DOCUMENT RESUME

ED 063 459 08 VT 014 939

AUTHOR	Gorman, Anna M., Ed.; And Others
TITLE	Annual National Vocational and Technical Teacher Education Seminar Proceedings (5th, Atlanta, Ga., Oct. 25-28, 1971): Assessment of Graduate Programs. Final Report.
INSTITUTION	Ohio State Univ., Columbus. Center for Vocational and Technical Education.
SPONS AGENCY	National Center for Educational Research and Development (DHEW/OE), Washington, D.C.
REPORT NO	Leadership-Ser-35
BUREAU NO	BR-7-0158
PUB DATE	Mar 72
GRANT	OEG-3-7-000158-2037
NOTE	181p.
AVAILABLE FROM	The Center for Vocational and Technical Education, The Ohio State University, 1900 Kenny Road, Columbus, Ohio 43210 (limited number, complimentary)
EDRS PRICE	MF-$0.65 HC-$6.58
DESCRIPTORS	Conference Reports; Educational Accountability; *Graduate Study; Leadership Training; *Program Effectiveness; Program Evaluation; *Seminars; *Teacher Education; Technical Education; *Vocational Education; Vocational Education Teachers

ABSTRACT

A total of 126 leaders in vocational and technical education from 44 states and the District of Columbia participated in a 3-day seminar conducted to focus attention on the concepts of evaluation and accountability in graduate programs in vocational education. Reaction panels and discussion groups were stimulated by these major presentations: (1) "Philosophical Design for Graduate Programs in Vocational and Technical Education" by G. Swanson, (2) "Improving Programs to Prepare Leaders in Vocational and Technical Education" by J. A. Culbertson, (3) "The Evaluation of General Staff Officers Programs in the United States Army" by I. Birrer, (4) "The Evaluation of Management Level Training Programs at the A.T. & T. Company" by R. J. Campbell, (5) "Model for Evaluation of Graduate Programs in Vocational Technical Education" by R. Hammond, and (6) "Accountability for Graduate Programs in Vocational and Technical Education" by H. Landrith, C. Schaefer, and J. Struck. Tests of the presentations and summaries of the two group sessions are included in the publication. (SB)

MISSION OF THE CENTER

The Center for Vocational and Technical Education, an independent unit on The Ohio State University campus, operates under a grant from the National Center for Educational Research and Development, U.S. Office of Education. It serves a catalytic role in establishing consortia to focus on relevant problems in vocational and technical education. The Center is comprehensive in its commitment and responsibility, multidisciplinary in its approach and interinstitutional in its program.

The Center's mission is to strengthen the capacity of state educational systems to provide effective occupational education programs consistent with individual needs and manpower requirements by:

- Conducting research and development to fill voids in existing knowledge and to develop methods for applying knowledge.
- Programmatic focus on state leadership development, vocational teacher education, curriculum, vocational choice and adjustment.
- Stimulating and strengthening the capacity of other agencies and institutions to create durable solutions to significant problems.
- Providing a national information storage, retrieval and dissemination system for vocational and technical education through the affiliated ERIC Clearinghouse.

LEADERSHIP SERIES NO. 35

FIFTH ANNUAL NATIONAL VOCATIONAL AND TECHNICAL TEACHER EDUCATION SEMINAR PROCEEDINGS

Assessment of Graduate Programs

October 25-28, 1971
Atlanta, Georgia

EDITED BY

ANNA M. GORMAN

JOSEPH F. CLARK

BENTON E. MILES

The Center for Vocational and Technical Education
The Ohio State University
1900 Kenny Road
Columbus, Ohio 43210

MARCH, 1972

A FINAL REPORT
ON A PROJECT CONDUCTED UNDER
PROJECT NO. 7-0158
GRANT NO. OEG-3-7-000158-2037

U.S. DEPARTMENT OF
HEALTH, EDUCATION AND WELFARE

Office of Education
National Center for
Educational Research
and Development

SEMINAR AWARD

Is Recognized for

Dedication to keeping abreast of current developments in vocational-technical teacher education as exhibited by consistent attendance at the annual national vocational-technical teacher education seminars sponsored by The Center for Vocational and Technical Education, The Ohio State University.

President, The Ohio State University

Director, The Center for Vocational and Technical Education

Date

Recipients

Dr. Willard M. Bateson
Professor, Industrial Education
College of Education
Wayne State University
Detroit, Michigan

Mr. James E. Finical
Teacher Educator
Distributive and Office Education
Eastern New Mexico University
Portales, New Mexico

Dr. Vera P. Tisdale
Assistant Professor
University of Alabama
University, Alabama

PREFACE

Two hundred and twenty-six leaders in vocational and technical education from 44 states and the District of Columbia participated in the Fifth Annual National Vocational and Technical Teacher Education Seminar. The purpose of the seminar, conducted October 25-28 in Atlanta, Georgia, was to improve the effectiveness of graduate programs in vocational education. Attention was focused on the concepts of evaluation of and accountability for this area.

Nationally recognized authorities presented models and alternative procedures for assessment of graduate education programs which were discussed and applied. This publication includes the texts of the presentations and summaries of the two group discussion sessions.

Appreciation is expressed to the Honorable Jimmy Carter, Governor of the State of Georgia, and to George W. Mulling, State Director of Vocational Education for the State of Georgia. Recognition is given to the group discussion leaders who conducted and reported the group deliberations. A special thanks is due the program planning consultants and the program planning committee who helped to guide the development of the seminar. Special notice is given to the following Center staff for their contributions in the conduct of the seminar: Anna M. Gorman, project director; Joseph F. Clark, research associate; Darrell Ward, coordinator; Calvin J. Cotrell, Edward Ferguson, Jr., William Hull, and Benton Miles who served as session presiders; and Sidney Borcher who guided the seminar's group discussion activity.

Robert E. Taylor
Director
The Center for Vocational
and Technical Education

INTRODUCTION

The Fifth Annual National Vocational and Technical Teacher Education Seminar was held in Atlanta, Georgia, October 25-28, 1971. The theme of the seminar was Assessment of Graduate Programs in Vocational and Technical Education with focus on (1) the evaluation of and (2) the accountability for these programs.

Information on existing models for evaluating leadership programs was presented and served as bases for group discussion. Models related to accountability for graduate programs in vocational-technical education were introduced and critiqued in group discussion sessions.

During the planning sessions for the seminar a determination was made to inaugurate several special program features. A keynote address was also delivered at the closing session; awards were presented to individuals for their devotion to keeping abreast of educational developments as evidenced by attending all of the seminars; and the sessions were recorded so cassette tapes could be made available for purchase by interested educational personnel.

The seminar began Monday evening with a keynote address on the philosophical bases for evaluation of graduate programs. On Tuesday morning, presentations were given describing models for evaluation of leadership programs in institutions other than higher education. Implications from these presentations for graduate programs in vocational-technical education were made by a panel. On Tuesday afternoon, a model for the evaluation of graduate programs in education was given. The components of this evaluation model include curriculum, internships and other types of experience activities, student selection, and faculty performance. Group participation followed with particular attention to pertinent questions.

On Wednesday, the concept of accountability for graduate programs in vocational-technical education was explored through the presentation of "blue sky" position papers. Group participation followed.

On Thursday, recent graduates of vocational graduate programs assessed the impact of these programs on their present position effectiveness. The final presentation and the second keynote address was a paper dealing with "Improving Programs To Prepare Leaders of Vocational and Technical Education."

The following collection of scholarly papers are presented to the reader with the hope that they will contribute to more effective and efficient graduate program development in vocational and technical teacher education.

Anna M. Gorman - Seminar Chairman

Joseph F. Clark - Research Associate

Bud E. Miles - Research Associate

ACKNOWLEDGEMENTS

Program Planning Consultants

Joseph Arnold
James D. McComas
Don Neff
Carl Schaefer
Gordon Swanson

Program Planning Committee

Joseph Arnold
Sid Borcher
William Hull
A. J. Miller

Discussion Group Leaders

Aleene Cross
Mary Helen Haas
Cas Heilman
Margaret Johnson
L. C. McDowell
Steve Lucas
Mary Marks
Warren Meyer
Lucille Patton
Thomas White

CONTENTS

FIFTH ANNUAL NATIONAL VOCATIONAL AND TECHNICAL TEACHER EDUCATION SEMINAR PROCEEDINGS

Assessment of Graduate Programs

CHAPTER I

OPENING SESSION

Welcome

The Honorable Jimmy Carter
Governor, the State of Georgia
Atlanta, Georgia

Good friends of Georgia and distinguished visitors to Georgia, I've always been interested in education. Several years back we set up, at Wesleyan College in Macon, a special program for the brightest 400 high school students in Georgia called the Governor's Honor Program. They had me down to make a speech, and I thought about it on the way out here tonight. I was the main speaker and the title of my speech was "Planning a Life's Career." These young people had been studying philosophy, advanced physics, and mathematics; but at one point in their eight weeks special course, they stopped to spend a whole day interviewing different people who were airline stewardesses, pilots, engineers, school teachers, and others. Now, I was the final speaker of the evening. The young man who introduced me had done a great deal of background work on my career. He got up and said how grateful all of them were to have the then Senator Jimmy Carter to come from Plains to tell them about planning a life's career. He said that I was born in Plains, Georgia, was graduated from Plains High School and then went to Georgia Southwestern College, where he said I studied chemistry. Then he said I went to Georgia Tech and studied engineering, then to the United States Naval Academy and was graduated with a degree in marine engineering science. Then he said I did graduate work in nuclear physics, he said I now grown peanuts for a living and he said I was here to tell them how to plan their life's career. Well, my speech was over before I got the audience back.

I don't know of anything we need more than to establish the closest possible lines of communication between those of you who are responsible for providing us with teachers, instructors, and professors; who prepare our young people for a life of work gratification, usefulness, fulfillment, and dignity: and those of us in public life who are responsible for making decisions about budgets, state governmental structure, ultimate goals, long-range plans, and so forth. Sometimes it's difficult to establish the

proper kinds of communication and it's not just between different kinds of professionals. Mr. J. W. Fanning is a great person. He's been Vice-President of the University of Georgia for quite a while, and is responsible for taking the University of Georgia and letting its influence be felt at every local governmental-community level in Georgia. He likes to tell a story about two young men who had trouble communicating with their daddy. They had a very strict father; he never did permit them to do anything out of the ordinary, and if they did the slightest thing different from what he told them, he would punish them severely. But, when their daddy wasn't around, they were a little more free with their actions. One day their daddy walked into the house and the mother and children were in the living room, and he heard the boys using some pretty foul language and slang in front of their mama. That night when the boys went to bed, their daddy went up to them and said, "Boys, I'm not ever going to warn you again, do not use slang language in this house and particularly in front of your mother." And the boys said, "No, sir, daddy, we won't do it." And, they didn't intend to. But, the next morning they got up pretty early and went down to breakfast and they were sleepy. The first thing the older boy said was, "Pass me some of them durn grits." His daddy didn't say anything; he just reached over and slapped him, alongside the face, not too hard, but the older boy got overbalanced and fell on the floor. He was lying there looking up at his father. The younger boy didn't know what to say; he looked down at his brother lying on the floor, and he looked up at his daddy, and he thought a while, and he looked down at his brother again and looked up again at his daddy. And finally his daddy said, "Boy, what do you want?" He said, "I don't know daddy, but I durn sure don't want any of them grits, I know that." Sometimes we need to have lines of communication established.

Since I've been governor, I've tried to do two or three things of substantial importance to the state, I believe. One is to institute a new system of budgeting, called zero base budgeting, where we just dig up the state government, divide it into about 10,000 small pieces, and take a look, an analytical examination, of each piece. Another thing we're doing is to reorganize the state government of Georgia. We have about 300 boards, bureaus, agencies, commissions and so forth in the state government. We're trying to reduce those to about 20 this year. But the most important thing of all, I think, is to go out to the people all over Georgia and let them tell me as governor, the legislators, educators, and others, that this is what they hope our state will be in the future. We've had 61 of these local conferences. Followed by eight at the state level, and we've had more than 7,000 people attend the local conferences, and about 4,000 or 5,000 people attend the state conferences. This is an analysis of state government but overall we hope to establish goals for out state to achieve. I'm dedicated to carry out these goals during the last three and a half years of my administration.

Every time we have had a discussion about education, the primary suggestion for improvement has related to career planning and vocational education as preeminent. I know what it means historically to benefit from vocational education. Now when I was a farm boy and lived about three miles west of Plains, Georgia, which even now has a population of less than 600, one of the major thrusts in my whole life as a child, until I went off to the Naval Academy when I was about 17 years old, was learning how to be a better farmer, how to make a public speech, how to plan a budget, how to work with others, how to be the president, secretary, or treasurer of that organization. I made my first trip out of my home county to a forestry school when I was 13 years old. I still remember it. I was able to get a good education at public expense. My family has lived in the state for more than 200 years, and I'm the first one to ever finish high school. So I know how much of my life has been shaped by an adequate, forceful, manly, dynamic, practical, inspirational teaching of a vocation to me. And although I've been a teacher myself in the navy, an electronics officer in a submarine, a nuclear physicist, an operator of atomic reactors, coincidentally, I've come back to be a farmer. At the same time, I'm the governor of the state, and I'm charged with the responsibility of assuring that we have the utmost return for the limited investment that we can make in education. Although, as I've said education, at the vocational level, with the career planning emphasis, is a preeminent thought and need in Georgia people's minds, in our high schools, now, we only spend about three percent of our total budget on the vocational program.

It's obvious that we need to reexamine our priorities, correct our faults better. We've had quite an altercation going on in instruction beyond the high school level. In Georgia, it's under the State Board of Education which also has the responsibility for elementary and secondary education. And the Board of Regents in Georgia has the responsibility for the junior colleges, senior colleges, graduate programs, and the training of teachers. We are now, I think, working very closely towards establishing a relationship between vocational-technical instruction and academic instruction so that they are mutually supportive, thus any difference in prestige between the two will be eliminated. We are striving mightily now to see how we can go down into the early years of schooling, just beyond the primary grades and start shaping a young man or a young woman's thoughts toward an ultimate useful life for herself or for himself. In doing this we hope to provide a motivation so that two things might happen. One we won't have the dropout problem so preeminent. We won't have any stigma attached towards a young person who tries from the early stages of his life to shape his efforts toward a useful occupation, short of a professional occupation, and so that we won't have any lack of career planning when a young person actually gets to college. We have a tremendous waste of public funds at the present time because young people go into college not knowing what they want to do, sometimes

even by the conclusion of the junior year. And, a constant shifting in emphasis from engineering to physics, to industrial management, or to liberal arts, or to teaching, wastes time, wastes money and wastes effort; so, career planning crosses many lines.

We are also searching for a way to tie together the many assets that we have in order to contribute a more substantive plan for us to follow. We've got an inadequate use of industry in Georgia; it should be brought in as an integral part of the planning and implementation process for helping young people. We have a very fine opportunity now to utilize new teaching techniques, television, electronic teaching devices, remote control demonstrations, individualized instruction, tailored for each person's needs. To get maximum use from the excellent professor, there will be an increasing use of para-professional personnel and volunteers and aides and superior students. I think often about a quotation from one of the favorite philosophers that I've read, Kierkegaard, who said, "Every man is an exception." Every man is an exception, and this ought to be a preeminent thought for a public official or a teacher--to understand how important it is to be given an opportunity that is shaped as nearly as possible to a student's needs, thus minimizing the number of failures. I'm not sure how far I'd go in saying there ought to be no failures. But, the schools fail more than the children do because we haven't the information nor the capability apparently of analyzing that young malleable person, who is an individual and then shaping a course of instruction or advice and/or counseling to meet that child's needs.

I know how desperately we have a hunger for a modicum of human dignity, among our people, and there ought not to be any lack of opportunity just because a person's parents may have been poor, or rural, or uneducated or black. Quite often we tend to forget in our own apparently affluent nation, we do have this yearning which is not met.

I also spoke the other day to the National Convention of State School Board members, and I told them about an incident that occurred to me about five or six years ago. It made a profound impression on me. At the time I was a chairman of a local school board and I had just been elected to the Georgia Senate. I thought I had really reached a deep understanding of my own people who live in and around the poorest county in Georgia, where my farm's located. I hadn't had a vacation for a long time, and I took one in Mexico. My wife and I and our three sons all speak some Spanish. We lived out in the boondocks in the little towns, and we went out in the wheat fields and the peanut fields, and we watched the people make straw furniture, and we didn't stay in the tourist accommodations because we wanted to try out our Spanish and see how the people lived. One day we were about 200 miles from Mexico City in a desert, and I saw a sign over to the side of the road that said in Spanish "Plains," which is the same name as my own hometown.

Beyond the sign was the most miserable looking little settlement that I have ever seen--about eight adobe huts which looked completely poverty stricken with nothing around them but cactus. Just as a joke, I got out of the car with my camera for I wanted to take a picture of that sign which said "Plains" (with the horrible looking village beyond it) to bring it back and show it to the folks who live in Plains, Georgia. And as we got out of the car, and were adjusting the camera, I saw about eight or 10 little children run out of the hut toward our car. I told my wife, "Rosaline, get out your pocketbook, I know what they want." Sure enough they got around us in a circle and they held out their hands, and they were jumping up and down shouting something over and over in Spanish. It was just a few minutes before I realized that they were <u>not</u> saying "dinero," which means money; but, they were saying two other words, one was "lapiz" and the other one was "papel," which mean pencil and paper. These little children, isolated, poverty stricken, perhaps even hungry, more than anything else in the world wanted to learn how to read and write, so that they could understand themselves and understand the outside world and understand their relationship with their fellow human beings. We got back in our air-conditioned automobile and started driving to Mexico City, and the thought struck me in a most forceful way, that in my own county, in my own state, there are tens of thousands of young people who have the same hunger--to take whatever talent God might have given them, meager or substantial, and develop it to the utmost. The responsibility for that development really to a great degree is not entirely on their own shoulders; it's on the shoulders of people like you and me, whom God has blessed so greatly with material benefits, education, time, positions of responsibility, judgment and influence. I had and still have the greatest determination to do the best I can with my life, as you are doing with your life--constantly to analyze the fruitfulness of our own efforts, and make sure that we never overlook an opportunity to give a child, a hungry child, the education food for which he has a yearning.

There is no other group that I can think of in our nation, who has greater responsibility than you do, nor a greater opportunity than you do because you train the teachers who open that child's eyes and mind and heart, to the outside world. You must do it with a sensitivity and an understanding and a dedication and a commitment that never lowers its search for a standard of excellence. It is always a temptation to accept mediocrity or failure or forget that each child is an individual and has a yearning for knowledge and life.

I talked longer than I had anticipated; but, I just had a few thoughts that struck me while coming to this conference because of knowing about your own inclinations and your own service. I want to add my own heartfelt welcome to you as you come to Georgia for this conference and express to you the thanks of our people for

coming. I hope that you experience a southern hospitality which we still cherish and preserve. I hope that you will have a fruitful conference but also an enjoyable time here, Atlanta has a lot to offer. And I hope you discover it all.

CHAPTER II

KEYNOTE ADDRESSES

Presentation

"Philosophical Design for Graduate Programs in Vocational and Technical Education"

Dr. Gordon Swanson
Professor and Coordinator
International Education
University of Minnesota
Minneapolis, Minnesota

Introduction

The title of this paper carries the implicit assumption that graduate programs in vocational and technical education have unique conditions or concepts requiring clarification. Such an assumption is only partially valid; graduate programs in this field have arrived on the scene as a result of forces set in motion within many other fields and most of the conditions or concepts are shared or linked with them.

Although it is difficult to identify a philosophical design in graduate programs which is unique to vocational education, a concern for graduate education has grown rapidly over the past two decades. Notable among the contributions to the literature is the work of Carl Schaefer and associates at Rutgers University.[1] In addition, there have been monumental studies by Bernard Berelson,[2] Ann Heiss,[3] and the American Council on Education.[4]

---

[1]"The Status of Doctoral Programs in Vocational Education" (paper developed for National Workshop on Fellowship Programs, The Ohio State University, April 12-14, 1971) (To be published).

[2]*Graduate Education in the United States* (McGraw-Hill, 1960).

[3]*Challenges to Graduate Schools*, Center for Research and Development in Higher Education (Jossey-Boss Inc., 1970).

[4]Everett Walters, ed., *Graduate Education Today*, American Council on Education (Washington, D.C., 1965).

It would be most useful if one could describe the development of graduate education in vocational and technical education as a movement couched in an orderly set of values, a system of logic or at least a prevailing rationale. When one examines the literature one soon discovers that such orderliness is not easily found in any field of graduate education and it is even more difficult to find it in vocational fields. The initial approach to be used in this paper, therefore, is to examine the background of graduate education and to raise the question: what does this background have to say to the field of vocational education? The second approach will be to examine the present status of graduate programs, including those in vocational education, and again raise the question: what does this have to say to us?

Background

It should be kept in mind that graduate programs are the offspring, often illegitimate, of universities. Graduate education has become the mechanism for identifying and advancing the most able for an increasing number of academic and professional roles. But universities and their graduate programs have not always accepted this function.

The great advances in science of the 17th and 18th century were led by individuals who were not associated with universities nor the graduates of their advanced programs. John Kepler, Rene Descartes, Isaac Newton, Henry Cavendisk, Joseph Priestly and Antoine Lavasier are among those who made significant contributions to science but whose contributions had neither the organizational support nor the recognition of universities.

A similar situation prevailed within the growing emphasis on technology and engineering in the 19th century. The first engineering degree granted in the United States occurred outside the aegis of universities; the first degree was granted by Reneselaer Institute at Troy, New York. It is not surprising, therefore, that the Land Grant movement itself was rather vigorously opposed by the existing universities of a century ago.

Graduate education had a difficult beginning; it was the focus of a struggle which lasted more than 50 years before the first graduate school was established at Johns Hopkins in 1876. There were many reasons for this difficulty. First, there were institutional tensions which arose from the way in which graduate and undergraduate programs threatened to polarize faculties and to disrupt existing programs. This was compounded by unending arguments about whether graduate degrees should be specialized or whether they should be classical. In due course the specialized degree won out on the grounds that it was more appropriate to the "needs of the times."

Further difficulties surrounded the question of whether graduate programs should culminate in a degree. Many institutions had enrolled "graduate residents" whose purpose was more advanced preparation but who had no possibility of earning an advanced degree. With the growing popularity of graduate programs the argument again was resolved as a response to the "needs of the times" and graduate programs were finally culminated by the awarding of advanced degrees.

