

Teaching As Well As We Know How

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Whenever I go out as a researcher to talk to practitioners in the colleges, I am humbled by the story of the agricultural extension agent whose task it was to take the latest research findings to the farmers in the field. One day as he was waxing eloquent over how greater knowledge of research would improve the farmer's production, the tired old farmer looked at him and said, "Sonny, I don't farm half as well as I know how now."

That problem plagues us too; we don't teach half as well as we know how. Higher education, especially, has a long tradition of the sanctity of the classroom. The professor's classroom is his castle, and we have not often questioned what goes on there. When we talk about educational reform, we are talking mostly about changing the structures and procedures of education. We seem willing to discuss changing the grading system; we give serious consideration to flexible scheduling, and we are even willing to rethink the traditions of degree credit. What we are reluctant to talk about is changes in the content and methods of education.

The Carnegie Commission spent six years and six million dollars on a comprehensive study of higher education. The 40 volumes they produced talk about almost everything except the teaching-learning process. Or take another example: The largest group of change agents in higher education

today are the nontraditionalists, who for the most part are talking about new ways of delivering the old courses to a new clientele. And that's fine. I'm all for a learning society in which people of all ages and circumstances of life are engaged in continuous learning. What I regret is that increased access and new delivery systems should be the cutting edge of educational reform. I suggest that we need to give voice to the problems that we all know lie deep in the heart of the teaching-learning process.

I thought once that the reason we didn't talk much about what we teach in college and why was that there was high satisfaction and agreement about the content and purpose of a college education. Some research on the discrepancies between what people think colleges are doing and what they should be doing, however, cast considerable doubt on any assumed satisfaction with present content and curricular emphases.

Let me describe briefly the California goals study that was conducted last year by an ETS colleague, Dick Peterson. As part of a larger study, Peterson (1973) asked people who knew 69 community colleges well what they think their college is doing and what they think it should be doing. I converted the discrepancies between the is and should be rankings into a rough index of satisfaction. In general, there was high agreement among various groups of respondents, i.e., faculty, students, administrators, trustees and lay people in the local communities did not have different goals in mind for the college with which they were associated. Furthermore, the constituent groups agreed fairly well on what they were doing well and what needed improvement. As a general conclusion, I can state that people are more dissatisfied with what colleges are doing than with how they are run. Yet most of our time, locally and nationally, seems to be spent on procedural and administrative matters rather than on content

and instructional matters. We spend more time talking about how to get students into college or about how to take college to the students, for instance, than we do about what students should learn once we get hold of them.

Figure 1 shows the goals of community colleges ranked in order of their importance to their constituencies. Vocational preparation of students, for example, has first priority. The only constituent group that thinks it should be anything but No. 1 is the faculty, but they think it should be No. 2. The satisfaction index shown in the column to the far right shows an extremely low discrepancy between what people think their community college should be doing and what it is doing. In other words, people are very happy with the primary emphasis on vocational education in the community colleges of California.

At the other extreme is the goal of individual Personal Development which shows a very high discrepancy between the emphasis presently given it and what people think would be desirable. The column labeled "average" shows that on the average, people think it should rank between second and third in importance whereas present practices rank it eighth in priority. The satisfaction index of -41 indicates that we are not doing as much as we know we should about helping students to grow as human beings. The Personal Development scale of the IGI consists of four specific statements worded as follows:

To help students identify their own personal goals
and develop means of achieving them

To help students develop a sense of self-worth and
self-confidence

To help students achieve deeper levels of self-
understanding

To help students be open, honest, and trusting in
their relationships with others

I'm sure that most of us would agree that those are highly desirable goals--and most of us would admit that we don't do much about devising educational programs that are specifically designed to accomplish those ends. We somehow hope that a brush with the accumulated wisdom of the ages will result in self-understanding, self-confidence, and honest relationships with others.

The inadequacy of our present curriculum becomes even more apparent when we consider Goal 3 in conjunction with Goals 4 and 10--Intellectual Orientation which shows high dissatisfaction in the sense that we are not doing enough about it and Academic Development which shows high dissatisfaction in the sense that it is greatly overemphasized in the opinion of almost everyone.

It is important to caution you at this point that the data are presented in Figure 1 as priorities. If we were looking at absolute rather than relative ratings of goals, we would find almost everyone thinking we should be doing better at everything than we are doing. In other words, there is room for improvement in every goal assessed by the IGI. And that holds true even for Academic Development; most people think Academic Development is a valid goal of high importance. It is when people must make choices between goals, as we inevitably must, that the goal of Academic Development gives way to other priorities.

