

relationship between Delta Tau Alpha and Alpha Zeta, the other national honorary fraternity found mainly in institutions in the National Association of State Universities and Land-Grant Colleges.

A new idea has come up this year, and let's pursue it. In several states institutions teaching agriculture have developed state organizations. Such organizations are relatively new. I have received inquiries about making these state organizations affiliates of NACTA. The first inquiry came from the State of Minnesota. I know that several states, Colorado, Illinois, and others have such organizations or relationships, which might very well tie into NACTA.

We have many dedicated and loyal members in our organization. I need not name these men — you know them. However, we need more members and more dedication. We must involve more staff members in two-year and four-year institutions; men who will take the time to promote the ideals and goals of NACTA. It's as simple as this if NACTA is to succeed.

It is a pleasure serving as your President this year, and now on with the conference, and with the many challenges which are ours to improve college teaching of agriculture.

Instructional Media, Colorado State University and Community Junior Colleges

J. Patrick Jordan, Associate Dean, College of Natural Sciences, Colorado State University
Garnie Johnson, Assistant Director of Admissions and Records, Northeastern Junior College

The following is an abstract of the presentation by the above participants.

Project BioCO-TIE is a statewide cooperative program among the two-year colleges of the State of Colorado and Colorado State University. Its purpose is to assist the junior and community colleges in their endeavor to provide for their sophomores the second-year of a Core Curriculum in Biology as developed at Colorado State University ("Population and Community Biology," "Cell Biology" and "Cellular and Developmental Biology").

The vehicle for presentation of materials will be television video tapes which are produced in color, making use of visual aids specifically designed for this medium employing studio production techniques. The tapes will average only twenty-five minutes each and thus will occupy only one-half of the scheduled class period. The system will also be utilized to augment and support the laboratory experiences which are extensive, particularly in the latter two courses.

Only a limited amount of laboratory equipment is requested for the participating two-year colleges because Colorado State University will make its facilities and laboratories available for periodic intensive use by students from the participating institutions. Additional audio visual support will be provided through the development and duplication of materials for auto-tutorial booths which have been designed and built at Colorado State

University. The content and effectiveness of the program will be evaluated not only internally among the participating institutions but externally through an Evaluation Committee organized through the American Institute of Biological Sciences' Office of Biological Education.

Project BioCO-TIE provides a vehicle by which the junior and community colleges of Colorado can markedly increase the effective talent available to teach biology in each institution by pooling the resources of the junior colleges/community colleges and by utilizing the personnel and resources of Colorado State University. Members of the biology department at the University of Colorado have offered their services as a source of talent as well. Such cooperation, developed in an atmosphere of true collegiality, will clearly intensify the effectiveness of teaching in biological sciences because it is based upon mutual respect. This program includes a mechanism through which teachers from both the participating two-year colleges and their satellite secondary schools can obtain credit towards the Master of Arts for Teachers degree.

A number of obvious benefits accrue from the continuity of course offerings that this program will provide since ease of transferability of credit from one institution to another, even those outside the State of Colorado, will be assured.

SOCIAL RESPONSIBILITIES IN TRAINING NONDEGREE STUDENTS

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My topic today has to do with the social responsibilities in training non-degree students. My plan for discussing this topic includes three parts — first, I plan to present some comments on the democratization of higher education, which I regard as a social responsibility. Secondly the context of this process — the community junior college which is a societal invention and finally to comment concerning the future and what might lie ahead for students, training programs and our collegiate educational institutions.

1. The democratization of higher education.

Throughout the world today, in almost all countries, a revolution is and has been unfolding in education, one that can be summed up in one word: Democratization. This educational revolution that we call democratization seeks to eliminate all restrictions upon educational opportunity, whether based on class, economic status, race, or on a quota system imposed by the professions. Its idealized goal is the dedication of the formal system of education to the full development of the talents of

each person. Its practical task is to relate individual development to an expansion of opportunity within the society. The underlying cause of the revolution is the same in all countries. The rates of social and technological change and of population growth have outstripped the rate of educational development, producing visible inequities and inadequacies within almost all educational systems.

The form of the revolution varies from country to country, depending on the development of its educational system, but its target is always the barrier or barriers that separate the universal level of education from the next higher level. In some countries the barriers are social, in some academic, in others racial, in others geographic, and in still others, financial. In fact, in the United States, or in Colorado specifically, four prominent barriers to access to higher education exist, all of which are social responsibilities of a type — financial, academic, geographic and motivational.

Whatever the barriers are, the democratization revolution attacks them where it finds them.