Other difficulties centered on the problem of how university faculties should be organized to provide both graduate and undergraduate instruction. There was the question, for example, of whether the faculty should be organized primarily for graduate instruction with undergraduate instruction being considered a subsidiary function or, conversely, whether the faculty should be organized essentially for the undergraduate function with the graduate function being considered its logical extension. A parallel problem involved the issue of whether the graduate and undergraduate faculties should be regarded as separate groups or as an intermingled faculty.

The latter was most easily determined, a natural course of events suggested that the faculties should be integrated wherever both a graduate and an undergraduate faculty was provided for a field. The question of organization was more difficult. Its resolution depended on which faculty was first on the scene and which faculty was most central to institutional purpose. In most institutions the graduate faculty and the graduate school developed as a function above the undergraduate function but subordinate to it.

Concurrent with all of its difficulty and controversy, three forces began to emerge, forces whose combined influence would govern the direction and growth of graduate education. The first was the Land Grant College movement whose most significant contributions to American education included its influences on raising a number of occupations, particularly in agriculture and engineering, to full professional status. Even more important may have been its influence in bringing professional schools into the structure and organization of universities. Neither American nor European universities had accommodated the growth of professional schools until the Land Grant movement began to embrace them.

A second force which combined easily with the first was the establishment and rapid growth of professional societies. Between 1876 and 1905, 15 major scholarly societies were established in the United States. Most of the societies had also established a learned journal and most had begun to look to graduate schools and graduate faculties as a source of leadership.

A third force can be described as the pressure of science. The value of science to the academic community and to the nation was gaining wider currency. Its value was seen as an approach to seeking truth as well as a growing body of knowledge. Its growth was also accompanied by a certain amount of fashion. Such fields as domestic economy and animal husbandry soon changed their designations to domestic science and animal science. Social studies was often referred to as social science and many other fields sought the benefits as well as the prestige of a widespread scientific awakening.

Within institutions and their graduate schools, controversy and argument continued around the following questions: What is the function of graduate education? What do the degrees mean? Why should the graduate school become a professional school? Why should the graduate school be regarded as an access route to jobs?

By the 1930's, graduate education had won its position in universities and graduate schools had been established in major institutions. Growth was very rapid, particularly at the doctoral level. Degrees were being granted in an increasing number of fields. There were no institutional dropouts; once an institution decided to offer graduate degrees, the decision seemed permanent. It may have been at this stage that the American university began to accept the uncomfortably dual role of pursuing the truth and defining what truth is.

During the decade 1960-69, 154,111 earned doctorates were granted by American universities in 176 fields. Of this number only 561, or about 0.3 percent, were granted in vocational-technical education. About 24 percent of the doctorates granted in vocational-technical education were awarded to women. Table I gives the doctorates granted by field and sex from 1960 to 1969.

It is utter nonsense to discuss the present status of graduate education as though it did not grow out of the past or as though its present organization can be taken for granted. Graduate education is a dynamic force responding to educational change and also acting to provoke educational change. What does a knowledge of the background of graduate education have to convey to a new and developing field? What does it have to say to us?

It is clear, first of all, that American educational preferences have moved increasingly toward becoming a credentialing, certificating, accrediting, and degree-oriented society. This movement has been supported by incentive and reward systems which ration status, prestige, and remuneration. Teacher salary scales, for example, are tied to certificates and degrees. Civil service ratings and professorial employment or advancement practices are often tied to the degree consciousness of the academic community. Graduate education has become more than a willing partner in this movement, it has become its chief instrument.

TABLE I

DOCTORATES EARNED BY AREA AND FIELD, 1960-1969

(Data source: U.S. Department of Health, Education and Welfare. *Earned Degrees Conferred: Bachelor's and Higher Degrees.* A publication of the Bureau of Educational Research and Development and the National Center for Educational Statistics. Washington, D.C.: U.S. Government Printing Office. All public and private colleges and universities in the United States known to confer doctoral degrees are included. Professional doctoral degrees such as M.D., however, are not listed.

	Total Number of doctorates earned 1960-1969	Total Number of doctorates earned by women 1960-1969	Percentage of doctorates earned by women 1960-1969
Agriculture, Total	4,462	79	1.77
Agriculture, General	115	1	.87
Agronomy, Field Crops	966	5	.52
Animal Science	872	21	2.41
Dairy Science	262	4	1.53
Farm Management	13	0	.00
Fish, Game or Wildlife Management (1961-1969)[1]	209	2	.96
Food Science	385	16	4.16
Horticulture	539	11	2.40
Ornamental Horticulture	14	0	.00
Poultry Science	211	7	3.32
Soil Science	568	2	.35
Agriculture, All other fields	308	10	3.25
Architecture	50	4	8.00
Biological Sciences, Total	17,708	2,448	13.82
Premedical, Predental and Preveterinary Sciences	25	2	8.00
Biology, General	1,949	395	20.27

(Continued)

	Total Number of doctorates earned 1960-1969	Total Number of doctorates earned by women 1960-1969	Percentage of doctorates earned by women 1960-1969
Botany, General	1,653	186	11.25
Zoology, General	2,262	318	14.06
Anatomy and Histology	633	116	18.33
Bacteriology, etc.[2]	2,096	355	16.94
Biochemistry	2,695	471	17.48
Biophysics	429	32	7.46
Cytology	30	9	30.00
Ecology (1961-1969 only)	37	2	5.41
Embryology	45	11	24.44
Entomology	1,097	46	4.19
Genetics	672	61	9.08
Molecular Biology (1968-1969 only)[3]	32	6	18.75
Nutrition (1961-1969 only)	156	45	28.85
Pathology	271	15	5.54
Pharmacology	783	87	11.11
Physiology	1,145	168	14.67
Plant Pathology	692	19	2.75
Plant Physiology	203	12	5.91
Biological Sciences, All other fields	803	92	11.46
Business and Commerce, Total	3,046	86	2.82
Business and Commerce, General	1,372	33	2.41
Accounting	268	18	6.72
Finance, Banking (1967-1969 only)[4]	53	1	1.89
Marketing (1967-1969 only)[5]	66	1	1.52
Real Estate, Insurance (1967-1969 only)[6]	2	0	.00
Transportation (1967-1969 only)	7	0	.00
Business and Commerce, All other fields	1,278	33	2.58
City Planning (1966-1969 only)[7]	44	2	4.55

(Continued)

	Total Number of doctorates earned 1960-1969	Total Number of doctorates earned by women 1960-1969	Percentage of doctorates earned by women 1960-1969
Computer Science and Systems Analysis, Total (1964-1969 only)[8]	158	4	2.53
Computer Science	99	3	3.03
Systems Analysis	22	1	4.55
Computer Science and Systems Analysis, All other fields	37	0	.00
Education, Total	26,369	5,230	19.83
Physical Education	1,143	313	27.38
Health Education	88	26	29.55
Recreation	30	4	13.33
Education of the Mentally Retarded	118	36	30.51
Education of the Deaf (1964-1969 only)[9]	6	4	66.67
Speech and Hearing Impaired	339	67	19.76
Education of the Visually Handicapped (1964-1969 only)[10]	3	1	33.33
Education of the Emotionally Disturbed (1965-1969 only)[11]	24	6	25.00
Administration of Special Education (1968-1969 only)[12]	14	4	28.57
Education of Other Exceptional Children[13]	391	126	32.23
Agricultural Education	228	2	.88
Art Education	194	52	26.80
Business or Commercial Education	300	89	29.67
Distributive Education, Retail Selling	28	6	21.43
Home Economics Education	124	123	99.19
Industrial Arts Education, Nonvocational	224	1	.45
Music Education	548	75	13.69

(Continued)

	Total Number of doctorates earned 1960-1969	Total Number of doctorates earned by women 1960-1969	Percentage of doctorates earned by women 1960-1969
Trade or Industrial Education, Vocational	181	8	4.42
Specialized Teaching Fields, All other	756	261	34.52
Nursery or Kindergarten Education	14	12	85.71
Early Childhood Education	22	20	90.91
Elementary Education	1,199	459	38.28
Secondary Education	966	154	15.94
Combined Elementary and Secondary Education	21	4	19.05
Adult Education	303	46	15.18
General Teaching Fields, All other	445	97	21.80
Education Administration, Supervision, Finance[14]	7,242	931	12.86
Counseling and Guidance	2,357	488	20.70
Rehabilitation and Counselor Training (1964-1969 only)	80	14	17.50
History of Education, etc. (1964-1969 only)[15]	488	99	20.29
Education, General	6,286	1,183	18.82
Educational Psychology (1964-1969 only)	875	224	25.60
Physical Education, Nonteaching (1964-1969 only)	36	9	25.00
Education, All other fields[16]	1,296	286	22.07
Engineering, Total[17]	18,572	82	.44
English and Journalism, Total	6,471	1,541	23.81
English and Literature	6,322	1,523	24.09
Journalism	149	18	12.08

(Continued)

	Total Number of doctorates earned 1960-1969	Total Number of doctorates earned by women 1960-1969	Percentage of doctorates earned by women 1960-1969
Fine Arts and Applied Arts, Total	4,035	678	16.80
Art General	99	18	18.18
Music, Sacred Music	1,473	199	13.51
Speech and Dramatic Arts	1,978	314	15.87
Fine and Applied Arts, All other fields	485	147	30.31
Folklore (1965-1969 only)	29	8	27.59
Foreign Languages and Literature, Total	4,158	1,186	28.52
Linguistics	551	133	24.14
Latin, Classical Greek	506	128	25.30
French	768	311	40.49
Italian	47	17	36.17
Portuguese	14	3	21.43
Spanish	668	217	32.49
Philology and Literature of Romance Languages	380	93	24.47
German	678	171	25.22
Other German Languages	27	5	18.52
Philology and Literature of Germanic Languages	52	9	17.31
Arabic	5	1	20.00
Chinese	14	2	14.29
Hebrew	23	1	4.35
Hindi, Urdu (1961-1969 only)	2	0	0.00
Japanese	12	2	16.67
Russian	116	28	24.14
Other Slavic Languages	68	20	29.41
Foreign Language and Literature, All other fields	227	45	19.82

(Continued)

	Total Number of doctorates earned 1960-1969	Total Number of doctorates earned by women 1960-1969	Percentage of doctorates earned by women 1960-1969
Forestry	558	1	.18
Geography	663	37	5.58
Health Professions, Total	1,831	168	9.18
Hospital Administration	20	1	.50
Medical Technology	2	0	.00
Nursing, Public Health Nursing	18	17	94.44
Optometry	16	1	6.25
Pharmacy	563	24	4.26
Physical Therapy, Physiotherapy	1	0	.00
Public Health	418	62	14.83
Radiologic Technology	3	0	.00
Clinical Dental Services	24	4	16.77
Clinical Medical Services	302	31	10.26
Clinical Veterinary Services	250	4	1.60
Health Professions, All other fields	214	24	11.21
Home Economics, Total	514	392	76.26
Home Economics, General	104	101	97.12
Child Development, Family Relations	174	87	50.00
Clothing and Textiles	53	52	98.11
Foods and Nutrition	134	108	80.60
Institution Management or Administration	6	6	100.00
Home Economics, All other fields	43	38	88.37
Law	268	12	4.48
Library Science	140	38	27.14
Mathematical Sciences, Total	6,166	401	6.50

(Continued)

	Total Number of doctorates earned 1960-1969	Total Number of doctorates earned by women 1960-1969	Percentage of doctorates earned by women 1960-1969
Mathematics	5,538	348	6.46
Statistics	781	53	6.79
Philosophy, Total	1,701	188	11.05
Philosophy	1,520	155	10.20
Scholastic Philosophy	181	33	18.23
Physical Sciences, Total	25,736	1,179	4.58
Physical Sciences, General	93	3	3.23
Astronomy	421	29	6.69
Chemistry	12,963	884	6.82
Metallurgy	213	0	.00
Meteorology	245	2	.82
Pharmaceutical Chemistry (1961-1969 only)	289	13	.50
Physics	8,415	168	2.00
Geology	2,143	53	2.47
Geophysics	203	3	1.48
Oceanography	222	4	1.80
Earth Sciences, All other fields[18]	170	2	1.18
Physical Science, All other fields	359	18	5.01
Psychology, Total	9,135	1,845	20.20
General Psychology	7,071	1,365	19.30
Clinical Psychology (1961-1969 only)	651	163	25.04
Counseling and Guidance	138	33	23.91
Social Psychology (1961-1969 only)	309	68	22.01
Rehabilitation Counselor Training (1964-1969 only)	36	8	22.22
Educational Psychology (1964-1969 only)	137	37	27.01
Psychology, All other fields (1964-1969 only)	793	171	21.56

(Continued)

	Total Number of doctorates earned 1960-1969	Total Number of doctorates earned by women 1960-1969	Percentage of doctorates earned by women 1960-1969
Religion, Total	2,825	141	4.99
Religious Education, Bible	368	49	13.32
Theology	1,417	49	3.46
Religion, Liberal Arts Curriculum		39	4.54
Religion, All other fields	180	4	2.22
Social Sciences, Total	18,662	2,072	11.10
Social Sciences, General	261	27	10.34
American Studies, Civilization, Culture	257	41	15.95
Anthropology	942	202	21.44
Area or Regional Studies	384	46	11.98
Economics	3,898	219	5.62
History	4,943	579	11.71
International Relations	425	33	7.76
Political Science or Government	2,876	253	8.80
Sociology	2,361	403	17.07
Agricultural Economics	1,165	12	1.03
Foreign Service Programs	11	1	9.09
Industrial Relations	96	4	4.17
Public Administration	283	23	8.13
Social Work, Social Administration	480	174	36.25
Social Science, All other fields	280	55	19.64
Trade or Industrial Training	84	0	.00
Broad General Curriculums and Miscellaneous Total	726	107	14.74
Arts, General Programs	39	9	23.08
Sciences, General Programs	84	9	10.71
Arts and Sciences, General Programs	40	5	12.50
Teaching of English as a Foreign Language	27	10	37.04

(Continued)

	Total Number of doctorates earned 1960-1969	Total Number of doctorates earned by women 1960-1969	Percentage of doctorates earned by women 1960-1969
All Other Fields of Study[19]	536	74	13.81
Total All Fields (areas) Reported:	154,111	17,929	11.63

1. When information was available from 1961-1969 (this field was not given as a separate category in 1960-1961) proportions were computed based on information available. If the field was not listed as a separate category for more years than 1960-1961, the information was included in the residual category. Exceptions are noted.

2. Includes Bacteriology, Verology, Mycology, Parasitology, and Microbiology.

3. The status of this field prior to 1968, when it was considered separately, is not clear.

4., 5., and 6. As in 3, the same observation applies.

7., and 8. These entire areas are new.

9., 10., 11., and 12. Subsumed under other categories in earlier years.

13. Includes: Special Learning Disability, Education of the Crippled, Education of the Multiple Handicapped.

14. Includes Curriculum Instruction as well. These fields were separated for all but year 1963-1964, so it was necessary to combine them.

15. Includes History, Philosophy, and Theory of Education.

16. Includes the recently listed field of Education Specialist.

(Continued)

17. A breakdown on Engineering was omitted from *Earned Degrees Conferred: Bachelor's and Higher Degrees* for the four academic years 1960 through 1964. Other sources investigated provided breakdown by field but not by sex.

18. Includes recent field, "Earth Sciences, General."

19. Includes recent field "Interarea Fields of Study."

Second, graduate schools have become society's central channel for recognizing, selecting, and training talent in all fields. Graduate education has become a part of the career ladder for those regarded as the most able to pursue any fields of intellectual endeavor. Graduate schools have thus accepted many of the functions of professional schools and, accordingly, they have acquired power beyond their role involving attention to knowledge and skill.

A third observation drawn from the background literature on graduate education involves the frequent references to the word "discipline" and the phrase "interdisciplinary study." While the literature is filled with such references there are no definitions to assist in clarifying such words or concepts. Nor is it helpful to refer to the fields in which degrees have been granted; the role disciplines, the mysteries of their creation, and the adequacy of their present supply are issues not treated in the background literature of graduate education nor in the growth patterns of fields in which degrees are awarded. It is merely assumed that, somehow, the attachment to undefined disciplines and interdisciplinary study has some natural value or intrinsic merit associated with the overall mission of graduate education.

A further observation of the background of graduate education shows that doctorates in general or broad fields have not been popular. Doctorates in humanities, American studies, and social studies, for example, have not been numerous compared to the special fields associated with such degrees. A similar observation can be made in more specialized categories as shown in Table II using data from Table I. Efforts to consolidate a field into its more general applications does not appear to win much interest from those choosing a field of study at the doctoral level.

TABLE II

COMPARISON OF NUMBER OF DOCTORATES AWARDED IN THE GENERAL AND SPECIALIZED ASPECTS OF SEVERAL FIELDS 1960-69

Field	Total Degrees	Degrees in Generalized Field
Agriculture	4,462	115 (general agriculture)
Biological Sciences	17,708	1,949 (general biology)
Education	26,369	6,286 (general education)
Physical Sciences	25,736	93 (general physical science)
Social Sciences	18,662	261 (general social science)

The unpopularity of the general or consolidated field may be closely associated with the increasing function of the graduate school as a professional school whose rewards are more available, typically, to those who specialize.

Finally it can be concluded that there have been very few graduate degrees and graduate programs in vocational-technical education. While the professional societies representing the field have been strong and numerous, the reliance on graduate education to supply leadership for the field has been weak particularly at the doctoral level.

The State of the Art--the Current Setting

Undergraduate teacher-education programs in vocational-technical education have been supported by state and federal subventions for more than 50 years. University commitment to vocational-technical education has been limited primarily to the provisions of the subventions which ordinarily did not prescribe graduate-level instruction. Graduate instruction became a function incidental to in-service education and not a primary focus of the field. Almost all of the graduate instruction was concentrated at the master's level.

Graduate instruction in vocational-technical education was stimulated in 1966 by the passage of the Education Professions Development Act. The stimulation did not occur because of the inclusion of provisions for advanced training in vocational education; it was stimulated because of its omission. When the 1968 Amendments to vocational legislation were later proposed, a special effort was mounted to include provisions which were omitted from the Education Professions Development Act. Part F, a section dealing with professional development including graduate instruction, was included. Graduate education in vocational-technical education began to receive systematic attention for the first time. Among other things, it created a flow of doctoral students in a limited number of institutions to supplement the meager flow of doctoral students already being prepared in these institutions.

Another thrust of the 1968 Amendments to vocational legislation, Part D (Exemplary Programs), initiated a transcendent element to the entire field of vocational education. Career education, an emphasis with a focus upon the world of work from kindergarten through adult education, has engulfed entire educational systems and has provided a new context for all of education including vocational education. Career education is too complex to describe within the scope of this paper. Its importance is sufficient, however, to prompt the field of vocational-technical education to raise questions about what its objective should be as well as how they can be accommodated.

The rapidly changing context of vocational-technical education has added fuel to the arguments which have either stimulated or plagued the general field of graduate education for the last century and the special area of vocational-technical education for the

last two decades. The arguments center on how the major or the degree should be defined and how the field should be organized or structured for graduate education.

The degree or the major representing the field can be defined in many ways. It can be defined as a body of knowledge, its conceptual base, and its growth. It may also be defined as a set of propositions or problems whose mastery represents a level of achievement in the field. Some may define it as the acquisition of a set of analytical tools with demonstrated performance in solving the problems in the field. Others would define the major as an effort to acquire competence in a number of practitioner functions such as administration, instruction, management, research, or evaluation. These several ways of viewing or defining the major or the graduate degree are not independent nor exclusive. They do represent, however, a range of emphasis over which there is no unanimity.

The issue of how the field of vocational-technical education should be organized and structured for graduate education leads to even wider divergence of opinion and preference. Some argue that graduate education should be closely linked with the occupational and professional orientation of undergraduate programs; that graduate education should be their logical extension. Others would argue that graduate programs in vocational and technical education should have an emphasis which is distinctly separate from and largely independent of undergraduate programs; and emphasis not linked with occupationally related practitioner skills. A third view suggests that graduate programs in vocational-technical education should be organized to embrace a multi-disciplinary approach albeit within the field of education.

The definition of the graduate major and the question of how the field should be organized for graduate education are not clear and easy options. They depend upon the commitment of the institution to provide in-service instruction to teachers in the field and the relationship of such in-service instruction to graduate education. They also depend upon the extent to which the field of vocational-technical education responds to the credentialing, certificating, and accrediting phenomenon which has greatly influenced all forms of graduate education.

What does an examination of the current status of graduate education in vocational-technical education reveal? What does it have to say to us?

First, graduate education in vocational-technical education has served to identify, select, and prepare a very limited number of persons for leadership roles in the general field of education and a very minimum number for the field of vocational-technical education. There has been a dearth of doctorates and graduate

education at the master's level has been essentially an extension of in-service education.

Second, universities have had a very limited commitment to graduate education in the field. The growth pattern of graduate education has not paralleled the aggregate growth pattern of graduate education in the country. The limited commitment is likewise apparent in undergraduate programs. The occupational emphases have not gone beyond those which have been legislated nor beyond the limits of funding provided by legislation at the federal level. In short, universities have been satisfied to allow external support to circumscribe rather than enhance their commitment to the field.

Thirdly, a large question remains as to how the field of vocational-technical education should attempt an expansion of graduate education. One alternative is to attempt a consolidation of the field and to seek the goal of having a general doctorate in vocational education and a minimum expansion of the fields represented at the master's level. This alternative holds the possibility that graduate education at the doctoral level will share the unpopularity of doctorates in such fields as American studies, general agriculture, and general physical science. This lack of popularity is undoubtedly associated with weakened professional loyalties and discontinuity between undergraduate and graduate programs. The other alternative is a move toward more differentiation with growing occupational and professional relevance as reflected on the overall growth pattern of graduate education in the last decade.

Fourth, the relationship between graduate education to federal and state program planning in vocational education has been very uneven. Federal attention to post-baccalaureate programs in vocational education did not commence until the field was more than 50 years old. State program planning has contributed very little to the direction or growth of graduate education. For the most part, state planning has merely acquiesced to it. The Vocational Amendments of 1968 show promise of a new focus on this problem.

Finally, it should be said that graduate education in the United States has followed a development trajectory that was neither planned nor intended. It wasn't intended, for example, that graduate schools should take on the characteristics of professional schools nor was it planned that graduate education would become vocationally oriented in its functions. It is a major anomaly to observe that the field of vocational-technical education has not had a close association with this development trajectory.