The goal of Academic Development has the highest dissatisfaction index of all. People think that community colleges are presently giving Academic Development 3rd priority whereas they would be happier if it were demoted to 9th priority. Academic Development is defined in the IGI by the following four statements:

To help students acquire depth of knowledge in at least one academic discipline

To ensure that students acquire a basic knowledge
in the humanities, social sciences, and natural
sciences

To prepare students for more advanced education,
e.g., at a four-year college

To hold students throughout the institution to high
standards of intellectual performance

It is my impression that these goals were rather universally accepted 15-20 years ago at the height of selective admissions and the meritocratic era of higher education. Academic excellence was the goal then, and most colleges were faced with a surplus of applicants from which they could pick and choose. But today, even quite traditional colleges and universities see broader missions for education. The data show that almost every constituent group of every type of college--community colleges, private and public four-year colleges, and the universities of California--think we are presently giving the goal of Academic Development more than its due, relative to other missions.

Significantly, I think, community college faculty and administrators are much more dissatisfied with the present emphasis on academic development than are faculty and administrators of four-year institutions. But students in the four-year institutions of California are as dissatisfied as the students in community colleges with the overemphasis on Academic Development. Thus students, who want a substantial deemphasis on the dissemination of information in the academic disciplines, and that seems to be most of them, will find greater receptivity to their desires in the community colleges than they will in the four-year institutions where the power structure of faculty, administrators, and governing board members is neither as dissatisfied with the present curriculum nor as united as community college constituents on where they wish to go in the future.

The disenchantment of many people with academic development as a primary goal of education should not be interpreted, as it sometimes is, as anti-intellectualism. The dissatisfaction index of -31 for Intellectual Orientation indicates that the constituencies of community colleges think that their college should move the emphasis on intellectual development from its present 9th priority to 4th or 5th priority. Intellectual Orientation is defined on the IGI by these four statements:

To increase the desire and ability of students to undertake self-directed learning

To train students in methods of . . . problem definition and solution

To develop students' ability to synthesize knowledge from a variety of sources

To instill in students a life-long commitment to learning

Especially in these times, with increasing talk about lifelong learning, few are going to dispute the priority given to self-motivated, self-directed learning which lies at the heart of the Intellectual Orientation scale. And yet, here is another worthy educational goal that we don't do much about--not because we don't think it is important--but because we really don't know how to instill a desire for lifelong learning in students.

Suppose, however, that instead of writing long-range goals that talked primarily about faculty qualifications and the arrangements and size of the college, we were to write goals that defined the outputs of college--what we want our students to be able to do. If we had a goal of instilling a commitment to lifelong learning, for example, would we teach as we do now? I think not. The sigh of relief that comes when students have "finished" their education and capped it off with a degree is all too familiar. They got what they came for; mission completed. Sad to say, the mission is all

too frequently the degree rather than the education that it represents.

Our present education lacks meaning to students as the human beings they are or would like to become. We don't stress personal and intellectual growth as much as we stress the mere accumulation of academic information that eventually comes to be used not for itself but for a grade, then a degree, then a better job. Education has become, so gradually that we fail to recognize it, a cold, frequently competitive, race without personal referent or meaning. The success of the term-paper industry is not so much a commentary on morality as it is on the complete distortion of the purposes and goals of education. To pay someone else to do your learning for you is to cheat yourself.

I don't resent the fact that a good education leads to better jobs. It should, but it should lead to better jobs because the education has made the person more competent to handle the job--not because the individual who excells in school is a superior person because he is a winner in the only competition society permits its youth.

The theme of this conference includes in parentheses the words "converting concepts into practice." I'm not quite sure why those words are in parentheses. My dictionary says that words set off in parentheses are either explanatory or a digression. Since I feel that converting concepts into practice in education is exactly what we should be doing these days, I'll assume that the remainder of my speech will not be a digression if I talk about how we might move toward helping students to grow personally and intellectually--about how to return education to its rightful place as something that takes place inside the student.

When we talk about developing self-understanding and self-worth or about instilling a lifelong commitment to learning, we are talking about

what the student is rather than what he knows--about internalizing knowledge so that it affects behavior. Take some examples: I can know about nutrition without that knowledge affecting my eating habits. I can know about defensiveness as a unit in psychology without such knowledge affecting how I relate to others. I can know that education must go beyond purveying academic information without changing what or how I teach.