The course of the revolution has so far depended on the reaction of the educational establishment. Some systems have resisted *revolution*. Other systems (which have perhaps come closer to understanding the purpose of the revolution) have formed new institutions, notably community junior colleges, changed structures (non-traditional education, university without walls, College Level Examination Program, etc.) and extended educational benefits in careful efforts to eliminate barriers to equal educational opportunity.

It must be said that much of the effort has been of the nature of trial and error. Taking all successes and failures into account, however, there has been a tremendous net change in the openness of educational opportunity for all.

The educational expansion we are presently undergoing has and will continue to have in it a very strong aspect of social promotion.

The introduction of the concept of the college as an instrument of social promotion does not necessarily change the method or content of instruction — although it probably will do so — but it does change the institution's responsibility for the student. If individual differences are to count in the development of students, the colleges must supply services — remedial instruction for students who do not keep up with the work, guidance to direct them into the studies for which they are best equipped, health services to safeguard their well being, welfare services to compensate for home conditions, and social education to help adjust them to their environment. Additionally, since approximately 80% of the expanding job opportunities in our society require less than a baccalaureate degree, the necessity for relevant short term courses and longer term occupational programs for non-degree students and others is amplified.

The change in the school's responsibility, which now requires it to support the students in a variety of ways, coupled with the conspicuous easing of admission to both secondary and higher education, have swept away the barriers which every traditional system erects to control the movement of individuals between educational levels.

It should be noted, however, that the onset of democratization in education (or the triumph of the educational revolution) does not mean the end of certain forms of selection, scholarship, standards, rules, procedures, training and education of the individuals who will eventually take on leadership roles and responsibilities. What it does mean is that the search is on for new ways of accomplishing the multiplicity of educational tasks necessary in higher education. If these ways are found, and I submit they have been found via and in the comprehensive community junior college, then our institutions of higher education will continue to reach higher achievements than ever before.

Okay, with the parameters and concept of the social responsibility of democratization established; let me move to what I believe is the context for and of democratization — the community junior college.

2. The community junior college today is necessary. It has emerged out of societal needs and aspirations. These are the sources of its identity.

The first public community junior college was opened in Joliet, Illinois shortly after the turn of the century and thus was launched an American educational institution that has brought about democratization of higher education through removal of barriers and expanded educational opportunity for all.

Presently Colorado has 12 community junior colleges located on 15 campuses. In 1967 the enrollment in Colorado two-year colleges was approximately 7,000 students. Last fall enrollments were in excess of 25,000 and we anticipate about 30,000 students in these institutions this coming fall. These figures represent 20-25% of all students in Public Higher Education and within this decade we expect one out of every two students will be in community junior colleges.

Our community junior colleges mean many things. For some, they may mean the best, if not the only hope for educational experience beyond the high school. For others, they may represent the best means to a baccalaureate degree and perhaps eventual graduate study in a professional field.

For still others, the community junior college may mean the chance for experience and training that will lead to satisfying jobs in a wide range of fields — non-degree students as well as degree students in short term and longer term courses and programs. These two-year colleges come in all shapes and sizes. Some are located in the heart of great urban centers, some in rural communities, many in small towns across the country. While they may differ in size and scope of operations, they have one characteristic in common. That is the fact that they represent "opportunity" for the many as well as the few. They mean many things to many people. Bright students, average students, non-degree students, home-makers, businessmen, policemen, farmers — there is something for everybody in the community junior college.

Thomas Jefferson once wrote "Society will never reach a state of perfection. However, mankind can achieve great improvement and the diffusion of knowledge among the people is the instrument by which it can be effected." It is my conviction that the community junior college, as it further evolves during the decade, will truly become the principal American institution for providing the "diffusion of knowledge among the people" including all of the people that Jefferson valued so highly.

Public interest in our institutions during this decade will be captured by the ways in which our institutions relate to man's most compelling problems. If this is to be done, radical change is required in many of our present concepts, definitions and structures. In the sixties, we developed resources, experience and an independent spirit. Now these resources must lead us to change.

The mission before us is to discover how our resources can be utilized as the young people and adults in the areas we serve discover their own identities.

It becomes apparent now that the democratization of higher education has occurred and is deeply embodied in the community junior colleges of this nation and of the State of Colorado. Also, it is clear that change has occurred and need for continued change has been identified.

So, where do we go from here — what does the future hold for you, for prospective non-degree students and others who follow.

The final phase of my comments is designed to answer this question and represent a posture on which I wish to conclude my remarks. A very recent book by Alvin Toffler entitled *Future Shock* deals with future ideas and concepts that I feel are fitting and appropriate as they reflect some clues for the future which we as educators, with certain social responsibilities, need to be aware of and sensitive to.