Presentation

"Improving Programs to Prepare Leaders
In Vocational and Technical Education"

Dr. Jack A. Culbertson
Executive Director
Council on Education Administration
The Ohio State University
Columbus, Ohio

When Professor Gorman invited me to speak at this national seminar, she provided several helpful suggestions. She indicated, for example, that you would have a special interest in the preparation of vocational and technical educational leaders in such widely differing arenas as state education agencies, vocational area schools, school districts, and universities; further, that you would be concerned about both resident, and on-campus programs as well as continuing education experience for leaders. My major tasks, she emphasized, were two: first, to stimulate seminar participants to think beyond their present graduate program and, second, to project ideas pertinent to the achievement of new or updated program designs. The paper, she said, should be set within the general theme of program evaluation and accountability.

Perhaps you might wonder why I had the temerity to respond positively to Professor Gorman's request. Some of you might surmise that I did so because of my demonstrated interest in the general improvement of preparation programs for educational leaders and you would be partly correct. However, I was even more intrigued by the fact that certain conditions now affecting American education add special significance to efforts to improve leadership in your field. Brief references to two conditions will help illustrate the point.

The first condition is immediate, visible and current. It can be summarized in two sentences written by Gene Maeroff in the *New York Times* on August 8 of this year: "Vocational education, far more broadly based than at present, figures prominently in the blueprint that the United States Commissioner of Education is drawing up for the future of American education . . . While he does not have the authority to impose his views on local school districts, Dr. Marland can influence local decisions through the power of persuasion and the manner in which the Office of Education allocates approximately $5 billion it has available for primary and secondary schools and for colleges." The move of the federal government into your field is very visible and is clearly represented, for example, in the so-called school-based, home-based, and industry-based models of "career education." This move represents one significant condition bearing upon our discussion. It also

highlights the need for leadership which can give direction, critical assessment meaning, and operation to "career education."

A second condition of note is less visible than the one just noted; however, in the long-range, it may represent a more dynamic and far-reaching lever for change. I refer to the changing relationships between business and education specifically and, more broadly, to the changing relationships between the private and public sectors of our society. President Johnson's tenet of the mid-sixties that the private sector could and should make a greater contribution to the solution of public sector problems, including those associated with education, was a pronounced indicator of the emergent condition. He and other leaders in his administration believed that the troublesome, residual American problems associated with race, education, poverty, cultural deprivation, and related matters could be met more effectively through a greater involvement of private sector leaders in their solution. Those in the private sectors, it was argued, had not only demonstrated the entrepreneural and risk-taking capacity to deal with change; in addition, they had developed the know-how to apply special organization, computer technology, systems analysis techniques, the fruits of research and development and its management, and other private sector tools to public policy problems. Even though the high hopes on the part of those in the public sector for help from the private sector have materialized slowly and inconsistently, and, in some cases, not at all, I am sure you would agree that the relationships between business and education have changed and are changing. Thus, it is not insignificant that we speak of an industry-based model for career education. Nor is it insignificant that performance contracting is making its way into more and more school systems. It is also of interest, to take one other example, that the theme in which you have had great interest at this conference, namely, accountability, is a private sector concept which is being diffused into numerous public sector institutions, including the schools.

Since leaders concerned with vocational and technical education are the ones in education most likely to be affected by the changing relationships between business and education, they are, to put it dramatically, in the "eye of the storm." They have new and unique opportunities, on the one hand, and on the other, are faced by what many see as a threat in such developments as industry-based models for career education. Changing business-education relationships, then, has special significance for the preparation of vocational and technical leaders.

So much for comments on the same illustrative conditions that have special implications for the subject under discussion. I shall return to these conditions later. Now, I would like to highlight some selected trends in the preparation of educational leaders

generally.[1] My assumption is that these trends have direct implications for those concerned with the design of new graduate programs to prepare vocational and technical leaders.

The most visible trend with regard to leadership recruitment and selection practices is found in increasingly aggressive efforts to tap broader and more diverse pools of society's talent. The purposes behind this trend are two: to obtain a greater share of society's leadership talent, and to attract new and different leadership into education. The National Program of Educational Leadership centered at The Ohio State University and involving the University of Texas, Claremont Graduate School, Northwestern, City University of New York, and the State Department of Education in North Carolina, is undoubtedly taking the boldest steps of any group of institutions to find a new breed of leaders. The point can best be illustrated by describing briefly the backgrounds of four of the 22 individuals who have been recruited into the program.[2]

Vivian Larson

Vivian Larson is in her late thirties. She is the daughter of an immigrant carpenter who settled in Cleveland. She attended the public schools of Ohio, eventually earned a baccalaureate degree in education from The Ohio State University. After a very few months of teaching she withdrew in order to earn an advanced degree in social work at Case-Western Reserve. Her career in social work brought her eventually to community mental health. Over the past decade she has worked in the Chicago metropolitan area, including the city of Chicago, as an administrator of public mental health programs. At the time of entry in NPEL, she was regional community health director for a large portion of the city of Chicago. In the late 1960's she worked closely with superintendents on the west side of Chicago in the establishment of state supported mental retardation and special education programs.

Eugene Speller

Eugene Speller is an engineer. He has a master's degree from Michigan State in that field. He is black. He was born in a share cropper's shack on a plantation in southeast Missouri. His life

---

[1]See Jack Culbertson, *et al.*, *Preparing Educational Leaders for the Seventies* (Columbus, Ohio, 1969).

[2]The descriptions are taken directly from Luvern Cunningham, "The Search for New and Better Prepared Educational Leadership," September 22, 1971. (Mimeographed.)

story is an incredible adventure leading from the miseries of share cropping through a vertical, social and occupational climb up a brick wall using his fingernails. He is a man of superior intelligence, compassion, and insight.

When he was working on his master's degree he supported himself in part by working in a special program in a high school in Lansing. He was invited to counsel (chiefly with minority group students) about their life, education, and occupational plans. He was "turned on" by that experience and pledged himself to move into education if and when the opportunity presented itself. He began at Ohio State last month. He has been very successful as an engineer in LaSalle, Illinois.

Emelio Gutierrez

Emelio Gutierrez is a lawyer. He came into NPEL four months ago after 14 years of successful law practice in the Rio Grande Valley of Texas. He is located at the center at the University of Texas. He feels deeply the agonies of the Spanish-speaking people everywhere but especially those in his precious and cherished valley. He is a quiet man, marked by compassion. But he is an intense and dedicated man filled with desire to improve opportunity for Spanish-speaking people. He knows that there are very few Mexican-American administrators in the United States. He, his wife and six children have moved to Austin, jettisoned the relative security of the practice of law, and started his new and uncertain career at the University of Texas.

Tom McCollough

Tom McCollough was vice-president of a medical instruments company prior to joining the program in November of 1970. He will soon complete his first full year as an NPEL fellow. In his previous job he was in charge of company planning and studies of the future. He traveled the United States, indeed the world, seeking out new ideas about man's technological and scientific progress. He is essentially a humanist, rather than a hard scientist. He is an artist, a person accomplished in music as well as an able writer. His wife is a junior high school teacher. He respects the incredible seriousness of the problems of education and sees himself as assuming major administrative responsibilities when he completes his program a year from now. Thus far he has participated in a study of the elementary schools in Detroit; audited conventional classes in educational administration; taught sixth grade in an all black ghetto school in Cleveland for 10 weeks; led an in-service education program for the top staff of a state department of education; and will study open classrooms in England and visit schools in Israel this winter.

Are there implications in this trend for those interested in designing new programs for vocational and technical leaders? Would it be possible and desirable, for example, for you to reach for those in significant leadership positions in American industry to undertake new and significant careers in vocational and technical education as a complement to your long tradition of recruiting teachers out of the private sector? Do you not need as much as any group in education to recruit aggressively talented members of minority groups to participate in the evolvement of new programs of career education?

The predominant recent trend in program content has been away from technique-oriented substance and toward theory oriented substance based on disciplines external to education. The disciplines most frequently studied by prospective leaders are sociology, political science, psychology, and economics, in that order. There is some study of, but considerably less emphasis upon, anthropology and social psychology.

Would not social science content be pertinent to the preparation of vocational and technical leaders? If so, which social science discipline(s) would be most central to the preparation of the vocational and technical leaders? For the prospective researcher interested in manpower studies a good grounding in the discipline of economics would be the most appropriate strategy. For the school leader assuming broad responsibilities, a combination of subjects in several disciplines as, for example, the sociology of work, the politics of education, and the social psychology of careers would seem desirable. For the student of educational policy learning theory, the economics of education, manpower studies, law, and other subjects would be relevant. In all cases social science concepts and modes of inquiry would need to be applied within a context of education and be supplemented by work in education.

Another distinct trend in the preparation of educational leaders is toward a greater use of the internship and other field experiences. Internships are being developed and tested in different settings and for different purposes. One type of experience, for example, is called the "rotating internship." In this arrangement the prospective leader spends a portion of his internship year or semester in agencies at different levels of educational government. Within the context of vocational education, for example, the intern might spend time in a federal agency concerned with the improvement of career education, in a state education department where a development project was in progress to improve vocational and technical education statewide, and in a high school where specific efforts to change vocational and technical education were underway.

Another type of internship experience emphasizes broadening experiences at the local school district level. Under this arrangement, the intern might spend time in a model cities program, the mayor's office, a community agency, or a minority group organization. Such experiences are designed to help prospective administrators view a school system as those external to the system see it and to achieve a better understanding of the environment within which school systems operate. The desirability of community experiences is based upon the assumption that future leaders will need to relate to varied organizations and that skills required to engage in the politics of education will continue to be important. Would not the same idea be pertinent to the preparation of vocational and technical leaders; further, would not internships for these leaders in business organizations encourage deeper understandings of the changing business-education interface, provide insights into vocational and technical education in industry; and offer leadership experiences in a substantially different setting.

A major factor affecting changes in preparation programs during the last decade has been the increasing trend toward specialization. Specialization has had two major expressions. One has to do with classes of knowledge, and the other has to do with special ways of using knowledge. New kinds of knowledge that have evolved could be referred to under such terms as the economics of education, the politics of education, the sociology of organizations, administrative behavior, and so forth. Specialized uses of knowledge are associated with the differing functions of research, synthesis, development, and administration. The generalization that researchers, developers, synthesizers, and administrators perform different functions in different settings to achieve different immediate objectives is increasingly accepted. At the same time, the practice of preparing these differing specialists through the same programs without some differentiation in their preparation is being increasingly questioned. It is presumed, for example, that the conclusion-oriented researcher planning to spend much of his career developing valid findings and generalizations to advance scientific understanding through basic inquiry, let us say about the politics of education, needs a somewhat different preparation than does the educational administrator who plans to spend his career making decisions and performing actions designed to bring about improvement in educational policies and programs in local school districts.

Those accepting the generalization in your own field who are engaged in preparing those with doctorates, for example, would strive to see that a substantial amount of preparation was differentiated to help prospective specialists (e.g. researchers, developers, administrators) perform skills inherent in their unique specializations. Differentiations would occur at various points in the program and might include differentiated criteria for

selection as well as differentiated field, internship, classroom, and culminating experiences. For example, prospective basic researchers might intern with basic researchers while prospective administrators interned with practicing administrators. Or, to take another example, the culminating experience for the prospective synthesizer of knowledge might be a dissertation while the implementation of an innovation in a school and the analysis of this experience might be the culminating activity for the prospective administrator.

The trend toward differentiation in preparatory programs is not unrelated to the move toward greater flexibility. Flexibility is usually defined in relationship to students' capacities to make choices. Choices could encompass program objectives as, for example, whether a candidate preferred to pursue a program designed for prospective researchers or one designed for prospective leaders in school districts.

Another aspect of choice has to do with determining the content and methods for achieving objectives. There has been a distinct trend toward greater flexibility with regard to this aspect of choice. In the Department of Educational Administration at New York University, for example, students can choose to pursue regular courses in their program or they can develop their own plan of study. If they elect the latter option, they are assigned to a program advisor who talks with the student as long as is necessary to get a plan of study developed. In developing plans students can pursue independent study, opt for a combination of independent study and regular course work, or ask a faculty member to assist in the design of a special series of small-group seminars. At the University of Massachusetts, to take another example, professors are creating a number of "modules" from which students can select those of interest to them and those related to their objectives. A student does not have to take a total course if he can demonstrate he has already studied or has special competencies in certain modules comprising it. Would not the concept of flexibility either as it relates to the student choice of a specific program to meet career objectives or content and methods for achieving these objectives be pertinent to those interested in improving programs for vocational and technical leaders?

The final trend I will mention has been the growing emphasis upon the development and use of simulated administrative situations and problems in preparatory programs. During the last two years, for example, under the auspices of the University Council for Educational Administration, approximately 100 professors have been involved in "Monroe City," a pseudonym for one of the 20 largest cities in the country, in a major effort to simulate an urban school system, its environment, various administrative positions in it, and problems faced by decision-makers there. The Janus Junior High, the Wilson Senior High, and the Abraham Lincoln

Elementary Principalship simulations are already in use. Eight additional simulations are planned ranging from the Monroe City superintendency to a "school of the future." Each simulation has both audiovisual and written components. The Wilson Senior High, for example, has eight filmed problems ranging from teacher-student conflict to a confrontation of the principal's staff by a rightist organization concerned with law and order. There are 14 audio recorded problems ranging from a bomb scare to a problem learning incident. More than three dozen problems are presented in in-baskets. Trainees making decisions can draw upon handbooks, data banks, and other information. They are also provided background information on films, filmstrips, and 15 booklets on the school systems and community.

A range of support materials are provided professors and graduate students to supplement the simulations. These include specific analyses of decision problems and theories bearing upon urban educational administration. For example, Don Erickson of the University of Chicago and Ted Reller of the University of California are assuming a leadership role in developing a book on the urban principalship. The conception of the book is logically related to the three urban principalship simulations. Finally, a range of instruments are being developed to enable prospective trainees to gain insight into their own decision-making behavior as well as the values and attitudes which shape these behaviors. Four instruments, for example, have been developed to help trainees understand their styles of communication in organizations.

In sum, then, a number of trends in programs for preparing educational leaders are now underway including: (1) more aggressive efforts to recruit from more broadly based talent pools, (2) more theory based content as represented in content from the social science disciplines, (3) an increase in the number and types of internship, (4) a move toward greater differentiation in programs for preparing researchers, administrators, and other specialists, (5) greater flexibility in preparation programs, and (6) the development and use of a wide range of simulations.

Having identified some general trends in administrator preparation let us turn more directly to your theme of "accountability." Webster defines accountability as "capable of giving a reckoning." In education this means that we need to be able to give a reckoning to various publics when their representatives post significant questions. To me there are four questions which are central to accountability and these can be translated into your own context as follows:

1) What are the schools doing with regard to vocational and technical education?

2) Why are the schools doing what they are doing in this area?

3) How well are the schools doing what they are doing?

4) What should the schools be doing in vocational and technical education, and why?

A good accountability system would help leaders to have the necessary data and concepts to respond effectively to these four questions. Therefore, resident, on-campus and continuing education programs can be evaluated for their capacity to assist leaders to deal effectively with the questions as they are posed by various publics. Even though the questions are not sufficient for a total evaluation of programs, they represent important selected criteria. Consequently, they can be used to generate ideas about needed new or updated program designs to meet accountability challenges. What, then, are some of the general implications of these questions for preparatory programs?

A central question today facing all educational leaders and certainly those of special interest to you is the following: What should the schools be doing with regard to vocational and technical education and why? This question bears upon the conditions noted earlier, namely, emergence of the very general and not yet well defined concept of "career education" and the federal effort to facilitate its implementation. Important questions facing leaders today are what is <u>now</u> meant by "career education" and what <u>should</u> be its meaning? Put differently and in more specific terms, what would be the significant outcomes of a desired career education program in a K-12 district, if it were implemented? Why do students and society need the outcomes projected? What programs can achieve the outcomes? I would submit that general administrators and vocational and technical education leaders both need continuing education experiences that would help them answer more clearly and effectively these important and interrelated accountability questions. For if there cannot be a clear vision on the part of leaders of the outcomes desired, how can they be effective either in their actions or in accounting for their actions and the actions of others? State education agencies, universities, local school districts, and other agencies need to design and sponsor seminars and other learning experiences to help leaders in effective purpose definition and value clarification as these bear upon vocational and technical education. There is the related need to be met of helping administrators understand the various models of career education which are now evolving and the concepts and purposes which are inherent in them.

I would also submit that we need greater numbers of well-prepared professors who can address effectively the question of what should the schools be doing in vocational and technical education and why? Leaders in school districts, in other words, should not be required to rely entirely on the political process, on federal guidelines, or on general discussions for definitions of the

purposes of vocational and technical programs. Scholars are needed who can address the question meaningfully and who can generate and order ideas that will inform and elevate political and leadership processes. Scholars need to be prepared with the capability of addressing the question of purpose in various ways. One is through manpower studies to get at the question of different careers and society's changing professional and vocational needs. Another is at the level of the functions to be performed in differing careers and, in turn, the types of training and education needed to enable individuals entering the careers to perform the functions. New thinking is also needed concerning how other purposes traditionally associated with education can be integrated with the emergent concept of career education. Can citizenship education, for example, be subsumed under the concept of career education or is it another category that needs to be logically related in some way to new concepts of career education? Still another major focus for study is the problem of needed curricula and programs to translate purpose into operation.

Clearly, then, we need a new breed of scholar to help articulate and clarify emergent purposes of career education at a time when there is much amibiguity about the directions of American education. Without new scholarship longer-range accountability needs cannot be met effectively. It should be made clear that, given the decreasing demand for newly prepared personnel in higher education, it would not be meeting accountability requirements to develop doctoral programs that offer more of the same. It should also be made clear that there are immediate training needs to be met with regard to professors already involved or needing to be involved in career education. We need, in other words, continuing education programs in career education and the problems to which it is addressed for professors of vocational and technical education, professors of educational administration and professors of curriculum, among others.

Another accountability question is "how well are the schools doing what they are seeking to do in vocational and technical education?" This question implies a capacity for evaluation. The question breaks into additional ones. For example, what measures of effectiveness can be used to determine the extent to which schools are doing what they are purporting to do, what kinds of information systems are needed to gather data on the measures of effectiveness to make necessary evaluations, and what are the implications for changes in preparatory programs? The questions just noted, of course, are central to systems analysis and planning. Practicing educational administrators can gain important insights basic to dealing with the accountability question of how well the schools are doing through a careful understanding of systems analysis and systems planning concepts. Even though a variety of continuing education experiences have been offered on the subject in recent years for leaders of vocational and technical education as

well as for general administrators, it is still a valid observation that school administrators have had difficulty in applying the system concepts and techniques in order to obtain data on how well the schools are doing. Therefore, they are still not well equipped to give a reckoning on this question to interested publics.

This condition poses another important problem concerning the continuing education of school leaders. Most all of the training models on systems analysis have been disseminative and not applicative. The theory of career education itself would lead us to question the heavy emphasis on conferences, meetings and other disseminative devices. Training situations need to be created in which individuals can apply learnings in the performance of functions or in the making of decisions that are central to their career pursuits. One reason why simulation receives support in training is that it does provide prospective administrators opportunities for practicing the application of skills and understandings in problem situations. However, we need to supplement simulation with development teams that will work on defined school system problems. These teams could be composed of scholars, administrators, graduate students, and other personnel who would apply systems concepts in ways that actually generate data about the extent to which schools are achieving stated purposes, including those associated with career education. The results should help some leaders meet accountability needs as well as provide models other leaders could use. The teams could also represent applicative models for the continuing education of professors and school personnel. They might in turn suggest other needed learning models.

The other two accountability questions noted above were: what are the schools doing and why are they doing what they are doing? These questions highlight other continuing education needs shared by almost all school leaders. They need to have a better grasp of emergent practice as it relates to vocational and technical or "career" education. Furthermore, they need to grasp why these practices are in operation and to have careful analysis of their impact and of their implications for use in other school districts. They need alternatives to consider which are related to but go beyond current practice. A model such as the National Academy for Education represents one mechanism for sharing and analyzing practices. State education agencies represent another source for such training as do universities. Clearly, there is much information about innovations in practice related to career education that are not widely known by school leaders. This would include emergent work in education as well as the increasing number of experiments carried on by those in the private sector. The effective ordering and use of this information by leaders is largely dependent upon the continuing education opportunities that are available to them.

Questions of accountability have been discussed to this point more from the perspective of public schools and their leaders. The questions can also be stated within the specific context of training agencies as, for example, institutions of higher education, state education agencies, and school districts. A final recommendation that I would have is that these various agencies responsible for new programs to prepare vocational and technical leaders state explicitly the four accountability questions noted above and that they relate them directly to training functions; further that they devise better ways for answering to their publics the four questions:

1) What are we now doing to prepare leaders of vocational and technical education?

2) Why are we doing what we are doing?

3) How well are we doing what we are doing?

4) What should we be doing to prepare leaders, and why?

I believe that training agencies are going to be pressed to give a reckoning on the questions more in the future than they have in the past. More basically, I believe they are going to have to achieve more carefully conceived and more data-based answers to them if they are to meet important challenges now before us.

CHAPTER III

EVALUATION CONCEPTS FOR GRADUATE PROGRAMS

The program had three presentations, one panel, and a group discussion which focused on the goal of presenting different evaluation models, eliciting implications for vocational and technical education graduate programs, and discussing related ideas.

Presentation

"The Education of General Staff Officers Program in the United States Army"

Dr. Ivan Birrer
Educational Adviser
U.S. Army Command and
General Staff College
Fort Leavenworth, Kansas

I am especially pleased to be here this morning and to tell you something of my institution, the U.S. Army Command and General Staff College at Ft. Leavenworth, Kansas. In talking about the college, or CGSC as I will call it for short, I will portray a military model for assessing, or evaluating graduate programs. At the outset, I should acknowledge that my remarks might sound somewhat prejudiced; indeed, I am enthusiastic about our program--I have been associated with it since January, 1948.

I begin this morning at something of a disadvantage because I represent a rather different kind of graduate professional schooling. Although I believe that much of what we do has application elsewhere, it is true that CGSC is, in many ways, unique. At the start, I'll endeavor to sketch in the necessary features.

Let's commence with a look at the army educational pattern. On this chart, years of commissioned service are shown on the vertical scale. We are concerned with the third, or next to highest, level. Let me make these points: first, while all officers attend the branch basic course and the branch advanced course, only about 50 percent are selected to attend the CGSC; second, the officer comes to the college after eight or more years of successful

competitive service--in mid-career and as majors or lieutenant colonels, with an average age of 34. Third, less than one-fourth of the CGSC graduates will subsequently be chosen for the highest level--senior service colleges. Obviously, each officer's record at CGSC will be a significant consideration for these later selections. In addition to these points, CGSC qualifies as graduate education on two counts. It is post-baccalaureate, and it is available several years after original entry into the military profession.

