. The hypothesis might then need revising. Problem solving skills are needed presently in class as well as in all of life. Life itself has many problems, major and minor, that need identification and necessary solutions. Thus, problem solving activities in the classroom should have transfer values to what transpires beyond the immediate environment (Ediger, 1995).

Eighth, students need adequate experiences with critical thinking in ongoing lessons and course work. As is true in problem solving, critical thinking skills stress higher levels of cognition. With critical thinking, students are asked to make comparisons of one account with another. Contrasting one situation with others also involves critical thinking. Separating facts from opinions and accurate from inaccurate statements are further examples of what students can do in the critical thinking arena. When engaging in critical thought, students analyze subject matter into component parts (Gagne', 1992).

Life in society requires individuals to be careful analyzers in separating the good, true, and beautiful from the rest of what is, such as self destructive behavior involving drug abuse, excessive alcohol consumption, and harmful sexual encounters. There is much in life's situations that invite and require individuals and groups to engage in critical thinking. The good life can only come about with engaging in critical thought to separate what one should do versus what is not good to do.

Ninth, students need to become proficient in creative thinking. The creative thinker perceives gaps in knowledge and skills presently being

emphasized. These gaps need synthesizing with unique ideas. Originality in thinking is needed to come up with inventions and ways of doing things that are judged to be effective and efficient. The traditional approaches in life may not work well and have become obsolete. Thus, the novel and the unique are so needed to move from what was to what should be. The what should be increasingly stresses growth, education, and development to a more ideal situation.

In Conclusion

Instructors need to emphasize in the instructional arena those principles of learning that promote all around student development. Classes taught and the experiences therein should equip students for responsible independence and lifelong learning. Accrued learning on the university level should enhance student well being and increase opportunities in the societal arena. A well rounded individual enhances the total experiences of all human beings in the environment. The university student who shows positive attitudes and achieves optimally enhances the self as well as others. Instructors in the university setting need to establish ideals for student achievement. These ideals become objectives that are worthwhile and achievable. The instructor provides well thought through learning opportunities for students to interact with. It is up to students to reach out and engage in a positive manner that which is attainable in order that objectives may be achieved. Self appraisal is an important factor in student achievement on the university level of instruction.

The instructor should obtain as much knowledge as possible pertaining to each student. This knowledge is to be used professionally by the instructor to do a better job of teaching. An inventory may then be developed by the instructor whereby the student lists personal interests. Here is an example:

- 1. What is/are your favorite hobby or hobbies?**
- 2. What are the strongest talents that you possess?**
- 3. Which interests do you pursue in your spare time?**
- 4. What do you like to read during your spare time?**

5. Which nations or places have you traveled to?

I find that student are rather modest in responding to certain items such as #2 above on "What are the strongest talents that you possess?" Trust and respect between students and instructors must be in the offing so that instructors may use knowledge of students to improve the higher education curriculum. For example, I have taught graduate and undergraduate classes in Teaching Social Studies in th Elementary School for thirty years. If a student responds with the talent of having sung solos at religious and civic organizations, I indicate to this student and to the class in how vocal music may be used in teaching the social studies. Thus, If elementary school pupils are studying a unit on "The Civil War," they may learn much by singing songs of the Civil War period of time. I show a listing of these songs to students in my graduate and undergraduate classes. When supervising these same students in student teaching, I have noticed how many incorporate their talents and interests in teaching elementary school social studies. The hobbies, talents, interests, as well as reading and travel experiences may very well be brought into units of study in social studies on the elementary school level.

At the beginning of my university level teaching experiences, I found out that I knew too little about each of my students. After these same students had been in my class, I learned that some performed in drama, instrumental music, and dance, among other areas. It was too late then to indicate to students how personal strengths can be used to improve the instructional arenas in the public schools. University professors should develop the best rapport possible with each student so that strengths possessed by learners may be used to improve university instruction.

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