Since there seems to be high agreement among educators that increased self-understanding is an important goal for education, we should be able to point to some learning experiences in college directed toward helping students understand themselves. Psychology, the science of human behavior, might be one obvious attempt to help students understand themselves through the content that we teach. But what is the first announcement any respectable psychology professor makes? Mine usually started off with a tough line that went something like this, "If any of you are in this class to gain insight into your own problems, let me assure you that this class will not help you." To suggest that what we learned in psychology could be applied by us in the real world was somehow to demean the academic discipline of psychology. It is a bizarre commentary on higher education that the pecking order of academe places the applied subjects at the bottom of the scale of prestige. Social work has less prestige than sociology; education less than psychology; engineering less than physics. In fact, the very word "academic" implies a removal from reality. To say that a question is academic means that it may be interesting to discuss, but it has no practical consequences. Well, I think knowledge should have practical consequences.

I suggest that almost every person and every subject would benefit from more intimate connections between academic study and applied practice. If we give high priority to the goals of helping students grow in self-under-

standing and interpersonal relations, then we need to teach as though we thought these things could be learned and applied. While we say that we are interested in teaching as well as we know how, we are extremely timid about teaching students anything that may affect them personally. In psychology, for example, we are relatively safe if we teach it so that the student makes no connection between himself and the subject matter. Chemistry, on the other hand, is a safe subject, and we can afford to do that well. We establish a chemistry laboratory, for example, to demonstrate the principles set forth in the text or lecture. Rarely do we create a human relations laboratory to demonstrate the principles of human behavior. The assumption has been that while mixing acids is safe for college students, mixing people in small action groups is not. There is some danger in the chemistry laboratory, of course, but we attempt to minimize the danger by having it supervised by a responsible professional, and there are some mixtures and some processes that are not permitted because of their danger. The analogy is obvious. There is some danger in exposing students to themselves in T-groups, but a carefully designed educational program supervised by a responsible professional should minimize the danger for the few, and it could result in some quite rich learning experiences for the many.

Most good academicians will ask at this point, where is the research that demonstrates the effectiveness of human relations laboratories? And it must be admitted that the research on T-groups has been equivocal and ambiguous. But let us humbly admit that the research on the effectiveness of traditional education is equally equivocal and ambiguous. To take a vivid example, I know of no research evidence that supports the classroom lecture as an effective learning procedure. And yet, because of its familiarity, we have ceased to question its lack of effectiveness.

T-groups and their more disreputable cousins, encounter groups and sensitivity training, have had a bad press--partly because of the over-exhuberance of early converts and partly because the enormous demand on the part of the public for this type of education has spawned some opportunists, some frauds, and some sincere but misguided adventurers. But there is an obvious unfulfilled need among the citizenry of this country to understand themselves and their relationships to others. Carl Rogers (1969) labels the small group experience "the most important social invention of this century . . ." and asserts that "The demand is utterly beyond belief (p. 6)." And indeed, it is estimated that in recent years, between three and six million people have participated in encounter or sensitivity groups (Appley and Winder, 1973). That is about two-thirds the total enrollment of higher education. But to date, only a few schools and colleges have attempted to meet this demand responsibly.

Laboratory education or T-groups is not everyone's cup of tea. It requires professional experience, community support, and careful design to present small-group experience as an educational (as opposed to therapeutic) program. But some imaginative community college teachers and counselors have modified the T-group procedure so that it is useful as an educational experience. By adding structure and control, attention can be directed to specific human relations skills. The addition of structure also reduces the likelihood of unexpected situations which require a high level of professional expertise. The T-group, some forms of which are appropriately labeled sensitivity training, places a heavy emphasis on feedback. People need to know how they affect others if they are to improve their interpersonal skills. Thus the group atmosphere needs to be both honest and trusting.

The supportive group may be especially important to New Students. And

some community colleges are using small groups more for their psychological support functions than for their facilitation of feedback. The human potential movement, for example, accepts as its goal the building of self-confidence. The research is not yet adequate to show whether the experiences provided by human potential seminars result in increased self-confidence or not, but there is little likelihood that emphasizing the strengths of New Students will hurt anyone, and it is possible that the experience may prove highly beneficial to some.

Two other tools should be mentioned as candidates for the human relations laboratory--roleplaying and simulation games. Roleplaying has been used most frequently to provide a window to the feelings of others. To play the role of a black person in a white society or of a woman in a man's world gives reality to the experience that cannot be gained through reading or listening to a lecture on prejudice and discrimination. Historically, roleplaying was introduced as an aid to understanding human behaviors, but both roleplaying and simulation games can be used in a variety of subject matter areas. Simulation games can make for fascinating involvement in some of the great events of history, for example, and roleplaying has been used by teachers of literature with great success--especially with disadvantaged learners who can put themselves into the situation with a reality that doesn't come through in more traditional approaches to the teaching of literature.