Having shown you the college's place in the military educational pattern, the next item I call to your attention is the mission. Here is the formal mission statement.

The key phrases are three: peacetime and wartime duty; commanders and general staff officers; divisions, corps, etc. Before attending CGSC, an officer, let's say an infantry major, has had formal military schooling and experience (in Vietnam, most certainly) in infantry. He is, as we say, branch qualified--he has had schooling and on-the-job experience in infantry. Our job is to extend this qualification over the gamut of the team of the combined arms and services. In short, we can say that our goal is to produce graduates who can perform the tasks and solve the problems of commanders and senior staff officers of large army units; that is, 15,000 or more men.

The remainder of my remarks will describe how we endeavor to accomplish this ambitious mission, including the steps we take to appraise our success.

A key variable in any school program is the student body. I have previously indicated that our students have earned attendance by prolonged (at least eight years) service. Perhaps it is self-evident that every officer wants to be selected to attend CGSC. Indeed, for all practical purposes, CGSC graduation is a *sine qua non* for a successful military career. This means that the competition for selection is spirited, and later, that there is substantial motivation to excel as a student.

Fortunately for us, the college is not a part of the selection process. This difficult and important process is accomplished in Washington--in the Office of Personnel Operations. In this office there is a special group specifically concerned with monitoring the careers of the officers of each branch. This office makes school selections as well as other personnel assignments. As for CGSC, each year, the group reviews the record of each officer of the branch with between eight and 15 years of service, who is not a Leavenworth graduate. This record includes efficiency reports made at least annually; reports of previous schooling, both military and civilian; and all other data pertaining to the officer's performance of duty. The point I'm making is that the officer

earns his selection to CGSC by his performance over a period of years. He has clearly demonstrated professional competence. The results of the selection process are published annually, around mid-December. At that time about 1,200 officers learn that they will begin a CGSC 10-month student tour the following August. Moreover, since the entire roster of selectees is published, the whole army knows who is and who is not chosen.

Having been selected, the student officer, complete with family and household effects, travels to mid-America in late summer to commence his schooling. From the college catalog he knows that the curriculum is divided into seven courses of study.

Course 1 covers instruction on the fundamentals of staff organization, including joint and combined staffs, and commander and staff responsibilities, functions, and procedures at command levels ranging from the division to the pentagon.

Course 2 covers the principles of command and management of the army's resources at all levels.

Course 3 presents principles and doctrine pertaining to the organization, mission, capabilities, limitations, and tactical employment of army divisions in various operational environments.

Course 4 presents similar instruction on our larger units, including the army's logistic structure and doctrine pertaining to combat service support for the army in the field.

Course 5 is devoted to strategic subjects that take into consideration the elements of national power and the fundamentals of strategic planning.

Course 6 investigates the concepts and principles concerning the organization and employment of joint and combined forces. Also covered are unconventional warfare, civil disturbance operations, tactical air support, air defense, and employment of other U.S. and Allied Armed Services.

Course 7 examines the history, concepts, organization, and patterns of insurgency. It also covers the effects of internal defense and internal development measures in countering insurgency.

As a matter of historical interest, courses 1, 3, and 4--staff procedures, division operations, and larger unit operations--comprised the pre-World War II CGSC curriculum. The inclusion of Course 2--management--is indicative of the army's concern for resources management. Course 5 reflects the fact that senior tactical commanders function in a broad strategic arena. Course 6--joint and combined operations--recognizes that no one service operates independently. Course 7--internal defense--testifies to

our concern with insurgency. In the military profession as in others it was simpler a few decades ago.

The curriculum is designed or, if you prefer, packaged into three-hour lessons. As a general rule the student attends two lessons per day. Each lesson has been prepared so that approximately one and one-half hours of homework is required. The student academic year, therefore, amounts to nine hours a day, five days a week, for 38 weeks. Of the 30 classroom hours per week (two lessons a day for five days), approximately half are devoted to solving requirements. The rest are spent discussing the requirements that have been solved either as homework or classroom work and in instructor presentations, primarily in the form of introductions, summaries, and conclusions.

Another feature of the college that merits attention is our scheme for curriculum planning--a problem which, in the military school system, is tackled in a quite formalized manner. To understand and appraise the college, one must be cognizant of this rather different approach to curriculum planning.

To establish some parameters for the planning sequence, I should note that the dimension with which we deal is time--classroom time, which is expressed in terms of clock hours instead of semester or quarter hours. Our students are ordered to the CGSC for a 10-month course. We have decided that six classroom hours on a typical day represent a reasonable amount of scheduled instruction. From these two facts, we arrive at a total of available hours for scheduled instruction.

Our mission, as has been pointed out, is a very broad one, which means that the subject matter content we would like to include far exceeds the available time. (An old story to each of you, I'm sure.) The challenge then, is to select from all the material that might be included, the best possible sample and fit it into the course--a task further complicated by rapidly changing world conditions as they pertain to the military. With this as a backdrop, let's see how we go about deciding what should make up the course of instruction--how we go about curriculum planning.

The starting point, of course, is the college mission, which assigns to the college the task to be accomplished. The mission is broad in scope and very general in nature. This means that the college has wide latitude in deciding what should be taught. At the college, the mission statement is under constant analysis to discern what changes in emphasis or direction are desirable. For any one school year the analysis is collected and reviewed. When approved, this collection is called the Commandant's Curriculum Guidance.

Based on this guidance, the academic staff, in coordination with the course directors, develop a document which, when approved, establishes the specific subject matter responsibilities for each course and allocates resources in terms of classroom time. We call this document, Faculty Memorandum Number 1. In military terms it is our operation order.

The content of Faculty Memorandum Number 1 is as shown here:

FACULTY MEMORANDUM NUMBER 1

1. GUIDANCE FOR CURRICULUM DEVELOPMENT.

2. COORDINATION INSTRUCTIONS.

3. ASSIGNMENT OF RESPONSIBILITIES FOR COURSE DEVELOPMENT AND PRESENTATION.

4. ALLOCATION OF HOURS TO COURSES AND SUBJECTS.

5. ASSIGNMENT OF EXAMINATION RESPONSIBILITIES.

As for item 1, two typical examples from the document for academic year 1971-1972 are that--

"Every lesson in the curriculum should be designed to require serious application and work in a manner that is stimulating and thought provoking rather than laborious and time-consuming."

"Instruction, especially the selected operating areas and levels of conflict, is to be guided by the announced U.S. military strategy."

By coordinating instructions we mean the procedures prescribed to control curriculum content, facilitate detailed coordination, and preclude duplication of instruction. These instructions insure that the seven courses of study are a cohesive and integrated whole. We will look at some of these procedures shortly.

The remaining items form the heart of the document. Each course of study is allocated a specific number of contact hours. This bulk allocation is further divided into what we call numbered subjects which consist of one or more three-hour lessons. And, finally, the plan prescribes the number, length, and time of examinations for each course of study.

From here the major focus of curriculum planning activity shifts to the instructional departments. The departmental subject

matter responsibility is analyzed against the background of the number of hours alloted to each course. From this analysis a Course of Study Outline is prepared for each of the seven courses of study.

The Course of Study Outline includes the following: first, a detailed narrative that describes the course of study; second, a listing of student-oriented instructional objectives and the subjects within the course that fulfill each objective; and, third, the proposed presentation sequence for all course lessons.

The crucial features of the outline, quite evidently, are the instructional objectives. In graduate education it is not easy to state specific objectives in precise terms--despite the obvious necessity therefor. We say instructional objectives should have these characteristics:

CHARACTERISTICS OF
INSTRUCTIONAL OBJECTIVES

Stated in terms of the TASK which the student must be capable of performing

Indicate the STANDARD of performance which the student must achieve

Indicate the CONDITION under which the student is expected to perform

Let's look at an actual example that purports to satisfy these characteristics:

EXAMPLE OF INSTRUCTIONAL OBJECTIVE

Course 3, Division Operations

Subject M6001, Organization, Combat, Combat Support and Combat Service Support-Division.

To enable the student, as a general staff officer assigned to
CONDITIONS

a division to allocate forces and assign tasks to subordinate
TASK

units based on unit missions and employment in accordance with

FM 61-100 and TOE's
STANDARD

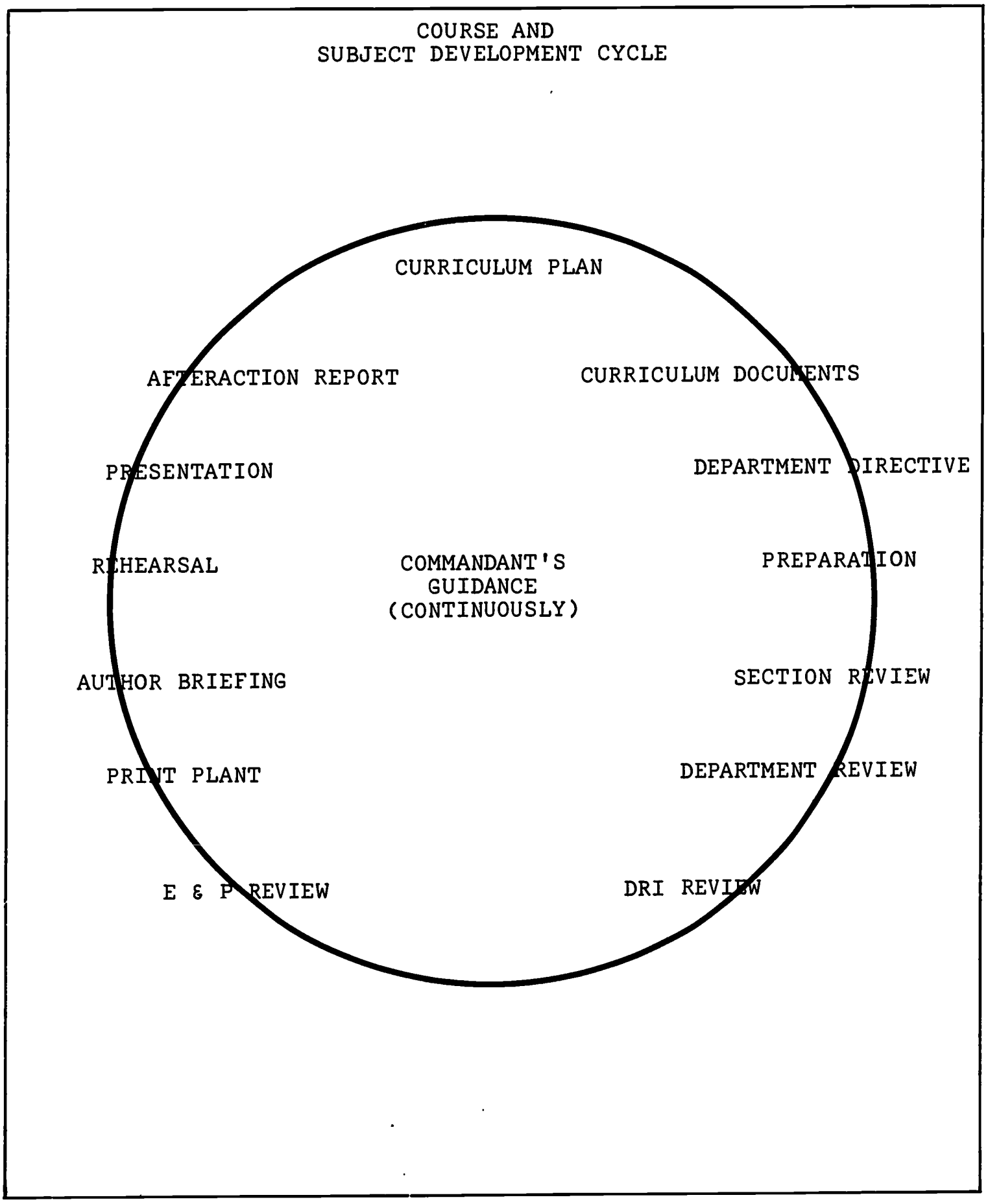
The TASK is allocation of forces and asignment of tasks to subordinate units. This is to be done in accordance with published doctrine--the STANDARD, and as a commander or general staff officer--the CONDITION.

In addition to the Course of Study Outline, the course director prepares and submits to the academic staff a Content Control Data Form for each subject of his course. The Content Control Forms are divided into two parts. Part one contains information that is required to develop the subjects, the training schedule, and the Program of Instruction. Part two consists of subject content control data that is designed along functional and organizational lines to ascertain the instructional emphasis and coverage of the curriculum.

These documents--the Course of Study Outline and its accompanying Content Control Forms--are submitted to the academic staff, which is charged with the important task of insuring that when the seven courses of study are combined, the curriculum will be responsive to the Commandant's Guidance. Based on this staff review, the Course of Study Outlines are modified to the extent required. Unnecessary duplication is eliminated; identified gaps in coverage are provided for; and necessary changes in emphasis, approach, and locale are accomplished. At this point in the sequence, the Course of Study Outlines, as modified, constitute the Curriculum Plan. The plan is submitted to the commandant for approval. When approved, a digest of the plan, giving the scope and other pertinent data for each subject, is published in a document we term the "Program of Instruction."

The next step in the procedure is the preparation and subsequent presentation of each subject listed in the approved Curriculum Plan. The process is explained in the diagram on the following page.

Each subject in the course is assigned to one instructor for preparation. We call him the author-instructor. Starting with the curriculum documents--the pertinent portion of the Course of Study Outline and the various content control forms for his subject, he accomplishes the pertinent research, develops an outline, and drafts the Department Directive. The Department Directive is a document describing the proposed subject in detail. In accordance with the approved Department Directive the author establishes the setting; selects maps if required; and outlines the tasks to be accomplished by the student. He also prepares a comprehensive lesson plan. His subject is then reviewed by his associates and chief within his section and then by his department. Following departmental approval, the subject is submitted to the coordinating staff. At this level the subject is checked for compliance with guidance and overall doctrinal soundness. The material is then reproduced in our own printing plant. After printing is completed,


COURSE AND
SUBJECT DEVELOPMENT CYCLE
CURRICULUM PLAN
AFTERACTION REPORT
CURRICULUM DOCUMENTS
PRESENTATION
DEPARTMENT DIRECTIVE
REHEARSAL
COMMANDANT'S
GUIDANCE
(CONTINUOUSLY)
PREPARATION
AUTHOR BRIEFING
SECTION REVIEW
PRINT PLANT
DEPARTMENT REVIEW
E & P REVIEW
DRI REVIEW

the author-instructor conducts an extensive briefing for his teaching team. The teaching team, consisting of the author-instructor and five members of the same department, is necessary because a subject is taught simultaneously in six classrooms. After a subject is taught, an afteraction report records views, and recommends changes, if any, that should be made in the subject for subsequent presentations. As this circle suggests, the afteraction report is the most important source document for the preparation of the subject for the following year.

So much for a quick resume of curriculum planning. I have endeavored to describe the process in sequential order. In actual fact, several steps are occurring simultaneously. Obviously, the proposed content of an individual subject is reflected in the Course of Study Outline. Certainly, the author-instructor does not wait for a formal printing of the Program of Instruction before beginning the development of his subject. He must act on the assumption that the proposed subject will be approved. On the other hand, the college does proceed through each of the several steps in the sequence each year. These procedures, I submit, have the merit of requiring an annual systematic review of the curriculum. Moreover, they establish an orderly procedure for instituting changes in the curriculum as needed.

The foregoing has been an attempt on my part to give you some general familiarity with my college, with special attention to the characteristics of our student body, the nature of the curriculum, and the manner in which we go about curriculum planning and preparation. With this as a prelude it is appropriate to turn to the theme of this meeting and to describe the procedures we use to determine results. For convenience, I'll divide the description into two parts: the way we evaluate student achievement and the way we evaluate, or assess, our program as a whole, with particular regard to the curriculum.

It should be noted that the college very definitely has a certifying function. Because graduation from CGSC is a prerequisite for a great many assignments (not to mention its effect on promotion) the college is in the position to certify its graduates as qualified for commander and staff positions. Also, from the standpoint of public interest, the fact that the student officer is paid to attend argues for the need to account for his achievement. This accounting is in the form of an Academic Report that is sent to Washington and becomes a permanent record.

Other than the usual identifying data, there are six substantive items. I'll say a word about each in turn.

The first item is the crucial question of graduation/nongraduation. The rules are quite simple: successful completion is

contingent upon the student's demonstrating satisfactory achievement in each of the courses of study. Two written examinations are given in each course of study--one at midterm and the second near the end of the school year. The responsible instructional department scores the test papers in the usual manner. Thereafter, the department director concerned conducts a qualitative review of the poorer test papers to determine which, if any, are unsatisfactory. Student officers who are judged qualitatively unsatisfactory are given the opportunity to correct this deficiency by either an oral or written retest. Although we expect our students to graduate, we have learned that each year a small number will be academic casualties.

The second item on the Academic Report is a determination of whether or not the student officer qualifies for the Commandant's List. By regulation, the list is limited to 20 percent of the class. To make this list, consistently good test scores are essential.

The third and fourth items record the student officer's ability in writing and speaking skills--two important characteristics of an effective officer. The speaking appraisal is based on two inputs: the first is a series of reports of classroom performance--our rules call for a computer assist card to be filled out for each classroom presentation of substance. (It may be of interest that we averaged 10 completed cards for each student last year.) The second input is a grade on a formal briefing prepared and presented in military style. Similarly, the writing entry is derived from an assessment of the worth of various papers prepared by the student officers throughout the year. They range from short summary sheets to extensive research reports.

The fifth item requires a judgment as to the potential of the student to be a member of the college faculty. The significance of a "yes" signifies the college's willingness to have the officer assigned to the faculty if at the time of his availability for such an assignment there is a vacancy in his grade and branch. From this item the CGSC exercises quality control over faculty assignments. Now about the item itself. To attain a PI "yes," the student must first be recommended in writing by one of our teachers. This recommendation is to be based on demonstrated performance in the classroom. Thereafter, the recommendation is reviewed by a Faculty Selection Committee which makes the final determination.

Last, and perhaps of greatest significance, our Academic Report includes a narrative description of the student officer--in much the same manner as an efficiency report. These narratives are prepared by the student's faculty advisor. Each advisor has some eight advisees. He knows them personally; he has had them in his classes; he has received several classroom observation reports prepared by other faculty members; he has evaluated the

student's papers; and he knows the student's test scores. Based on these facts, he writes the description.

My account of student evaluation would not be complete without mentioning some of the difficulties involved. What we have been directed to do in the way of the Academic Report is neither easy nor popular. The difficulties stem from the size of the student body together with the elusiveness of the criterion we are, in a sense, striving to predict; that is, officer success. The unpopularity is, I suppose, intrinsic. Most of us prefer not to be scored, especially when the scoring counts. We get by at CGSC I think, primarily, because our students are used to competing for record. They tend to view CGSC as more of the same.

The remainder of my remarks will be concerned with our procedures for a continuous and, we believe, systematic review and appraisal of our curriculum. As a result of these procedures, we are constantly endeavoring to improve our program and thereby increase our contribution to the nation's military preparedness.

The first group of processes I'll discuss are the means we use to obtain feedback from our immediate consumers, the students. I might remind you that these student officers are competent, motivated, and experienced. We believe they represent a fertile source for suggestions to improve the curriculum, and we intend to exploit this source.

In each of our classrooms we have student comment sheets. The students have been told that we solicit their comments and recommendations about any subject in the curriculum. The comments are routed to the staff curriculum division. Our students are not reticent about expressing their views. Last year we received over 500 student comments. Many contained suggestions that have been adopted.

We hold seminars with students throughout the school year. These sessions are called by the course director, who invites 10 to 15 student officers to meet with him and his instructors. The discussion topics will be the material of the specific course, with emphasis on ways to improve what has gone before as well as what is to follow. We have been able to create a permissive atmosphere during the seminars so that ideas are freely advanced. The very existence of this procedure has had the salutary side effect of letting our students know we have a genuine concern for their reactions.

In a more formal vein, we conduct systematic surveys in the questionnaire format. This year we surveyed a sample of the class at the onset of the course with a kind of self-rating form that called for the respondent to estimate his proficiency in a number of areas; competence in electronic warfare, for example. In part,

we are endeavoring to establish a base for our instruction that is in consonance with student background. At the end of the year we will administer the same form. By this kind of pretest-posttest procedure we hope to acquire some insight into the changes our treatment (instruction) has produced. These systematic surveys are administered by the staff curriculum division.

From the students directly, we (I should more correctly say the commandant) have, this year, instituted one additional procedure for obtaining feedback data. The commandant has directed the senior officer in the class--ex officio the class president--to appoint a representative ad hoc committee to meet throughout the year. At the conclusion of the academic year this committee will submit a report to the commandant recommending course improvement. It is an interesting innovation that is believed to have considerable promise. The committee should take its responsibility and opportunity seriously, knowing that the commandant can, if he elects, order adoption of suggestions in whole or in part.

In a somewhat different category is the next process, which I have labeled simply classroom visitations. We have already seen that during the preparation of the subjects the work of the author-instructor is subjected to a number of reviews: by his section, by the course director, and by the academic staff. It should, therefore, not be a surprise when I tell you that the presentation of the subject is also supervised. This supervision, in the form of unannounced and unscheduled classroom visits, is made by persons throughout the organization. The commandant and the deputy commandant try to spend some part of each day in one of the classrooms. The department directors sit in on parts of lessons taught by their personnel. Members of the academic staff spend a part of their time observing what goes on in the classrooms. No one considers these visits as anything other than business as usual. From an evaluation standpoint it is obvious that such visits give valuable insights into the classroom processes; it is equally evident that these visits provide a control of the quality of classroom teaching. The process insures that the instructors are prepared. Our supervisors see their teachers in action and can offer constructive criticism as appropriate. This criticism is, by its very nature, a form of in-service training.

To complete my account of our course evaluation, I now invite your attention to the processes we have for obtaining input data from external sources. Follow-up questionnaires to graduates are the first of these processes. Last year we contacted more than 100 graduates of each of the last five years and asked them to submit their recommendations for course improvement. We have not had much success with follow-up questionnaires insofar as specific curriculum recommendations are concerned. They have proved of value in some unexpected ways. For example, we now know that our graduates occupy a much wider variety of assignments after graduation

than we had foreseen. This fact raises some interesting questions for the curriculum planners.