The book, *Future Shock* is about what happens to people when they are overwhelmed by change. It is about the ways in which we adapt — or fail to adapt — to the future. It is designed to help us come to terms with the future — to help us cope more effectively with both personal and social change by deepening our understanding of how men respond to it. Toward this end, it puts forward a broad new theory of adaptation. Successful coping with rapid change will require most of us to adopt a new stance toward the future, a new sensitive awareness of the role it plays in the present.

The technology of tomorrow requires not millions of lightly lettered educated men, ready to work in unison at endlessly repetitive jobs, it requires not men who take orders in unblinking fashion, aware that the price of bread is mechanical submission to authority, but men who can make critical judgements, who can weave their way through novel environments, who are quick to spot new relationships in the rapidly changing reality. It requires men who, in C. P. Snow's compelling term "have the future in their bones."

Unless we capture control of the accelerative thrust — tomorrow's individual will have to cope with even more hectic change than we do today. For education the lesson is clear; its prime objective must be to increase the individual's "copability" — the speed and economy with which he can adapt to continual change; and the faster the rate of change, the more attention must be devoted to discerning the pattern of future events.

To create a super-industrial education, therefore, we shall first need to generate successive, alternate images of the future —

assumptions about the kinds of jobs, professions and vocations that may be needed twenty to fifty years in the future; assumptions about the kind of family forms and human relationships that will prevail; the kinds of technology that will surround us and the organizational structures with which we must mesh.

Thus, two cardinal tasks of education will be to create curiosity and awareness. To develop an education that will insure this curiosity is the third, and perhaps central, mission of the super-industrial revolution in the schools of the future.

Education must shift into the future tense.

A similar and related charge was issued by Abraham Lincoln

in his annual message to Congress, December 1, 1862. He delivered these words: "The dogmas of the quiet past," he said, "are inadequate to the stormy present. The occasion is piled high with difficulty and we must rise – with the occasion. As our case is new, so we will think anew and act anew. We must disenthrall ourselves and then we shall save our country."

Individuals associated with the National Association of Colleges and Teachers of Agriculture, here today, have a new case so they, as we, must think anew and act anew and disenthrall ourselves in order to rise with the occasions of the future.

Good luck.



Where the real work is done



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Economic Responsibilities in Training Nondegree Students

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As I look at the economic responsibilities involved in training non-degree students, I see several aspects of a topic which I am sure we all have given some thought to at some point in time, but which may have never had full meaning to us as educators.

You have heard the arguments that it may cost more per year to prepare a non-degree, occupational student than a baccalaureate or liberal arts major: or that the occupational student is out earning a living much sooner and has a greater lifetime income expectancy than the average bachelor's degree holder.

This year in particular, but in past instances I can cite as well, students prepared in non-baccalaureate programs are just as eligible and qualified for certain positions as are bachelor degree holders. In fact, more and more frequently these latter people are finding that if they want employment, they will have to compete for jobs that are open to the students who have completed good vocational-technical programs. These all represent aspects of one kind of economics.

Another kind of economics often thought of are those which are brought to light each year around budget time. How many tax dollars are being spent? For what are they being spent? Is the best possible use being made of monies expended in non-degree programs?

Often, unfortunately, principles of crisis management are applied in such instances. An example that is very real and very recent has occurred in this (Colorado) state. A high-cost occupational program was challenged in a public school recently because only fifty students were benefiting from it. In the face of a probable tax increase within the district, the taxpayers thought this was one of the first things that should be eliminated. What wasn't accounted for was that there was far more economic advantage in continuing to train even the fifty students in question

and get them into the mainstream of business and industry than to turn them out – push them out – or let them drop out unemployed or welfare recipients. I know that you have heard this all before, but in all seriousness I ask you, "What is the economic advantage of your program?" Have you ever figured it? I would wager that your efforts would mean a lot more to you if you would.

Now I would like to take some time to speak of another kind of economic responsibility – that in which student time and benefit is considered.

The annual report of the state advisory council for vocational education in Colorado cited several problems which should be dealt with in this state as programs relate to state and national goals. None of the problems cited were related to spending too much money. One, however, certainly had some implications for how money was spent and here now we open a whole new aspect – time economics. The problem stated was that (and I quote), "The image of vocational education, while perhaps improving, still has the stigma attached to it of being for 'somebody else's children.' Such an image results from a lack of information or from misinformation about vocational education programs."

I would like to relate this problem, which I am sure is not one in Colorado alone, to a term that we had all better take a hard look at – "accountability." Or, to use a term in another sense, mission control.

The March 1971 issue of *Junior College Journal* dealt with educational accountability as a crucial problem. The preface to an article written by Bennett Jordan reads, "A better educational system within a method of quality control is an end result of being accountable in an educationally defensible way." How many of us even hazarded a guess five years ago that the day