If we believe that personal development can be fostered as a function of education rather than left to chance, we will have to begin to develop our own expertise as an educational community. It is unfortunate that some of the new programs in personal development have not been subjected to more rigorous research and evaluation. Some of the new techniques are promoted by entrepreneurs who manage to make a cult or a fad out of methods that should be

open to experimentation and subject to improvement by everyone who tries them. There is no reason why colleges willing to experiment with human relations training should not conduct their own careful evaluations, making improvements where possible and passing their experience on to others. There is a tendency, it seems to me, for community colleges to be intimidated by the presumed expertise of some charismatic workshop promoters. I think it is safe to say that no one knows enough about the enormous complexities of human behavior to pose as expert. We need to develop the spirit of responsible experimentation, careful evaluation, and open communication if we are to make headway in helping students toward personal growth and maturity.

I started this speech with a presentation of research that indicated that there is a strong desire on the part of the constituencies of community colleges to help students understand themselves and their place in a world populated by human beings. I have suggested that if we are serious about the goal of personal development, we should take some bold steps to develop programs and experiences in human relations and self-understanding.

Let me move now to a discussion of approaches that might be considered if we are serious about correcting our second major dissatisfaction with present educational practices. The California goals study indicated that most educators and most students are dissatisfied with the intellectual orientation that we provide for students. According to the data, we believe that we should do more to instill a commitment to lifelong learning and to help students undertake self-directed learning. If we truly believe that, then we better be about giving students some practice in directing their own learning and enjoying it enough to continue even when the external motivators of tests, grades, and degrees are withdrawn.

Sad to say, we don't have much experience with self-directed learning. And it is only recently that we have recognized learning as a continuous adult activity. Margaret Mead has said that no one will live their life in the same world in which they were born. Learning is going to be a requirement for living successfully with escalating change. Since historically schools were designed long ago for an age in which only dependent children went to school, our techniques consist largely of telling learners what to do and when to do it and checking to see that they have done it. Furthermore, schools were designed for groups. For the sake of efficiency, we must move the group along at the same pace even though we know that it will result in boredom for some and lack of satisfaction for others--hardly a procedure designed to stimulate enthusiasm for lifelong learning.

But exciting things are happening to individualize education and to give students more control over their own learning. Although the extent of use of individualized learning systems is still tiny, its potential is enormous. What we have discovered is that the teacher need not--indeed should not--do all the work. Computers, peer tutors, self-teaching media and programmed texts have all been recruited to perform specialized functions. We are only beginning to put the student at the center of control with increasing responsibilities for the direction of his own learning.

Since I can't possibly talk about all of the interesting innovations that are taking place in classrooms across the country today, I want to illustrate the central idea of individualized learning by a brief description of one plan that seems to incorporate most of what we know about how people learn. It was devised and put into practice by a psychology professor whose specialty is the psychology of learning. (It is scary to contemplate how many experts in the psychology of learning have come and gone without ever

applying their knowledge to their practice.) Fred Keller got the attention of his colleagues in 1967 by an address cleverly but inaccurately entitled "Good-By Teacher . . . (Keller, 1967)." In it, he proposed a classroom strategy that has become known as the Keller Plan, but there are many variations on the theme. Individualized, personalized, or modular instruction, self-paced learning, contingency contracting, and PSI are all names used to designate a learning approach designed for individuals with their infinite variety of learning styles.

The new approaches to individualized learning have some features that distinguish them from conventional instruction. Briefly summarized they are as follows:

- 1) The course is broken into smaller units or modules with objectives made explicit to the students.
- 2) The course is self-paced, permitting the student to proceed at a speed commensurate with his ability and other demands on his time.
- 3) Mastery learning is stressed. The student can go ahead to new material only after demonstrating mastery of the prior unit.
- 4) Lectures are optional and are used to motivate rather than as sources of critical information.
- 5) Peer tutors are used to administer and correct mastery tests and to work individually with students to enhance the personal-social aspects of education.

The learning principles incorporated are apparent. The small unit permits frequent feedback and positive reinforcement. Individual differences are acknowledged in the self-paced feature. Mastery learning recognizes that education is a gradual building process and that the self-satisfaction of completing a task is important to continued motivation. Peer tutors recognize the human need for personal-social interaction.

The Keller Plan may be one of the first major educational innovations

to make it across the threshold of the classroom door. Usually educational innovators concentrate their energy on system design and new programs that can be implemented despite the resistance or indifference of entrenched faculty. The speed with which the Keller Plan has spread across a wide variety of subjects and institutions is heartening, as is the research showing generally positive results for content learning, retention, critical thinking, and student enthusiasm (University of Tennessee, 1974). It is truly amazing that it took us so long to apply academic knowledge about learning to our own classrooms.