We have routinely surveyed senior commanders regarding their appraisal of CGSC graduates. Last year we contacted 65 general officers, including every major field commander. We solicited responses to specific questions and invited general remarks about the college. You might find the responses of interest. The senior commanders complained mostly about the scarcity of Leavenworth graduates. They called for more graduates, not better quality graduates. (On the side, let me acknowledge that this high quality is not all because of the college. Inasmuch as the best army officers come to CGSC, naturally the user simply wants more of the list. We try to maintain perspective on this point.) Another item from the general officer's survey should be noted. It was a request for graduates who are able to write and speak more effectively. I imagine one might obtain a similar reaction from corporation presidents; college chancellors; state educational commissioners; and, certainly, from high school English teachers.

Almost all portions of our curriculum have a real life counterpart somewhere. It behooves us to be sure that what we present as theory is in consonance with fact--or, at least, that we are aware of the differences and the reasons therefor. A primary means to bridge the gap between fact and theory is the liaison trip to field units. Each year our faculty members visit major units stationed throughout the world. They call on the staff sections of the Department of the Army. They talk with the commanders and general staff officers who actually occupy the positions relevant to the college curriculum. The result is a constant blend of the real world with the simulated world of the classroom.

I have included the next item with some misgiving. The great preponderance of our curriculum is the result of our own volition. At the same time, we are a part of the U.S. Army and, as such, are responsive to directives from our superiors--Continental Army Command, Department of the Army, and Department of Defense. Directives from our superiors affect curriculum only in those rare instances in which a policy decision is made to attack some new problem by means of the military school system. Just recently we were directed by higher headquarters to add curriculum coverage of contemporary leadership problems--drugs, dissent, race relations.

I realize that this next item, reaction of CGSC visitors, hardly qualifies as an appraisal process. It does, however, serve such a function. CGSC teems with official visitors, both military and civilian. If military, they are, with few exceptions, CGSC graduates. If civilian, they know something of the institution and its role in the defense establishment. They come to Leavenworth for many reasons; but, regardless of why they come we brief them on the current college program. We tell them about the changes

and the future plans. From them we get reactions that add to our reservoir of curriculum planning data.

The next item is similar to the last in that it, too, is not an evaluation process per se, but it functions as one. General officers are prone to write to the commandant (who is often a personal friend) and suggest what the college should and should not do. Sometimes their suggestions involve the teaching of new battlefield techniques; sometimes they deal philosophically with the role and status of the army. Regardless of the topic, they comprise still another pool of proposals for change and, from the standpoint of the general officer offering the proposal, not only for change but also an improvement.

The list of appraisal processes is completed by reference to our advisory committee. This nine-man, all-civilian board of educators convenes at the college at least once a year. Its charter directs the committee to "examine the organization, management, policies, curriculum, instructional methods, facilities, and other operational aspects of the college" and, as a result of the examination, to "provide views, advice, and recommendations to the commandant." As the committee functions, the annual meeting is in the nature of a report of what has been accomplished the past year and what has been planned for the year to come. From the committee we obtain an independent analysis and review of both accomplishments and plans.

For the past several minutes I have described the 12 processes we use to obtain data for curriculum evaluation and curriculum planning. From these several activities we acquire a myriad of suggestions for change. But mere accumulation of suggestions does not, in itself, result in action. What is required is: first, some procedures to consider the suggestions and decide on those to be adopted, and second, a procedure is needed to actually implement the changes.

It is the task of the staff curriculum division, working jointly with the course directors, to consider the merit of each suggestion. These considerations result in a decision of whether or not to adopt each proposal; and if adopted, just where it will fit in the curriculum. At this point, the action falls to the author-instructor who will be responsible for making the changes in his subject. These changes are carefully noted in the after-action report, which is the document that contains the record on the subject for the year and the changes to be made for the next year. Once directed, it is the responsibility of the author-instructor and those who review the subject to take the actions that were ordered.

This completes my description of our plan for curriculum evaluation. Before leaving you, let me submit one more proposal

for your consideration. Often in conversations with persons about CGSC, I am confronted with this challenge: What evidence do you have that you are doing a good job? And, I submit, this is not an unfair challenge for any person in education.

My response to this challenge is twofold. Certainly, the substance of my earlier remarks is a partial answer, employing factual data of some validity. My second response is more subjective.

Basically, the mission of the college is to produce commanders and general staff officers for large units of the field army. We want our graduates to be able to perform the tasks and solve the problems intrinsic to commander and general staff positions. While at the college our student officers have daily opportunity to do the kinds of planning and decision-making that they will be called on to perform in real life. As they solve their school problems they do so using the exact same procedures, documents, and format prescribed for real use.

In the early months of the course our students, when cast in the role of a division commander, given a corps order, and told to plan an operation, are at a loss as to how to begin. These same students at the end of the course competently and confidently conduct tactical planning of very complex operations. They almost routinely manifest the problem-solving competencies the college is charged with producing. On the basis of this demonstrated performance in our classrooms, not only the faculty, but more importantly the students, are convinced that as graduates they can do the job. This consistent result insures us that we are satisfying the crucial criterion: accomplishment of mission.

Presentation

"The Evaluation of the Management Level Training Program at the A.T.&T. Company"

Dr. Richard J. Campbell
Personnel Manager of Research
American Telephone and
Telegraph Company
New York, New York

I am pleased to have the opportunity to be with you this morning to discuss some of the work we have been doing in the Bell System on the selection and development of managers. My objective is to present some of our experiences and findings that will be relevant, at least in some degree, to your concerns. I face this task with some trepidation. Several years ago I was asked to present the Bell System's approach to selection problems at a symposium on the selection of teachers. I was one of the first speakers, and after my presentation felt satisfied that I had described an interesting approach to selection that would be of some value to the assembled educational administrators. It was a bit of a jolt to learn during the course of the symposium that the selection ratio in this particular system approached one--there were not enough candidates to fill available openings! Undaunted, I shall try again today to present some relevant ideas, and trust that you and the panel can draw some implications for graduate education.

My remarks will focus on the selection and development of managers to staff middle and upper management in our Associated Telephone Companies. As you well know, the Bell System is a very large organization. It employs more than one million people, which represents more than one percent of the nation's labor force. Approximately three-fourths of the employees work in the telephone companies; the remainder in Western Electric, Bell Telephone Laboratories, and other subsidiaries. The managers in the telephone companies come from two main sources--the non-management ranks and direct hiring into management. A substantial portion of the latter group is recruited from the college campuses.

The Bell System has devoted considerable time and resources to research on the development of managers. Management development activities entail considerable cost in such a large organization. Also, many managers have careers with the Bell System that span 30 to 40 years. Even small improvements in the effectiveness of selection and development procedures can have significant impact on the organization when you are dealing with large numbers of managers and long career spans.

54/55

My presentation will deal primarily with the findings of a major longitudinal study of managers' careers launched during the 1950s and the impact of the findings on Bell System practices. It might prove helpful, however, to begin with a brief review of some of the research projects conducted over the years to provide some perspective.

One of the earliest studies, conducted in the twenties and updated in the fifties, looked at the relationship between performance in college and later success in management. The earlier study (Bridgman, 1930) showed, among other things, a definite relationship between rank in class and salary progress.[1] Livingston (1971), in a recent article criticizing the effectiveness of university programs in preparing students for managerial careers, concludes that academic achievement is an unreliable measure of managerial potential.[2] Our data for Bell System managers do not support the contention that undergraduate grades bear no relationship to later success in business. The study conducted during the fifties (Kappel, 1962) supported and extended the earlier findings of Bridgman.[3] Table 1 shows the relationship between rank in class, college quality, extracurricular achievement and salary progress. All three variables are positively related to salary progress. Of those in the top third of their class, in a better than average college, and with substantial extracurricular achievement, 67 percent had achieved the top third in salary progress. Of those in the bottom third of their class, in a below average college, and with no extracurricular achievement, only 20 percent achieved the top third in salary progress. Although the controversy over the relationship between academic performance and later success continues, our studies have produced consistent findings. These results have been used in setting selection standards for college recruiting over several decades. Our present recruiting standards include both rank in class and extracurricular activities.

A number of the studies conducted during the last 20 years have focused on developmental issues. Most relied on attitude surveys and interviews. Some were concerned with the needs of higher managers; others probed problems at the first and second levels of supervision. In some instances applications of the

---

[1] D. S. Bridgman, "Success in College and Business," *Personnel Journal*, Vol. IX, No. 1 (June, 1930).

[2] J. S. Livingston, "Myth of the Well-Educated Manager," *Harvard Business Review*, January-February, 1971, pp. 79-89.

[3] F. R. Kappel, "From the World of College to the World of Work," *Bell Telephone Magazine*, Spring, 1962.

findings consisted of attempts to alter jobs and tasks, while others resulted in formal educational programs. The studies included such diverse subjects as delegation of authority, initial training for high potential managers, training needs of middle managers, expectations and turnover, and standards of performance.

One of the more intensive and widely known developmental programs was the Institute of Humanistic Studies started in 1953 at the University of Pennsylvania. This was a 10-month program of lectures, discussions, and readings in the humanities designed to broaden the outlook and interests of the participants--selected middle managers in the Bell System considered to have high potential. Several in-house studies were conducted of the effectiveness of the program, and a special study was conducted by Viteles and reported in *Personnel Psychology* (1959).[4]

These programs and studies yielded important information that helped guide development activities, however, there was a strong feeling that more fundamental information on the growth of managers was needed. There was no body of data available in the literature on the growth and development of managers over time. While it was possible to point to the short term effects of specific programs and actions on limited aspects of managerial behavior and performance, the studies were piecemeal and did not provide base line information on the long term growth patterns of managers. It was decided during the mid-fifties that a major longitudinal study of managers would be undertaken. The study, called the Management Progress Study (Bray, 1964), is still continuing, and the remainder of my remarks will be devoted to describing some of the results and their impact on company practices.[5]

The overall purpose of the Management Progress Study (MPS) is to develop an understanding of the growth of managers as they proceed through a substantial portion of their business careers. The total sample consists of more than 400 managers. About two-thirds of the sample (n=274) were college recruits hired as management trainees; one-third (n=178) were young managers who had advanced into management from the vocational ranks of the telephone companies. This morning, in an attempt to simplify and focus on the more relevant findings, only the results for the college recruits will be presented. These men were brought into the study on a

---

[4]M. Viteles, "'Human Relations' and the 'Humanities' in the Education of Business Leaders: Evaluation of a Program of Humanistic Studies for Executives," *Personnel Psychology*, 12, 1959, pp. 1-28.

[5]D. W. Bray, "The Management Progress Study," *American Psychologist*, 19, 1964, pp. 419-420.

staggered basis during the 1956-1960 period. They represent five telephone companies located in the East, Midwest, and Mountain regions. The typical recruit was 25 years old and entering his first job following graduation from college. Only a few had prior full-time work experience.

The recruiting objective of the companies was to hire high potential men who could reach middle management within a relatively short period of time--about 10 years. During this era management recruits usually were placed in a rotational training program that could extend as long as two years. Departmental assignments were varied, but most were assigned to plant, traffic, commercial or engineering.

A few words about the study design will help clarify the results. The subjects began their participation in study by attending a three day assessment center shortly after they were hired. This assessment process has been described in detail elsewhere (Bray and Grant, 1966).[6] The assessment devices included paper and pencil tests, group and individual simulations, projective tests, and interviews. At the conclusion of the assessment, the assessment staff rated each subject on a number of dimensions and made a rating of his managerial potential.

The study design includes an intensive follow-up program. Each subject is interviewed annually from the second through the eighth year. The interviews are conducted by psychologists and usually last two hours. The interviewer gathers information on many aspects of the subject's job, career, and nonwork activities. In addition to the interviews with the subjects themselves, periodic interviews are conducted with company representatives who can provide information on the man's performance, work environment, boss, and so on. At the nine year point each subject attends another three-day assessment center. This reassessment is very similar to the original assessment. The study is continuing on beyond the ninth year, but this phase of the study will not be covered in this morning's presentation. Incidentally, all individual data are held in strict confidence by the researchers.

The purpose of the original assessment was to determine as accurately as possible what the recruits were like when they joined the Bell System. These data could be used to isolate important career relevant dimensions and to determine the degree to which personal characteristics at the time of hire influenced later success as a manager. Another central concern of the study is the

---

[6]D. W. Bray and D. L. Grant, "The Assessment Center in the Measurement of Potential for Business Management," *Psych Monographs*, whole #625, 1966.

influence of the environment in fostering or arresting growth along these dimensions. The follow-up program provides information on the environment and individual change. The reassessment provides further information on changes over the eight year period. Although many of the necessary analyses are still to be completed, some important findings are now in hand.

Let us begin with the results pertaining to the isolation of important career dimensions. At the conclusion of the assessment, all data were reviewed and each man rated on 25 variables. The variables were drawn from the skills, personality, and motivational domains. Since there was obvious overlap among the variables, the Wherry Hierarchial Procedure was used to reduce the 25 variables to orthogonal factors. The factor analysis yielded eight factors, including a general factor, which account for most of the variance in the ratings. Table 2 shows the correlations between composite scores based on these factors and salary progress over seven to nine years for recruits in two companies (n=81). All of the personal characteristics are reliably related to salary progress. Three of the factors--administrative skills, interpersonal skills, and intellectual ability--represent skill or ability dimensions. The results clearly show that they are important factors in one measure (salary progress) of success in a managerial career.

This finding will not lead to revisions in the hundreds of lists currently available which purportedly contain the characteristics necessary for success in management. The relationship between intellectual ability and progress in management is not a new discovery. Organizing, planning, decision-making, and leading others are important aspects of most managerial positions.

The results for the personality and motivational factors are more eye-catching. The correlations are of a similar magnitude to those for skills and abilities. Control of feelings reflects the individual's ability to maintain his effectiveness in stressful and/or unstructured situations. Work oriented motivation taps the importance of work to the individual and his inner work standards. Both factors are positively related to salary progress. A person scoring high on the career passivity factor is one who is more concerned with job security than advancement. The dependency factor taps need for support from superiors and peers. Both career passivity and dependency are negatively correlated with salary progress. Or to turn it around, desire for advancement and independence are positively related to success. It appears, then, that a number of personal characteristics are important factors in career progress.

The assessment rating of the overall managerial potential of each subject was a judgment by the staff as to whether or not the man had the potential to reach middle management. When these

ratings were compared to actual progress approximately eight years later (Table 3), 59 percent of those judged to have middle management potential had achieved that level as compared to 25 percent of those judged as not having middle management potential.

These findings strongly indicate that career development theories and programs must take into account the large differences that exist between individuals at the outset of their careers. The above results show that individuals vary widely in important career relevant dimensions at the beginning of their careers, and more importantly that it is possible to measure people on these dimensions with sufficient accuracy to predict later progress. The measurement of change or growth on these dimensions over time requires a fairly complete analysis of the reassessment data. Unfortunately, these analyses are not complete at this time. (We hope to have the results in print next year.) We can turn, however, to some interesting data obtained in the annual follow-ups on the reactions of the men to their careers and companies.

The interviews conducted during the first two years revealed a considerable amount of dissatisfaction on the part of the recruits with the initial training program. This rotational training program was similar to those used by many companies today. The recruits were given a series of assignments of short duration. In some instances the recruits observed other people working in various jobs, in others they actually performed the job for a few months. There was a strong feeling at the time that it was necessary for a recruit to work in non-management positions before being placed in a leadership position as the supervisor of such roles. In addition to these assignments, recruits met people in other departments and were given reading material about the departments and the company. More than a few did not respond as the company expected. Some stated rather negatively that they felt they were back in school again. They wanted an opportunity to test their wings, to see what they could do, and they felt they were not getting it.

Another negative aspect of this rotational program was that the company did not learn much about the men. While they were progressing through this one to two year program, there was little opportunity to evaluate their performance as managers. As a result, no firm evaluations could be made of the managerial potential of many recruits even after they had been with the company a considerable period of time. It was becoming clear that we had a problem with our initial training program.

Another set of data that has proved quite useful in examining the effectiveness of our programs is that concerning termination. One of the strongest responses an individual can make to his early experiences in management is to leave the company and/or his chosen career. Termination is a serious problem, for both the individual

and the organization. Although mobility is advocated as the key to success by some writers, e.g., Jennings (1967), it does have its negative features.[7] Frequently the prospective terminator finds himself in an avoidance--avoidance or approach--approach conflict, and the typical recruit finds such decisions trying.

Some of the negative effects of termination on the organization are obvious. The high costs of recruiting and training must be written off. When Human Resources Accounting (Pyle, 1970) is fully developed these costs may prove to be considerably higher than most people realize.[8] At the present time, the organization may mourn the loss of a capable manager, but the full cost doesn't appear on the balance sheet. Many organizations do not appear to have good figures on loss rates. One gets the impression these figures can be painful to review, and it is more comfortable to leave them buried in tables where they are difficult to interpret. It is a pity, because organizations can learn a great deal from those who leave.

Thirty-eight percent of the Management Progess Study recruits left the company within eight years of employment. While it is difficult to obtain comparable figures for other organizations, this rate appears to be somewhat below that for large organizations during this time period. Publication of termination rates stimulates questions within the organization about the kinds of people who are leaving. This usually represents one of two concerns--are we losing the more promising recruits, or is there some way we can predict who will leave and screen them out prior to hire? Should the organization try to change so it can keep more of the recruits, or should it strive to do a better job of selecting those who will stick with the existing organization? In the absence of more definitive data on termination, there is a strong tendency to opt for the latter solution.

The Management Progress Study design called for interviews with all terminators after they were off the payroll. A companion interview was conducted with a company representative to determine the company's view of the circumstance leading to termination. The intensive follow-up interviews with the terminators and the company representatives revealed that only half of the recruits left voluntarily. The other half were fired or encouraged to resign. In effect, one of every five recruits was a failure as a manager. According to their supervisors, they were terminated

---

[7] E. E. Jennings, *The Mobile Manager* (University of Michigan, 1967).

[8] W. C. Pyle, "Accounting System for Human Resources," *Innovation*, 10, 1970, pp. 46-55.

because of ineffective performance or failure to demonstrate potential to advance in a managerial career. On the other hand, the company lost a number of capable managers who apparently could have progressed and contributed much in the Bell System.

The assessment judgments of potential track fairly well with these results. Table 4 shows that the percentage of voluntary terminators assessed as having high potential was double that of the forced terminators. The net effect of termination on the quality of the group remaining with the system was negligible. The percentage of high potential men (assessment rating) in the remainder group was similar to that of the original group. Since the forced terminators were a relatively low potential group, improved selection should reduce the number of failures. In the case of voluntary termination, it is necessary to take a more careful look at what happened on the job.

It is difficult, even for the terminators themselves, to determine precisely why they left the company. The motives for leaving can be complex, and a number of external circumstances may impinge on the decision. Analysis of the extensive interview protocols showed that the reasons for leaving cited by the voluntary terminators themselves fell into four major categories. A glance at Table 5 shows that the most frequently mentioned reasons were uninteresting or unchallenging assignments and lack of opportunity. Although money (usually related to lack of opportunity) is a factor in termination, our results suggest it is not the major one. In some cases individuals felt they were misplaced and could not move into the activity they preferred. Others stated they wanted more challenge and responsibility, felt they were not getting it quickly enough, and did not have the desire or will to wait for something better to come along in the company.

Most of these terminators continued to pursue a managerial career in a large organization after leaving the Bell System. Table 6 presents the employment of the men immediately after termination. In the case of both voluntary and forced leaves, termination did not lead to rejection of a career in a large organization for most men. At least half of both groups joined another large corporation shortly after leaving the company. Some shifted to different career fields, e.g., those pursuing professional degrees, but they are in the minority.

The conclusions seem clear. The companies lost a number of men they wanted to keep and should be able to keep. The voluntary leavers were capable managers who continued to pursue their careers, frequently in another large business organization. It appeared that the place to begin in the search for solutions was in the structure of our jobs and career paths.

The findings of the termination studies are supported by studies of those who stayed which examined the relationship between job assignments and the individual's development, performance, and success. Berlew and Hall (1966) conducted some rather innovative research with a subsample of Management Progress Study subjects. They coded the follow-up interviews protocols for "company expectations," defined as the type and quality of contribution expected of the employee by the company. Company expectations were coded in 18 categories in an attempt to reflect the demands upon the recruit in his particular assignment. One of the findings was that performance expectations held by the company for the recruits during the first year were related to success criteria six years later. The study further showed that initial company expectations were related to later performance even when the effects of first year performance were partialled out. Thus, we see additional strong evidence that job challenge is a very important factor in the development and progress of the recruit, and here there is particular emphasis on the first year.

Berlew and Hall present an interesting interpretation of the training or learning situation in which the new recruit finds himself. They note similarities between the early career years of the young adult in a business organization and the socialization of the child. Berlew and Hall state:

> Very early in his organizational career an individual will develop enduring attitudes and aspirations which will have important effects on his future behavior. Of particular interest is the early development of performance standards and job attitudes. From the moment he enters the organization, a new manager is given cues about the quality of performance that is expected and rewarded. The probability that these expectations or standards will be internalized is probably higher when the individual has just joined the organization and is searching for some definition of the reality of his new environment.[9]

The authors further reason that the individual who successfully meets performance expectations will be rewarded, e.g., with promotion, and that he will feel personal satisfaction at having achieved his goal. These positive outcomes will generally lead to a higher level of aspiration and a more positive attitude toward the task or job. Failure to meet performance expectations has effects quite opposite to those of success.

---

[9]D. E. Berlew and D. T. Hall, "The Socialization of Managers: Effects of Expectations on Performance," *Administrative Science Quarterly*, Vol. 11, No. 2 (September, 1966), pp. 207-223.

The Management Progress Study was not specifically designed to test these hypotheses, but the data do provide some indirect evidence. While the findings to be presented cannot be considered definitive, they provide some basis for evaluating the utility of the socialization concepts in studying young managers.

One of the measures included in the annual follow-up of the men was an attitude survey. This survey was constructed for general use in the Bell System. The largest changes in attitudes came during the first few years. For illustration, the results for one of the scales, General Management Attitude, will be presented. This is an overall measure which includes items from the other nine scales in the survey. It encompasses attitudes toward higher management, pride in working for the company, communication in the company, identification with management, etc. The trend of mean GMA over a six year period is shown in Figure 1. While the trend line continues downward through the period, the greatest change occurs during the first year of the survey. Similar results were found for the three other scales studied, which supports the socialization notion that this is a period of maximum change. When the group is split into successful and less successful subgroups based on their management level at year eight (Figure 2), we find more positive attitudes for the successful group than the less successful. The trend lines never cross, and the differences become greater with the passage of time. The mean difference at year two does not reach the .05 level of significance, but the results of a cross-lagged correlational analysis suggest a cyclical or mutually influencing relationship between attitudes and progress in management. One is tempted to draw the inference, following the socialization model, that those who had stimulating or challenging jobs during the early years maintained more positive attitudes toward the company in addition to achieving greater success.

These findings illustrate the infleuence of the organization on the individual. But in an era when institutions are under scrutiny and there is a clamor for institutional change, it would be more than remiss to ignore the influence of the recruits on the organization.

The young managers who left the company not only changed their own environment, they also were instrumental in changing the environment they left.

The number of terminators who gave lack of challenge as the reason for leaving and the dissatisfaction with the training program reported by many who stayed were strong factors in the decision of the Bell System to change its developmental program for young managers. As you will recall, the objective of our college hiring program is to select individuals who have the potential to reach middle management in a relatively short period of time.

The rotational program was dropped, and a new initial management development program (IMDP) was designed with the dual purpose of accelerating development of the manager and securing a good estimate of the individual's potential. The program provides for prompt separation from the business of any recruit judged not to have middle management potential. It is a tough, demanding program. We are convinced that it is important for both the recruit and the company that those with low potential are separated early. Separation of recruits six to seven years after hire because of insufficient potential does a great disservice to the individual. It is even more unsatisfactory to lock people into the company at levels far below their aspirations. The manager deserves clear feedback on his potential early in his career.

The college hire entering the new development program begins with a one week orientation course. Several fundamental points are emphasized. The recruit is urged to set personal objectives and take the initiative in his own development. It is up to the recruit to take advantage of the opportunities for development. In short, development is the recruit's personal responsibility. They also are alerted to some of the negative influences they may encounter, e.g., the well intentioned advice from older managers who may be passing along outmoded wisdom, and the equally well intentioned interest of some supervisors in protecting the novice against risk.

The recruits are given assignments immediately following the one week orientation. They report to middle management level bosses who have been trained for this special supervisory role. The recruits spend their first year on management assignments where they have to find out for themselves what they need to know to get their jobs done. They determine what formal training they think they need, and, with the help of their supervisor, arrange for it.

The initial assignments are given considerable attention. They must be carefully chosen to provide a real challenge and stretch the individual's ability and ingenuity. Interestingly enough, many recruits are taken back by the emphasis placed on their personal responsibility for development. They become eager to accept the challenge, however, once they understand it.

The program has been operational for a decade. We believe, generally speaking, the program has achieved its objective. The identification of potential takes place much sooner. The recruits are ready to assume middle management responsibilities earlier in their careers. But we are aware of the need to go further. Loss rates during the second and third years are higher than we like. One of the reasons is that the first year tends to be a particularly satisfying experience, but subsequent assignments offer insufficient challenge and opportunity for growth. It is clear that

career development plans must be carefully formulated beyond the first year, if we are to capitalize on the momentum developed during the first year.

The Management Progress Study also stimulated some dramatic changes in our selection procedures for management. Direct hiring into management accounts for only about 20 percent of our management intake. The remainder of our new managers come from the ranks of non-management. It is extremely important that we identify those who are capable of handling supervisory responsibility. The bulk of our present first and second line supervisors, and a substantial portion of higher level managers, come from this source. The traditional method for selecting supervisors was selection by supervisors based on their appraisal of the candidate's potential. Unfortunately, such appraisals are based on performance in non-supervisory tasks. The supervisor must make his choices on the basis of limited information. The natural tendency is to recommend the best workman. While this is a relevant consideration, e.g., knowing how to install telephones will help one who is supervising installers, it is not sufficient. In addition to technical knowledge, supervision requires other skills and abilities, as our own research has shown.

More than 10 years ago, the companies decided to use a modified version of the research assessment center to assist them in selecting new managers. These centers concentrate on the evaluation of skills and abilities. The three factors emphasized are administrative skills, leadership skills, and intellectual ability. Most of the assessment time is devoted to simulations. No personality techniques are used, because the assessment staffs are composed of line managers who can observe and evaluate in the skills domain but are not trained to handle personality instruments and constructs.

In a typical assessment program, candidates are selected by the supervisors who nominate individuals on the basis of technical knowledge, promptness, desire to do a good job, etc. After the candidate attends the assessment center, a written report is sent to the line organization which describes the candidates particular strengths and weaknesses as a potential supervisor. Line management then decides, on the basis of all available information, which candidates should be promoted to specific positions. In addition, candidates are offered a feedback as an aid to their own self-development efforts.

Over 70,000 candidates for management have been assessed over the past 13 years. About one-third were judged to have good supervisory potential, another third were seen as capable of supervision with some development, and the remaining third were judged to be poor risks for management. The line organization is free to override assessment judgments, but the assessment reports play a strong role in promotion decisions.

This program has had a marked impact on the selection of managers. The program is well accepted by management and has expanded each year since its inception. The best research evidence on the effectiveness of the assessment process is the Management Progress Study findings, but several studies have been conducted of these operational assessment programs. One study (Campbell and Bray, 1967) followed up on 500 managers--some of whom had not been assessed, and others who had received various potential ratings when assessed.[10] The results show that assessment did improve the quality of intake into management. Those who were rated highly at the assessment center performed better at first level and a greater percentage had potential for further advancement when compared with those not assessed or given lower ratings at assessment.

This overview covers some of our activities over a substantial period of years. Times change, and we recognize the need to constantly reexamine our programs. Changes in the nature of our business and more general societal changes cannot be ignored. We are experimenting with some new approaches. For example, we are testing some early identification programs designed to spot individuals with short service in non-management positions who appear to have managerial potential. Our objective here is to find ways to prepare such individuals more rapidly for promotion to management than in the past. If such programs proved effective, it would help solve some pressing problems in the staffing of management.

We are confident that we know a great deal more about the growth of managers than we did 20 years ago. We are also convinced that the selection and development of managers is a constantly evolving process and harbor no dreams of eventually reaching a "final solution."

---

[10] R. J. Campbell and D. W. Bray, "Assessment Centers: An Aid In Management Selection," *Personnel Administration*, March-April, 1967.

TABLE 1

RANK IN CLASS, COLLEGE QUALITY, EXTRACURRICULAR ACHIEVEMENT AND SALARY PROGRESS

(Percent of men in each category achieving top salary third)

	High Rank in Class			Average Rank in Class			Low Rank in Class		
	Colleges			Colleges			Colleges		
Campus Achievement:	Better	Average	Below Average	Better	Average	Below Average	Better	Average	Below Average
SUBSTANTIAL	67%	47%	50%	52%	38%	34%	37%	25%	26%
SOME	61%	44%	37%	42%	33%	24%	32%	24%	18%
NONE	47%	37%	37%	35%	28%	25%	31%	24%	20%

TABLE 2

CORRELATIONS OF ASSESSMENT STAFF JUDGMENTS WITH SALARY PROGRESS OVER SEVEN TO NINE YEARS

Assessment Staff Judgment	Correlation
General Effectiveness	.47**
Administrative Skills	.31**
Interpersonal Skills	.32**
Intellectual Ability	.43**
Control of Feelings	.41**
Work Oriented Motivation	.22*
Career Passivity	-.36**
Dependence	-.24*

** .01 Level of Significance
* .05 Level of Significance

TABLE 3

RELATIONSHIP BETWEEN ASSESSMENT OF MANAGERIAL POTENTIAL AND MANAGEMENT LEVEL EIGHT YEARS LATER

Middle Management Potential (Assessment Rating)	Management Level	
	Lower	Middle
YES	41%	59%
NO	75%	25%

TABLE 4

MANAGERIAL POTENTIAL (ASSESSMENT JUDGMENT) OF MEN WHO TERMINATED AND MEN WHO REMAINED

Middle Management Potential (Assessment Rating)	Remainder Group	Voluntary Terminators	Forced Terminators
YES	35%	42%	21%
NO	65%	58%	79%

TABLE 5

REASONS FOR LEAVING THE COMPANY GIVEN BY VOLUNTARY TERMINATORS

Reasons	Percent
Uninteresting or unchallenging work	56
Lack of opportunity	42
Home-Personal	19
Military Service	10
Other	18
TOTAL	144*

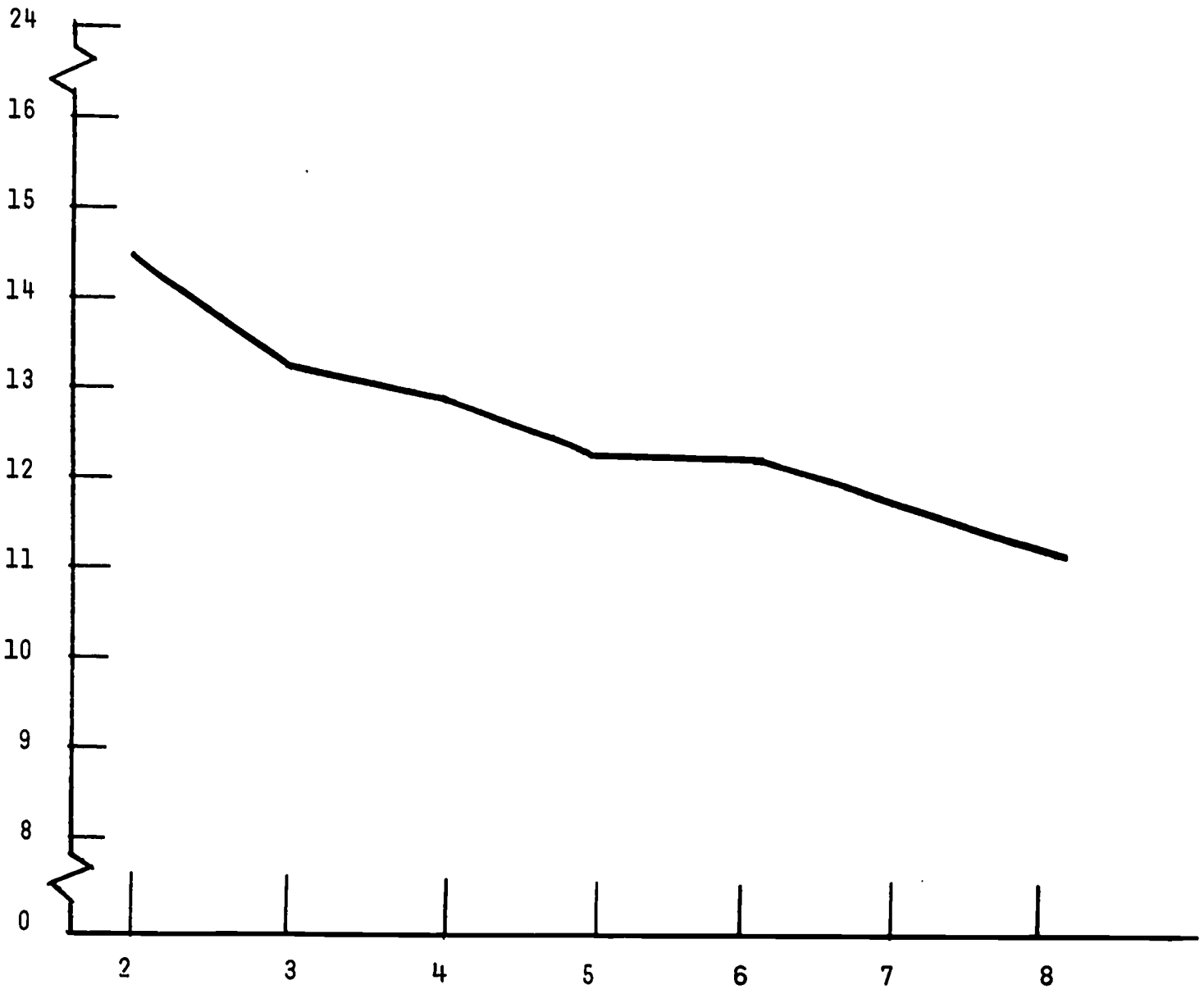
* Percentages add to more than 100% because some men give more than one motive for resigning.

TABLE 6

EMPLOYMENT OF TERMINATORS AFTER SEPARATION FROM THE SYSTEM

	Voluntary Terminators	Forced Terminators
Large Corporation	52%	52%
Government	8%	9%
Small Company	4%	13%
Self-Employed; Professional	13%	2%
Military Service	9%	2%
Full-Time Student	8%	8%
Unemployed	0%	6%
Other	6%	8%

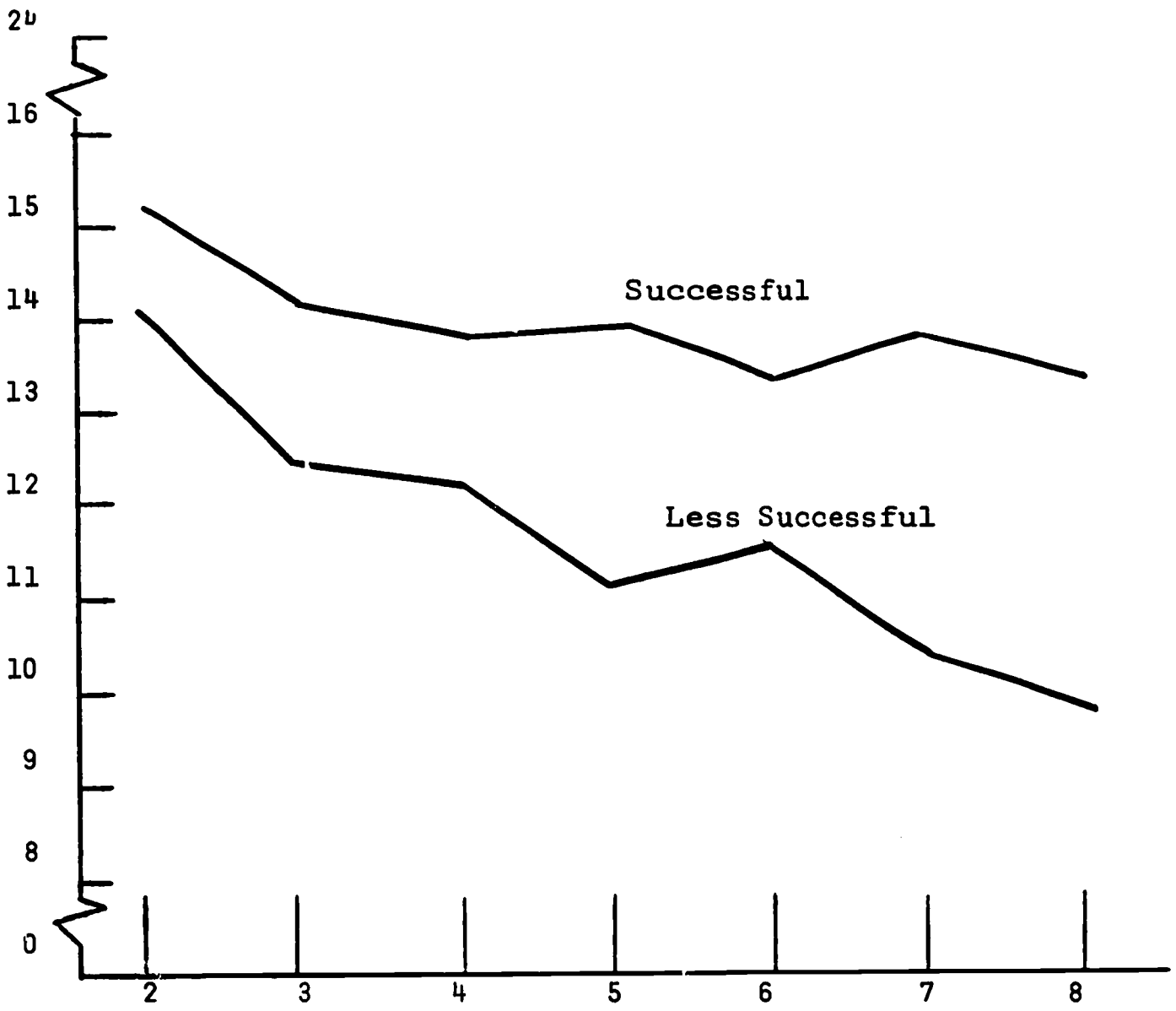
GENERAL MANAGEMENT ATTITUDE



FOLLOW-UP YEAR

Figure 1. Trend of means for general management attitude over time (remainder group).

GENERAL MANAGEMENT ATTITUDE



FOLLOW-UP YEAR

Figure 2. Trend of general management attitude means over time for the successful and less successful groups.

Panel Presentations

"Implications of the Models for Evaluation of Graduate Education Programs"

First: Dr. Doris E. Manning
Professor and Chairman
Home Economics Education
University of Arizona
Tucson, Arizona

This morning we're concerned with accountability and evaluation in acquiring information for decision-making in order to review and reform the systems of graduate education. I think that the CGSC and AT&T representatives were selected because it's so obvious whether they succeed or not. At this point in time in graduate education perhaps our frame of reference is considerably more nebulous and we really don't know whether we're succeeding or not. We hoped to find some guidelines from the models presented that would help us develop a firmer structure.

There is little disagreement as to the need for and desirability for a policy of accountability and evaluation. The concern is probably mostly with the means for implementing the policy. The policy should take into consideration the following questions. What is program effectiveness in graduate education? What tools will be used to assess program effectiveness? What does the program and the assessment do to the people in the program?

Both Dr. Birrer and Dr. Campbell spoke to us of information used in selecting candidates for their programs. If we might paraphrase a bit, be there a graduate program so dead that never to itself has said, "Who shall be admitted to the promised land?" Who has not suffered, as these two gentlemen said, when one admitted that the program "failed." The implication for us is to continue to examine our selection procedures and to define career relevant dimensions.

Our problem is compounded by the need to select, in as well as out, those individuals representing groups generally underrepresented in the field. One must not only select in members from minority groups, but provide programs which insure that these individuals will succeed. We already have been concerned with wide individual variation; we'll be broadening the base of this variation even more.

Both of our guests spoke to us about their goals and the kinds of information upon which decisions about goals are based. As I studied the two papers, it seemed to me that the two organizations were concerned with goals for graduate education which Marjorie

Brown discussed at the American Home Economics Association Convention in June, namely, long-term development of personality organization of the student based on a command of knowledge relevant to the problems in his area. We're all concerned with the long time goal of developing persons with complex, autonomous, and morally mature personality organizations. Therefore, we're all concerned with substantive content; but, we're even more concerned with the process by which content is learned--the mode of thinking, the amount and kinds of control exercised over the student, and the type of interpersonal relationship between the student and those providing the educational environment.

It seems that CGSC involves students in monitoring curriculum with respect to context input and process information. The newer AT&T system builds a great deal of autonomy as the recruits identify what they need to know to get their jobs done and what formal training they think they need as they make arrangements for securing the training. Graduate schools might well build in more self direction for students than appears to be general. We hope to get some of this input through advisory committees and who should know more about committees than vocational educators.

As Dr. Birrer said in the area of product evaluation, we're dealing with elusive criteria. I expect we will continue to examine student competence in areas that we consider integral for his future success, both performance and attitude. We'll examine placement and retention in that placement and we'll examine promotion. I'm not sure in our field we'll look at salary so much as a criterion.

Other ideas have implications for graduate education. Dr. Campbell has shown us quite clearly how programs can be developed on a research base. We could strengthen vocational-technical education through application of such procedures. Both our guests showed us the need for follow-up of graduates across time; our assessment needs to be longitudinal. Dr. Campbell reminded us of the need to examine, by use of longitudinal study technique, elements which might otherwise be perplexing. One element might be the degree of job challenge in the first year, the second year, and the third year. And perhaps while we're developing vocational-technical ladders and lattices, we need to look at our own organization in graduate schools to see if we're insuring enough challenge for the young recruits in teacher education.

Second: Dr. W.R. Miller
Chairman
Department of Vocational
and Technical Education
University of Missouri
Columbia, Missouri

There were several things which impressed me about both of these presentations. The most important was the degree of commitment expressed by both speakers regarding their programs and their evaluation models. I get concerned about this in relation to educators every once in a while. I want to tell you a little story about it. Some of you have heard the story because its been kicking around awhile; but, I think it illustrates the point of my concern. This story is about a chicken that talks and a pig that talks; this chicken and pig talked together. They decided to visit a skid-row mission to see about social conditions; they had heard of them and they wanted to see if they could be of help; but, when they visited them, the chicken was particularly moved and wanted to become involved. So, the chicken in his great plea to help the people in plight exclaimed, "We've got to do something. Let's go home and prepare a breakfast for these people. I'll take care of the eggs if you'll supply the bacon." The pig thoughtfully said, "Well! I'd like to call that a 'cop out' on your part because you're only making a token response while you want a total commitment from me." Now, you might think about that a little and see where it fits in; but, I have a feeling that there is some chicken and pig in all of us.

The thing that we teacher educators need to get out of the presentation regarding the army school is the structured, systematic manner in which the curriculum was developed and the instructional plan was carried out. Now, whether you like structure or don't, or whether you like a lot of academic freedom or don't, this will cause you to either think thoughtfully about the model or to brush it off as being something very unique and something we cannot apply. I'm generally considered on our campus as a rather liberal person; but, nevertheless, it bore in on my consciousness that we, as college professors, have exercised more freedom than we can intelligently use, and I think we need to discipline ourselves a bit.

I suspect that there are few campuses where we have the committee kind of review for each of the courses that is offered in vocational teacher education that was implied in the army presentation. One might further observe the following ideas from this presentation: (1) the "each one look over the shoulder of the other and help" process, (2) the look at the specific competency that you want developed, (3) then, set out to translate these competencies into behavioral objectives, and (4) work out a

strategy whereby the individual can exhibit this kind of confidence or competency.

I was impressed by a comment that I got from this presentation, that every lesson should require serious application that is stimulating and thought provoking rather than time-consuming and laborious. This has something to say for a competency based, direct, systematic kind of program. The fixed responsibility that Dr. Birrer talked about in terms of author-instructor, as we translate it, is a team leader--a team of professionals on the staff who work to develop a given course so that it is our course and not my course. I think this has strong implications for those institutions that are attempting to develop interdisciplinary approaches to vocational teacher preparation. One of the constraints that's affecting all of us as we use this approach is that if a man has an industrial background, the course he teaches must be just as relevant to industrial majors as home economics, as agriculture, as distributive education, as business, or whatever it might be.