I have addressed myself today to two aspects of education. I have suggested that we should rethink what we teach and how we teach it. If we believe, as we say we do, that self-understanding and interpersonal relations are valid goals for postsecondary education, then let us devise the programs that we think will accomplish those goals. If we believe, as we say we do, that students should learn to appreciate and direct their own learning, then let us start them on the road to lifelong learning by giving them some practice in self-direction.

Neither human relations laboratories nor personalized instruction are panaceas for the multiple ailments of education. But they are surely steps in the right direction. They confront the problems that we know exist, and they are a beginning toward teaching as well as we know how.

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COMMUNITY COLLEGE GOAL PRIORITIES

SHOULD BE RANK	IGI GOAL		Fac.	Day Stud.	Eve. Stud.	Adm.	Pres.	Gov. Bd.	Lay Com.	Total	Ave SB Rank	Sat.
1	Vocational Preparation	IS	1	2	2	1	1	2	2	11	1.4	-3
		SB	2	1	1	1	1	1	1	8	1.1	
2	Community	IS	7	4	3	3	2	1	3	23	3.2	-7
		SB	1	3	3	2	2	2	3	16	2.2	
3	Individual Personal Development	IS	8	10	10	8	7	6	10	59	8.3	-41
		SB	3	2	2	3	3	3	2	18	2.4	
4	Intellectual Orientation	IS	11	8	7	10	10	11	8	65	9.2	-31
		SB	4	4	4	6	6	6	4	34	4.6	
5	Meeting Local Needs	IS	2	6	6	2	3	3	5	27	3.6	+14
		SB	5	12	6	4	4	5	5	41	5.6	
6	Intellectual/Aesthetic Environment	IS	12	12	11	12	12	7	9	75	10.5	-19
		SB	8	8	9	9	8	7	7	56	8.0	
7	Democratic Governance	IS	9	9	8	6	6	5	7	50	14.2	+8
		SB	6	6	10	8	9	8	11	58	8.2	
8	Innovation	IS	10	11	13	11	11	12	12	80	11.3	-20
		SB	7	11	11	5	5	9	12	60	8.4	
9	Social Egalitarianism	IS	3	7	9	5	8	10	11	53	7.4	+9
		SB	9	10	8	7	7	11	10	62	8.6	
10	Academic Development	IS	4	1	1	4	4	8	1	23	3.2	+44
		SB	12	9	5	12	13	10	6	67	9.4	

COMMUNITY COLLEGE GOAL PRIORITIES

SHOULD BE RANK	IGI GOAL		Fac.	Day Stud.	Eve. Stud.	Adm.	Pres.	Gov. Bd.	Lay Com.	Total	Ave SB Rank	Sat.
11	Humanism/Altruism	IS	13	14	12	13	13	13	13	91	13.0	-24
		SB	11	7	7	11	10	12	9	67	9.4	
12	Accountability/Efficiency	IS	6	5	5	9	9	4	4	42	6.0	+33
		SB	13	15	14	10	11	4	8	75	10.5	
13	Freedom	IS	5	3	4	7	5	9	6	39	5.4	+41
		SB	10	5	13	13	12	13	14	80	11.3	
14	Public Service	IS	15	15	15	14	14	14	15	102	14.4	-8
		SB	14	13	12	14	14	14	13	94	13.3	
15	Social Criticism/Activism	IS	16	18	18	16	16	16	16	116	16.4	-6
		SB	16	14	16	16	16	16	16	110	15.5	
16	Cultural/Aesthetic Awareness	IS	14	13	14	15	15	15	14	100	14.2	+12
		SB	15	18	19	15	15	15	15	112	16.0	
17	Off-Campus Learning	IS	17	19	19	17	17	17	19	125	17.6	-6
		SB	17	17	17	17	17	17	17	119	17.0	
18	Advanced Training	IS	19	16	16	18	19	19	17	124	17.5	+1
		SB	19	16	15	19	19	19	18	125	17.6	
19	Research	IS	18	17	17	19	20	18	18	127	18.1	+5
		SB	18	19	18	20	20	18	19	132	18.6	
20	Traditional Religiousness	IS	20	20	20	20	18	20	20	138	19.5	-2
		SB	20	20	20	18	18	20	20	136	19.3	

Source: Derived from data in Peterson, R. E., Goals for California Higher Education: A Survey of 116 Academic Communities, Princeton, N.J.: Educational Testing Service, 1973.