I also couldn't help but think about the kinds of pressures that pull on faculty members that perhaps the army staff members do not have. Some of the competitive demands from off-campus teaching, school visitations (both formal and informal), the professional organization involvements to get resources to carry on the activity at your institution and in your state, the pressures to conduct research and publish, these kinds of things scatter our commitments with regard to instruction and we have to have a commitment to instruction.

Thinking about the structure and organization of courses and the teaching process there are implications from both presentations for the need for student involvement. We've really just begun to do this at our own institution, that is graduate students assisting in the course development process and in the learning strategies. We do have several committees of faculty members and students who take a look at a given course. The students are from several areas of vocational education and staff members from several service areas. They get this feeling of "our" rather than "his" or "my."

I wish to tag onto some of the comments that Dr. Manning made with regard to follow-up of students and the use of advisory committees. I think all too often we, as teacher educators, admonish our students both preparatory and in-service to use advisory committees. I really shouldn't ask for a show of hands to ask how many of you, in teacher education departments, have an advisory committee of persons outside of your institution.

I think all too often we've been caught up in what we have experienced. We don't think out new ways, new approaches, better ways, better approaches. Most of us went through college classrooms which were the opposite of what Dr. Birrer was talking about;

and, many of us do what we experienced. We tend to teach for the learning of facts and read assignments because some author wrote the material. We don't teach enough with emphasis on applicability, transferability, and process, rather we emphasize recall of specific facts.

I certainly think that we can operate more in real world conditions (supply-demand, selection, retention) at the doctoral level, then we've been able to operate with our undergraduate and master's degree programs. I think these presentations should have something to say for those of us who are beginning or operating doctoral programs.

With regard to the selection and retention of doctoral level students, we have to look very carefully at the potential for the individual's success, so that we don't take institutional resources and squander them, but also so that we don't wreck human lives. We talk about that a lot with undergraduates and we tell our teachers to try to assist people to have something other than failure experiences; but sometimes, we don't carry these over into graduate programs. After people are in a program we should provide them with early feedback. Most of us want to know why and how and by what means we're going to be evaluated.

The whole concept of developing responsibility within the recruit that Dr. Campbell talked about has real relevance for our students, undergraduate and graduate alike. Too often we've given a lot of lip service to individual differences and we've admonished our students to be aware of them and to take them into account; but you know there is that odd tendency that a student tends to teach as he's been taught. Frequently students do not experience at the college level any attention being paid to individual differences, only people telling them that there are individual differences and that they should take them into account. The whole concept of developing individual responsibility for their own development means a lot of individualized instruction, and this means different kinds of instructional modes than most of us have been using as we've dealt only with group instruction.

There was some attention given to individual differences in Dr. Birrer's program when he talked about who took examinations and some passed and others who didn't being given a second chance. Now I'd like to lighten that concept a little bit. We have a faculty member on our campus who emphasizes continually, he's either passed or he hasn't passed yet. He doesn't fail--he just takes a little longer time, and you have to package it in different ways but he may eventually get there. Now to live in the real world you have to decide whether the resources can be put into getting him there, which implies a lot--why'd you select him for this anyway, if he couldn't get there in a reasonable length of time? But I think as you ponder you will find many ways in which you can apply

a lot of things that were said, maybe not just the way they were done in the military or at AT&T, but in different ways to help teacher education programs in which you're involved.

Third: Dr. J.A. Williams
Dean
College of Education
The University of Georgia
Athens, Georgia

It is a pleasure to have the opportunity to react to these two presentations which have been made here today. As you can well imagine being the third man on the totem pole, you sometimes wonder what will be left for you to say when you reach the podium. My presentation and reaction will take a little different format from the two that have gone previously because I did make an assumption before I came here that they would have covered all the more pertinent points and so I have attempted to draw from these two presentations and from some of my own thinking, as related to these presentations, a series of basic assumptions which I feel are valid assumptions for the evaluation of graduate programs, whether these be graduate programs in vocational-technical education, or in the education of a school administrator, or in the education of a master teacher of mathematics at the secondary level.

The first assumption I've made here is that teacher education programs should provide for the continuous growth and development of the teacher, both preservice and in-service from the very earliest entry point into the program through the highest level of specialization. Now this of course has quite a bit of relevance back to the presentation made regarding the command general staff school in terms of how the army career development program operates. Here we are saying that in essence a relevant program of teacher education, a sound program of teacher education, is one that has program characteristics involving program continuity from the very lowest entry point level to the very highest. It is based upon the career sequence of the individual in terms of his aspirations and in terms of the needs of the educational organizations. It provides for reciprocal provisions for transfer as between levels and as between institutions.

First Assumption	Program Characteristics
A teacher education program should provide for the continuous growth and development of the teacher both preservice and in-service from the earliest entry point into the program through the highest level of specialization.	Program continuity Career sequence Reciprocal provisions for transfer

A second assumption that I have drawn from this is that a teacher education program should be so organized that it provides

for the continuous evaluation, feedback, and revision of all of its component parts. In effect, the army curriculum model, the wheel which he flashed on the screen, here is a regenerative model. All sound teacher education programs also should be, in my opinion, regenerative models involving program evaluation, review and revision on the continuous basis. This is a characteristic that should be provided for at all levels, not just the graduate level, but also, your preservice level and your in-service level after formal graduate training.

Second Assumption	Program Characteristics
A teacher education program should be so organized that it provides for the continuous evaluation, feedback and revision of all of its component parts.	Regenerative model Program evaluation, review and revision

The third assumption that I've drawn from these is that a teacher education program should recognize the changing nature of society and its values and provide for these changes through frequent updating and revision of its content and organization. In other words the whole question of relevance was touched upon quite a bit by both of the presentations this morning, both in terms of relevance of the training program for management individuals, for example, as well as the training programs for command at general staff schools. It was pointed out quite forcefully that these programs are continuously reviewed and updated in terms of the changes that are taking place in terms of the military technology, as well as social and economic development, not only in the United States but in the world as a whole. A teacher education program that is viable certainly is one that is changing in terms of the nature of society in its values. In vocational-technical education you're acutely aware of this, particularly in the whole field of career development as we see it today and in terms of how we attempt to organize our instructional programs so the elementary, secondary, and post-secondary levels meet the relevant needs of society. I forget the figure, but I have heard quoted many times that an individual going into vocational-technical fields today will probably have to prepare for say a half a dozen different careers in his working life. This implies that the state and local levels, if we have a viable program of vocational-technical education, will be changing each year in terms of relevance to the needs of the society in which we are living.

Third Assumption	Program Characteristic
A teacher education program should recognize the changing nature of society and its	Relevance

values and provide for these changes through frequent updating and revision of its content and organization.

Fourth assumption. A teacher education program should be maintained by persons who have particular competencies to do the job to which they are assigned. The obligations and responsibilities should be clearly specified and they should be assigned tasks within the parameters of those specifications. Now when we speak of teacher education programs, we're speaking of a rather broad spectrum of individuals, as I view the whole field of teacher education, not only the graduate and undergraduate schools of education but also the state departments of education and the local school systems. All of these are part of the viable teacher education program. We must concern ourselves in these teacher education programs with accountability. We must provide for differentiated staffing patterns. We must make clear the job descriptions to be carried out. We must provide for management specialists in order to get the job done--say, at the graduate level or undergraduate level the use of program advisement specialists and scheduling technicians, particularly if we are working towards the development of teacher education programs that provide for individual differences. In teacher education we have talked for many years to the classroom teacher that we should provide for the individual differences, but I'm saying that in teacher education programs themselves that we must provide for these same individual differences and staff our own institutions and programs as we would ask others to do.

Fourth Assumption	Program Characteristics
A teacher education program should be maintained by persons who have particular competencies to do the job to which they are assigned. Their obligations and responsibilities should be clearly specified and they should be assigned tasks within the parameters of those specifications.	Accountability
	Differentiated staffing
	Job descriptions
	Management specialists
	Program advisement specialists
	Scheduling technicians

Fifth assumption. A teacher education program should provide for the development of the personal qualities of the individual learner. It should provide opportunities for him to establish his self-identity and to help to pursue his personal objectives. In other words, I'm saying that a teacher education program cannot all be cognitive; it must concern itself for sure with the affective domain; it must be a humanistic program; it must provide for

personalization and negotiation. I think that the gentleman who spoke on management training programs this morning in the development of individuals that they have through their research become aware of the importance of this particular parameter in the development of personal training programs.

Fifth Assumption	Program Characteristics
A teacher education program should provide for the development of the personal qualities of the individual learner. It should provide opportunities for him to establish his self-identity, and help him pursue his personal objectives.	Humanization Personalization Negotiation

Sixth assumption. A teacher education program should be developed and managed by modern systems technology. In such a system I think that the command in general staff school model has some characteristics of a systems technology educational model, but not all the way; I inferred that it was moving in that direction--a program which involves systems analysis, program planning and budgeting systems, differentiated staffing patterns, program evaluation and review technique of PERT, and systems technology as we know it.

Sixth Assumption	Program Characteristics
A teacher education program should be developed and managed by modern systems technology.	Systems analysis Program planning and budgeting systems Differentiated staff Program evaluation and review technique Scheduling technology

Seventh assumption. A teacher education program should be so organized and managed that all persons concerned with the education of teachers or affected by it share the responsibility for it. Some characteristics of such a program would involve community based educational programs, multi-institutional responsibility for the operation of such programs, and possibly competency based certification. Now a number of these are items of which you are acutely aware these days. The community based educational program involving a partnership on the part of institutions of higher

education, state departments of education, and local school systems is on the scene, as I see it, and will grow and develop considerably in the future. I think this has a great deal of promise for in-service education of teachers and vocational-technical fields as well as in other phases of teacher education. State departments of education throughout the nation are becoming more concerned with the development of a competency based certification program. Competency based certification programs, in the final analysis, can be developed and based only in terms of performance criteria. This would involve the development of performance criteria of the management of performance of teachers, working with teachers in a community based system to improve their competencies so that they could demonstrate that they had acquired the competencies necessary to meet the objectives of the individual learners for whom they are working.

Seventh Assumption	Program Characteristics
A teacher education program should be so organized and managed that all persons concerned with the education of teachers or affected by it share the responsibility for it.	Community based education Multi-institutional responsibility Competency based certification

Eighth assumption. A teacher education program should prepare teachers to assume the responsibility for the progress of each learner under his guidance towards specified objectives. Now this, of course, is the accountability kick which is right on top of the heap these days and will continue to be. The general public is more and more interested everyday in accountability; in other words, are we performing? Are we securing results for the dollars which the public is investing in public education? This is at all levels, not just public elementary and secondary, but the higher education level as well as at the in-service education level.

Eighth Assumption	Program Characteristic
A teacher education program should prepare teachers to assume contractual responsibility for the progress of each learner under his guidance toward specified objectives.	Accountability

Ninth assumption. Teacher education programs should provide for differences among teachers (both preservice and in-service) and the accumulation of experience, extent of achievement, and

the rate and style of learning. Program characteristics of such a program would certainly encompass individualized instruction, team teaching, modularization of content, and the development of learning centers. The last item, the development of learning centers, could also imply the development of the teacher education center concept which is fairly new and on the scene now with the office of education. The development of teacher education learning centers on the statewide basis or regional basis involves the cooperative action of institutions of higher education, local school systems, the community, and state departments of education. This will be demanding a great deal of your attention and will have considerable implications to you as vocational-technical educators within the next year and over the next several years. And it's one that behooves us to work cooperatively together because no one educational force can meet the real educational needs of teachers at the graduate or undergraduate level, whether this be vocational-technical educators or for any other teacher in the school system.

Ninth Assumption	Program Characteristics
A teacher education program should provide for differences among teachers both preservice and in-service in the accumulation of experience, extent of achievement, and rate and style of learning.	Individualized instruction Team teaching Modularization of content Learning centers

Tenth assumption. A teacher education program should have as its base detailed descriptions of the behaviors essential to effective teaching, and preservice and in-service teachers should be guided towards acquiring mastery of them. Here we are saying, in effect, that teacher education programs in the future should be developed as competency based programs involving mastery of criteria and be programs that involve continuity for the teacher preservice, graduate, and in-service, through all steps of the career ladder.

Tenth Assumption	Program Characteristics
A teacher education program should have as its base detailed descriptions of the behaviors essential to effective teaching, and preservice and in-service teachers should be guided toward acquiring mastery of them.	Competency based programs Mastery criteria Continuity

These are or these can constitute 10 major assumptions that I have pulled together here. Suggestions from the two presentations which have been made here today and these 10 assumptions, I believe, provide a challenge to all teacher educators in terms of the development of viable programs at the graduate and undergraduate levels and at the in-service level. These 10 assumptions, I feel, are not all; I don't claim these to be all inclusive because there are several others that I have that I did not include because they were not as relevant to the subject this morning. But these, I think, form some philosophical base for program evaluation and review, which you are concerning yourself about in this very important seminar on vocational-technical education.

Presentation

"Model for the Evaluation of Graduate Programs in Vocational and Technical Education"

Dr. Robert L. Hammond
Associate Professor and Evaluation Officer
Center for Advanced Study in Educational Administration
College of Education
University of Oregon
Eugene, Oregon

Graduate programs in vocational and technical education and those responsible for their development and implementation must be accountable to the student and the community he is to ultimately serve. The problem of assessing the degree to which graduate programs are accountable in vocational and technical education is one responded to through good evaluation programs. Evaluation as defined in this paper is, "the process of delineating, obtaining and providing useful information for judging decision alternatives"[1] (See Figure 1[2]). The model for evaluation of graduate programs and vocational and technical education will be discussed in four parts: (1) preparation, (2) delineation, (3) collecting, and (4) providing.

Preparation

The preparation phase requires: (1) program identification, (2) policy search, (3) schedule of activities, (4) staff orientation, and (5) a systems study. The first step in the model for evaluation is the identification of the program to be evaluated. Caution must be exercised in the early stages of implementation in the selection of programs of a size and scope that can be handled by the staff available.

Once the program has been established, policies governing evaluation must be reviewed. This is especially critical in the early stage of implementation, since, in many cases, policies do not exist and must be generated when situations requiring policy decisions arise. Examples of situations requiring policy statements are: access to data sources, access to data base and

---

[1] Phi Delta Kappa National Study Committee on Evaluation, *Educational Evaluation and Decision Making* (Itasca, Illinois: F. E. Peacock Publishers, Inc., 1971), p. 40.

[2] *Ibid.*, p. 216.

88/89

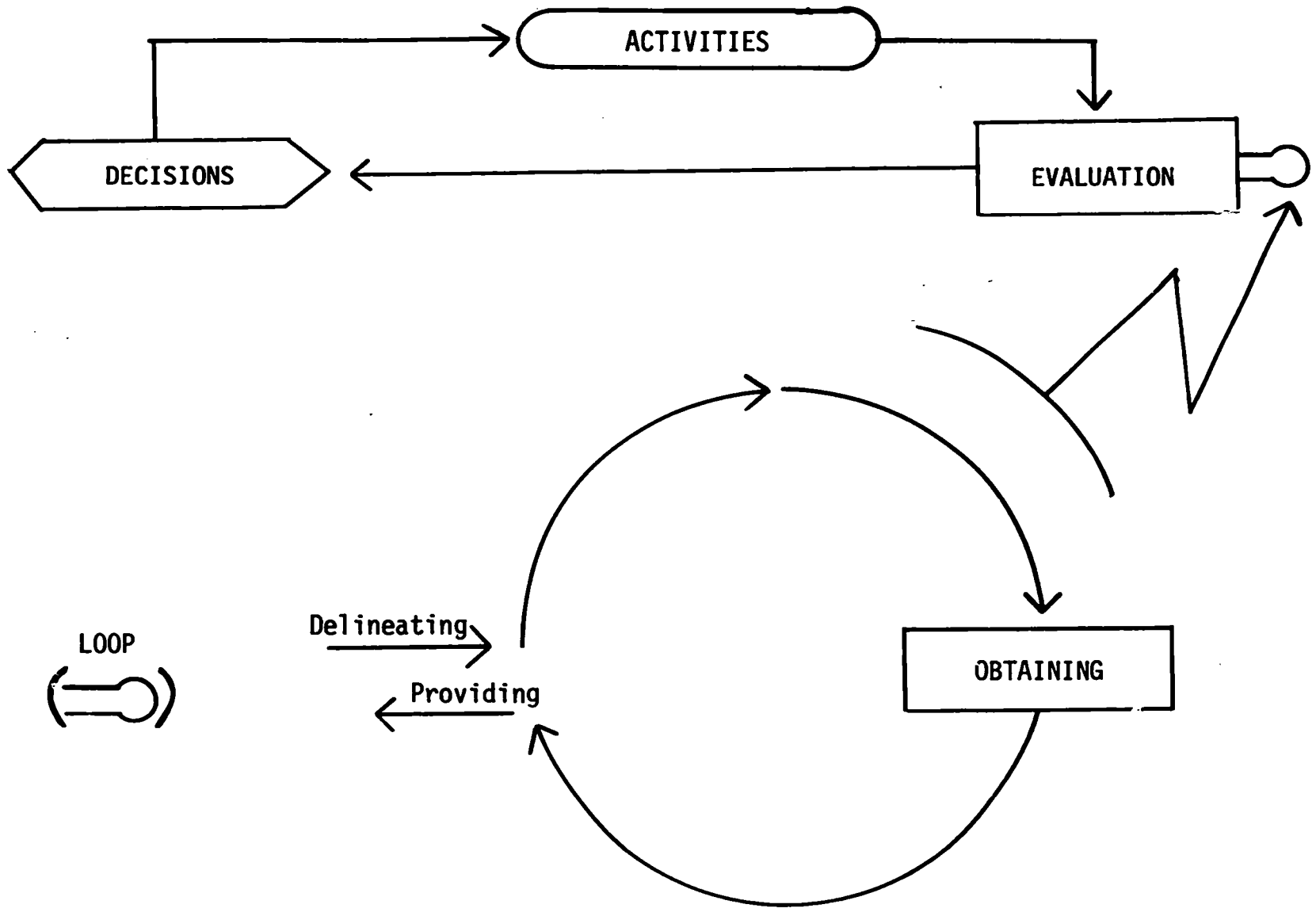


Figure 1. The Relation of Evaluation to Decision-Making

evaluation information, role of evaluation authority, scheduling limitations, and reporting policies.

The problem of timing and scheduling of activities for evaluation is critical to all steps in the evaluation process. Schedules, once developed, provide the critical linkage between staff and objectives to be achieved. In the process of evaluation, such schedule development must take into consideration decision points and situations to be served, which require close timing and cooperation between instructional program staff and those responsible for evaluation.

Once schedules have been established, the next step is that of orientation. Orientation sessions are required at all levels of the program to be successful. Poor communication is the greatest single barrier to good evaluation programs. Mistrust, suspicion and lack of cooperation are natural outcomes once such barriers develop.

The final point to be discussed under preparation is a systems study. Decision-makers at each level of the decision-making process should have a common understanding of the program, and its relation to the organizational structure of the educational institution designed to provide a learning environment. Such a structure must include administration, program, and accounting functions that have direct influences on the outcome of graduate programs in vocational and technical education. Systems studies provide a picture of the environment for instruction which can lead to more complete evaluation designs.

Delineation

The delineation process "identifies evaluative information required through an inventory of the decision alternatives to be weighed, and the criteria to be applied in weighing them."[3] The outcomes of this process will be a complete description of the program through (1) a statement of boundaries for the graduate program to be studied, (2) people, program and behavior variables, (3) objectives, (4) decision situations to be served, and (5) questions to be answered by the evaluation. The boundaries statement will provide a description of the program, through factors that fix or limit the program in order to (1) obtain a general description of the program, and (2) to identify a common framework of program references for the evaluator and the decision-maker. Boundary statements should provide answers to the following: (1) What is the title and authority of the program? (2) What students

---

[3] *Ibid.*, p. 41.

and instructional levels does the program respond to? (3) What methods and procedures are applied? (4) What is the cost of the program and what are the sources of funding? (5) Does the program follow a timetable and, if so, what are the key decision points in the program? (6) What is the program designed to do?

The evaluation design for graduate programs in vocational and technical education must provide information on the many forces that influence the student's achievement. The identification of such forces requires a framework involving a system of variables reflecting theory and practice of teaching and learning. A framework designed to meet these kinds of specifications is composed of three sets of variables: instruction, population, and behavior (See Figure 2).

As a heuristic devise, the three-dimensional framework can reveal combinations of variables leading to a more complete description and analysis of the program. The use of the three dimensions, for purposes of analysis, is limited only by (1) the nature and scope of the graduate program, (2) the desire for simple or complex analysis, and (3) the ability of the decision-maker and his staff to describe variables on each of the dimensions. A description of the forces affecting program results is produced through the interaction of variables on each of the dimensions.

The value of each of the potential interactions in an analysis of accountability might be established through a series of questions. For example, what cognitive levels of behavior (e.g., knowledge, comprehension, application, analysis, synthesis, evaluation) are relative to the content of the graduate course? Is graduate student attitude toward course content important? Is the community attitude toward institutional cost important and, if so, is it important that they have a knowledge of the cost breakdown and the programs before such value judgments are made?

The system of variables and the framework providing interactions between variables produces sources that may or may not have a direct effect on graduate student performance, yet the relevance of each of the potential forces produced must be creatively analyzed and explored if a total picture for graduate instruction is to be complete.

Objectives for programs are essential if any clear picture of program accountability is to be produced. Those to be affected by a given program require information as to what the program is to achieve. To be held answerable for results requires statements of objectives involving (1) who is to be involved in the program (subject)? (2) what will he be doing (action verb)? (3) what aspect of the program (program variable)? and (4) what degree of success is expected (criteria of success)?

STRUCTURE FOR EVALUATION

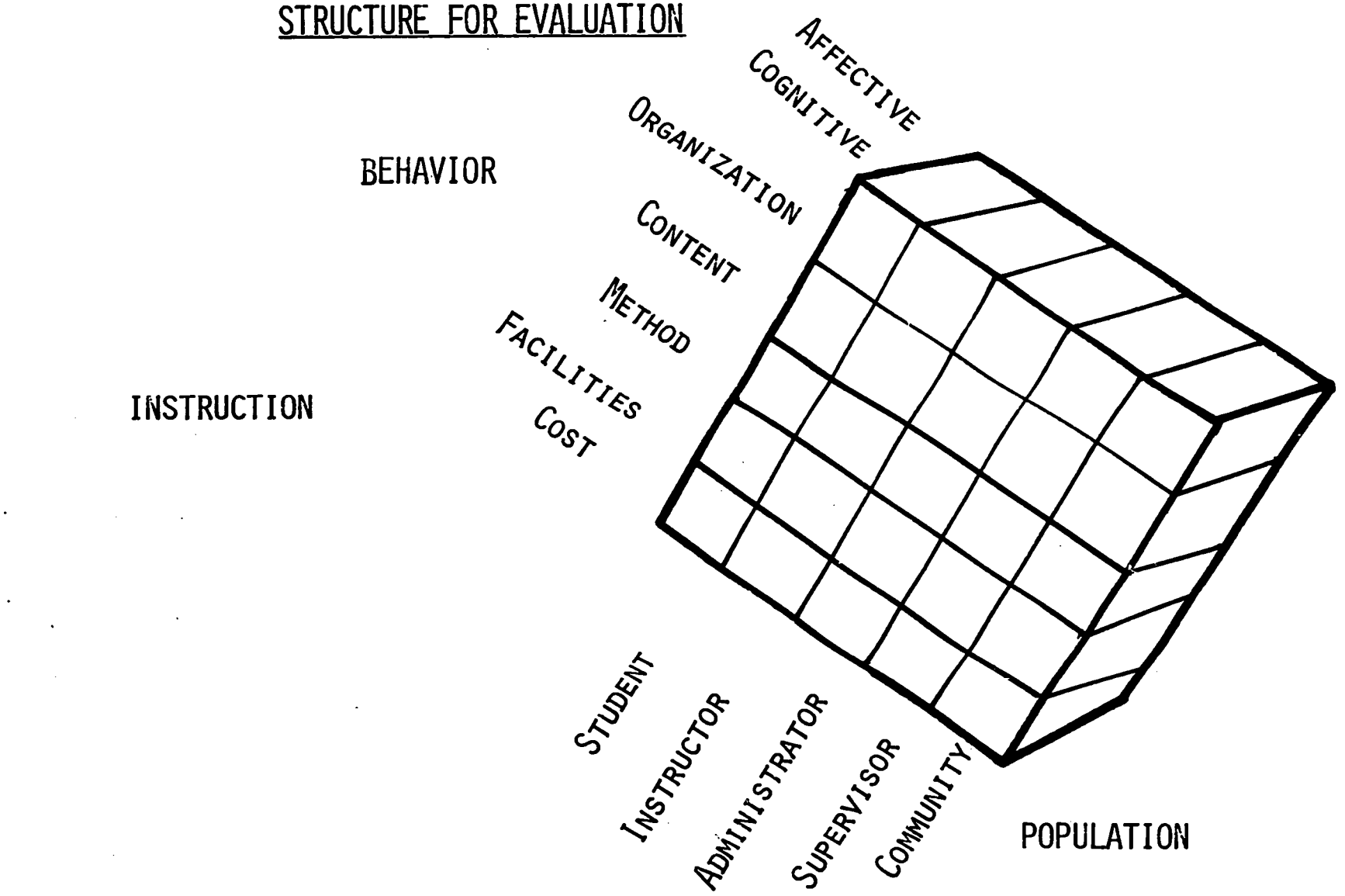


Figure 2

The design for evaluation must respond to needs for information relative to decision situations to be served. The nature of the information will be determined by (1) the purpose the information is to serve, (2) a timetable for providing the information, and (3) the levels of decision-making for which a report must be prepared. Accountability, as discussed in this paper, is a two-way interaction involving people and program. Analysis will show that the process of being accountable or not being accountable can be brought about by interactions of many forces within the program. Decision-making at all levels must be sensitive to these forces and recognize their existence through the identification and timing of decision situations to be served at all levels of decision-making in the program.

The final step in the delineation process is that of identifying questions to be answered by the evaluation. Given the objective, having participated in the graduate program for vocational and technical education, 75 percent of the students will demonstrate a positive attitude towards the course content, as demonstrated by a content survey administered to all graduate students in the program. What are some of the potential questions to be developed? Obviously, the first question to be answered is: Did 75 percent of the students have a positive attitude toward the course content? Other questions prompted by this objective might be (1) what aspects of the program content did the students like or dislike? (2) did the methods used in the program have any effect on the attitude toward the course content? (3) what are the attitudes of the instructors in local educational agencies toward the course content? (4) how do state supervisors for vocational and technical education feel about the course content? Questions could be developed for each objective in the program. The questions developed will require answers. Answers produced should provide information for decision-making. If the program cannot be classified as accountable, then the analysis of the information should provide a clear picture as to why the program failed. If this picture does not appear, then the evaluation design has failed to be accountable to those it must serve.

Collecting Information

The collecting of information on graduate programs depends on three kinds of activities. First is the identification of information sources. The identification of information sources includes (1) identification of information to be collected, (2) sources of information, (3) the form of the information to be called for, (4) population to be included, (5) sample size required, and (6) sampling procedures which provide a short description of the suggested sampling method.

A second activity is the development of instruments for gathering information. The review of instruments, the construction of new instruments, and the testing of all instruments should be guided by considerations for instrument specification. Examples of such specifications are reliability, validity, and audience pretest results.

A third collection activity is the identification of collection conditions. Collection conditions include the development of a schedule for administering instruments and environmental conditions (room size, materials needed, and so forth). The activities discussed under collecting information serve as an example of some of the kinds of activities that should be considered in the obtaining of information in the evaluation design. Detailed explanations on each of these activities may be found in journals and textbooks on the subject.

Providing Information

The problem of providing information, resulting from the evaluation of graduate programs, depends on activities involving analysis, preparation and dissemination of information. Analysis of information will not be discussed in detail. However, one point involving a problem with respect to aggregation needs to be emphasized. Once data have been gathered and stored, they should serve a variety of purposes. Both group and individual, as well as, immediate and long-range needs for analysis of data must be satisfied. Data aggregated and stored on the basis of reducing groups of scores to measures of central tendency (e.g., mean or median scores of a given course) will seriously limit future use of such scores for studying long-range problems regarding program development. Storage and retrieval systems must be developed for the program that permit a wide range and flexible approach to the analysis of data.

The preparation of reports involves transforming data to useful information. To be useful the information should (1) depict what it is meant to and be applicable in generalizable cases, (2) communicate with target audiences, (3) to be used equally well by different people to provide sound information, (4) identify bias in information, (5) overcome some crucial uncertainty for major shortcomings in the information available for a key decision that has been made, (6) be trusted to provide credible information, (7) arrive in time to be useful, and (8) reach all decision-makers who have been designated.

Evaluation reports should be prepared for the audience they are to serve (e.g., immediate, mandated, and supplementary). To determine the information to be used, reporting levels must be distinguished. The levels, ranges of simplicity to complexity of

detail, are applicable in two related areas--information and audience. The information delineated and obtained must be screened prior to audience use. Judgments are required regarding terminology, quantity of facts, quality of generalized or specialized statements, and technical interpretation. Prospective audiences must be studied so the information provided is compatible with the audience needs. Finally, setting, content and media factors are brought together such that the diverse needs of audiences and complexity of information are put together in packages of information that communicate. Dissemination of information requires the establishment of policies governing the release of such information. Information in any form is open to a variety of interpretations by different groups of individuals. In the hands of a professional, the data may be interpreted and used for constructive purposes. Data unaccompanied by proper interpretation can lead to many misleading generalizations on the part of many groups. Education, medicine and many other professions have felt the sting of public criticism when data has been left wide open for any interpretation one desires to place on it. This is not to say that information available should be withheld. But strict policies governing the manner, means, and timing of information need to be enforced.

An information system for graduate programs in vocational and technical education has been discussed. Much has yet to be learned relative to complete information systems for decision-making. Yet, I doubt seriously if anyone would deny the need or importance of delineating, obtaining and providing useful information for judging decision alternatives affecting good graduate programs. To provide such information, we must continue to explore the forces that influence the success or failure of such programs. Well designed evaluation programs provide this opportunity.

Discussion Leaders Summaries

Following the evaluation model presentation by Dr. Hammond, the participants went into groups for discussion purposes. The planners had designed six questions prior to the seminar and these questions were to be used by the discussion leaders to guide the groups' deliberations. Each of the 10 discussion leaders gave a short summary of the consensus of his or her group. These summaries follow.

Group A: Leader Aleene Cross

One of the strengths that we identified was that the model had most of the basic elements of evaluation. Now we put "most of" to qualify it so that none of you can come back and say, "But, he left out so and so." We felt that this was a fairly complete model for our use. We did feel that somehow or other that it might be difficult to find the man-hours, the personnel, and time of staff to do this particular job. I'm not sure that that wouldn't be a weakness of any model. The implication which is probably the most important part was you could use this model to build an evaluation component into the system of graduate education--a clearly visible component. Also, that this particular model would augment the EPDA evaluation that some of us are involved in right now.

Group B: Leader Mary Helen Haas

Our group felt that this model certainly provided us with an extension of a systematic approach to evaluation which will maximize the kind of flexibility that we're building into graduate education programs. It also has the additional value of evaluating beyond just the cognitive behaviors. The major weakness was that we felt little familiarity with the model, having had it just presented to us. We're all in an unfortunate position of trying to evaluate the model without having had the opportunity of using it.

We saw this model as a useful tool in our graduate instructional program--to better prepare our graduate students for the evaluation function. This has been a weakness in many of our graduate programs as we have experienced them, and perhaps we needed a model such as this so that we could all be using it to teach our future vocational educators how to do a better job of evaluation.

Group C: Margaret Johnson

One of the major strengths of the model for evaluation is that it is now in published form and available to all of us to try in our graduate program. (Reference here to Stufflebeam, *et al., Educational Evaluation and Decision Making*, Phi Delta Kappa, Inc.) Other strengths are: it was programmatic; it provides for intermediate steps, intermediate evaluation of our programs; it provides for setting of boundaries in developing the scope of the programs; and in addition, it does provide for us standardized instrument and storage of information for purposes of retrieval. One of the weaknesses that the group discussed was that of the energy that would be needed for implementation of this evaluation procedure. As far as the implications are concerned, a couple of the major ones seemed to be that the model could increase coordination and provide for reassessment of our priorities. It could provide a means of meeting our accountability needs in our graduate program, and could also increase the cohesion between the university and the state organizations.

Group D: Leader L. C. McDowell

Strengths of the models were that it was quite highly organized and it provided for people to have an input in it. Another strength was the utilization of community resources; another was that evaluation is responsible to objectives of the program. Good management techniques were reflected in the model. The process for decision-making reflects a guide rather than a set of rules.

The conscious listing of these strengths inherently revealed implications for some present programs. The model was a good reference for reviewing our present program. Another implication was that we can more easily identify people who will provide input in the program.

The greatest difficulty that the group saw in implementing the model was selling the idea to the top administrator sufficiently for him to provide budget and staff to get the job done. Another question that arose was who would take the lead for implementing the model. Would such a person be external or internal to the immediate organization?

Group E: Leader Steve Lucas

First, we think that the major strength is the organizer effect. It provides us a way to order the information thus enabling us to give priorities to those kinds of things we're going to study and the order in which we would accomplish them. There should be a task analysis of the model so that staff deployment could be made

in one sense underutilized. The implication is actually a strength also, and we go back to the organizer feature because that again provides for staff specialization.

Group F: Leader Mary Marks

Some key strengths from our group centered on the preparation step in the process. We felt this step required involvement of all who will be affected by and have an interest in the evaluation model, and then, provide for staff orientation and group planning which will bring a certain unity, a unified approach to evaluation.

We felt that the model provided a way for identifying our present strengths and weaknesses. By using the model, needed changes could be built upon strengths. We could identify our weaknesses and we would not then eliminate activities which contribute positively to our program.

One implication was that we can use this model as a tool for unifying the various service groups into a vocational and technical education group; it will be helpful in breaking down some of the stereotypes of the lock steps that seem to exist among our traditional offerings. By identifying the commonalities and the uniquenesses, we will be able to improve communication and bring a better cohesiveness to our charge in graduate teacher education. One further comment was the need for in-service training of our own staffs so that we become familiar with the model and are able to use it.

Group G: Leader Cas Heilman

The model implies that there's a logical set of events that can occur in terms of evaluation and that as a result of these logical events the establishment of priorities can be derived and then more specific operating objectives will have to be identified. The adoption of the evaluation model will provide us with a means of involving the staff where objectives can be modified and can be identified for programs. The staff can be involved, outside people could be used, priorities can be set, objectives to programs can be developed that are reasonably measurable, and as a result programs can change, and then the graduate programs can become more viable. Basically then, we looked at the adoption of the evaluation model as being the process which can result in program change.

Group H: Leader Lucille Patton

Some of the strengths of the model as expressed by the members of Group H are its ability to look at the interaction effect of different variables and to establish a base upon which projected program changes can be hypothesized. We can start with this base and work in any direction that we need to go. It has universality of application; it can be applied at any point, and along with that as a strength, it stimulates a multiplier effect--that of starting from the bottom up instead of from the top down as much evaluation is.

We wondered if we're not losing the humanistic effect; maybe we're more concerned with the process than we are with the product. We're also concerned with funding. Who's going to supply the funds? We also see a need to reevaluate our present organization. How should teacher education programs in vocational-technical education within university confines, actually be organized? Another concern of our group, as an implication for implementation of the evaluation model, is how does this fit in with existing evaluation systems such as NCATE, Northcentral Southern regional evaluations?

Group I: Leader Warren Meyer

The strengths of the model, in addition to providing a well-organized, systematic way of examining a program are it: brings about sensitivity to change and socioeconomic conditions; provides a wide potential applicability; and, provides the necessary detail for careful planning. It suggests the elements to be evaluated, contains a built-in feedback system, it forces thinking about evaluation at the outset of a new program, and serves as a springboard for launching new programs. It precludes discarding a program prior to its evaluation; it establishes the interdependence of program inputs and outputs; and it evaluates the total program concurrently.

For the implications, we believe more clearly stated objectives and goals will be required. The focus will shift from degrees to competencies and task orientation. It will put more meaning into degrees and it will result in greater scrutiny of the program inputs. It will result in inner-institutional planning t serve the needs of the total state vocational teacher education program. It will call attention to the needs of groups not now being served. It will force teacher education to reassess its criteria for success and the success of its graduates; it will lead to the discovery of duplications and voids in the teacher education program.

Group J: Leader Thomas White

We should like to compliment the developers of the model on the emphasis they placed on the preparation phase; we felt that in other models that have been discussed, that the early preparation was not nearly emphasized as much as was done in this particular model. A particular weakness, or concern, that this group had in dealing with the model was the fact that we didn't feel that the model had all the components of a model. We also were not real sure of the theoretical foundation of the model. As far as an implication, it's been mentioned that there's a great deal of emphasis on evaluation of graduate programs across the board beyond the scope of vocational-technical education. This should give us a greater where-with-all in dealing with across campus relations when other deans from other schools, other campuses, talk about evaluations of total graduate education.

CHAPTER IV

ACCOUNTABILITY CONCEPT FOR GRADUATE PROGRAMS

Panel Presentations

"Accountability for Graduate Programs in Vocational and Technical Education"

First: Dr. Harold F. Landrith
Dean
College of Education
Clemson University
Clemson, South Carolina

Medieval universities used secret committees to report on the faculty. This early form of accountability made it a crime punishable by a fine for the professor to skip paragraphs or chapters in his lecture or to refuse to answer questions. If the professor wanted to be absent from his lectures, he had to obtain permission from his students. If he failed to progress to specified sections on specified dates he also had to pay a fine.[1]

During the 1960s the term accountability began to make its way from the business world into the field of education. Techniques, similar to "management by objectives" (MBO) and "Planning, Programming, and Budgeting System" (PPBS), if applied to education, could improve the efficiency of the system and save it from financial ruin.

According to the Carnegie Commission on Higher Education almost two-thirds of all colleges in the United States were either in financial difficulty or heading for financial trouble. Total deficits for private colleges were expected to surpass $370 million in a four-year period.[2]

---

[1] Hastings Rashdall, *The Universities of Europe in the Middle Ages* (New York: Oxford Press, 1936), pp. 196-197.

[2] *Chronicle of Higher Education*, January 1, 1971.

The financial crisis in higher education was precipitated by many complicated factors. Decline in state revenue has caused a proportionate cut in state appropriations for public institutions. Decreases in the amounts of gifts and grants have produced hardships for both public and private colleges. Federal aid has been sharply decreased and even eliminated in a number of areas. Destruction of facilities and campus disruptions have caused insurance and maintenance costs to spiral. Colleges are beefing up police and security forces by budgeting as much as a third of a million dollars per year.

State legislatures faced with a declining economy have spread their resources thin by dividing monies among more institutions and agencies, including all kinds of new commissions, boards, and student grants.

The financial picture for the 1970s does not appear much brighter for many institutions. Colleges are attempting to decrease deficits by abolishing vacant positions, reducing or eliminating equipment and travel allotments, and curtailing maintenance. They are attempting to secure additional revenue by increasing student fees, abolishing sabbatical leaves, and increasing faculty workloads and class sizes.

Aside from financial problems, institutional programs are being challenged as irrelevant and in need of overhauling. For generations graduation speakers have been exhorting students to go out into the world and improve it. Today, students are not waiting until after graduation to attack the world and its problems. Much to the consternation of the faculty and administration, they are including the university as part of the world which is in great need of improvement.

Faculty members have been affected by student pressures and financial conditions. Those not having tenure are concerned about permanent employment. Some with tenure are afraid their positions might be abolished in an economy move. Legislatures in New York and Florida sought to establish minimum teaching loads. Individual speakers began to point out that faculty privileges were the chief cause of problems in higher education; others indicated the ills were caused, not by students, but by faculty. As the crises increased, faculties began to turn to national organizations such as AAUP, NEA and AFT for assistance.[3]

---

[3]Harold F. Landrith, *Introduction to the Community Junior College* (Danville: Interstate Printers and Publishers, 1971), p. 221.

Thus, alienated students, disaffected faculty, dissatisfied legislators, disenchanted alumni, and disappointed parents have focused attention upon the university and its problems.

Public elementary and secondary schools suffering from many of the same problems and forces had been offered a new panacea for their educational ills. The magic formula: accountability. Little known until an official pronouncement by President Nixon in his 1970 Educational Message, the word has been spread by prophets of the new cult. When 67 percent of the persons contacted in a Gallup Poll approved the concept, a new innovative approach was added in the academe. What was good for elementary and secondary schools was good for colleges and universities. At a Western Interstate Commission for Higher Education Seminar, economists made conceptual analyses, developed models, discussed measuring educational input and output, and proposed an accounting structure for measuring outputs.[4]

A new day in education had arrived: accountability: la nouvelle vogue; accountability, la nouvelle vague.

The term has many meanings and implications. Accountability implies establishing educational objectives, providing funds to meet these goals, and conducting scheduled evaluations. It encompasses the evaluation of teachers and teaching processes, control of educational expenditures, and the development of professional standards. It suggests the assignment of cause, the placement of blame in cases of educational failure. However, in spite of the scientific connotation it embodies value judgments by individuals. Accountability, as Lessinger once defined it, "is the process designed to insure that any individual can determine for himself if the schools are producing the results promised."[5]

If the concept never gets beyond the jargon and the accountability design stages, it has focused upon a number of useful principles which could benefit education.

Implication No. 1

Accountability emphasizes planning, total planning--course, curriculum, educational resources. All planning must be based

---

[4]*The Outputs of Education: Their Identification, Measurement, and Evaluation* (Boulder, Western Interstate Commission for Higher Education, 1970).

[5]Leon M. Lessinger, "Accountability in Public Education," *Today's Education*, 1970, p. 52.

upon a careful analysis and assessment of the particular educational environment. This contextual evaluation provides information for developing educational objectives. These goals based on the functions of specificity and involving cognitive, affective, and psychomotor, must be measurable and capable of being quantified. Stated in terms of observable student behavior, they become the basis for curriculum planning. Learning experiences likely to contribute to the achievement of these goals are specified and developed. A design to evaluate learning in terms of the stated objectives is selected or constructed.

Graduate schools have been rather diligent in determining curriculum input. Department committees, college committees and graduate councils spend a great deal of time approving courses and programs. Students are carefully screened in terms of admission requirements. Often standards of competency have been so carefully determined that only those graduates with GRE scores of 1,000 (not 999) and grade point ratios of 3.00 (not 2.99) can be admitted.

Accountability suggests new dimensions in evaluating graduate education. Though input has been based upon GRE or NTE scores and/or grade point ratio, few studies have been conducted on the validity of specific cutoff scores or ratios. Evaluation of output has received even less attention. If a graduate locates a job and is able to hold it, the curriculum developer often considers the program highly successful.

Those who have made careful studies of output in terms of input have encountered numerous problems. Both the Willis and the Essex Committees were handicapped by a lack of realistic objectives to serve as standards of comparison for curricula outputs. Obtaining any kind of evaluative feedback during the organization of a new curriculum is difficult. Since many graduate vocational education programs do not require any kind of internship or practicum, evaluating the application of materials and skills presents numerous problems.

In general, vocational education program planning and evaluation have made use of advisory committees, industry-education coordination, placement and follow-up studies, process rather than product evaluation. Various taxonomic schemes have been devised. However, no single set of desired outcomes for vocational education curricula has achieved consensus among researchers and practitioners.

Implication No. 2

Not only does the concept of accountability require planning and evaluation, it also encompasses involvement and sharing of

ideas. Responsibility for student learning rests not only with the teacher but is shared by the department head, the dean, the president, the board of trustees, and all who play a part in the education of the student. Accountability seeks to evaluate the input of all to determine their effectiveness--and efficiency--in educational processes. In actuality, accountability is a statement of policy indicating all those involved will accept responsibility for the performance of their students.

Implication No. 3

Accountability seeks to establish priorities based upon carefully formulated plans. Colleges and universities must squeeze every ounce of education from the educational dollar. Faced with a shortage of funds, they must be prepared to do internal shifting of monies. In many instances courses and programs with lagging enrollments may be curtailed or eliminated.

Colleges of education, in spite of their large enrollments, have seldom received a proportionate share of the revenue. Classes are large, equipment and buildings old and antiquated, faculty salaries low. Accountability seeks to allocate funds more equitably. Efforts in Texas and in several states would distribute funds according to the number of students per discipline. Thus, a college of education would be allocated faculty on the basis of 10:1 for master's programs and 5:1 for doctorate programs. A college of engineering would be allocated 6:1 and 4:1 for their curricula.

All across the country colleges and universities are expending their valuable resources by teaching small classes and maintaining programs with insufficient enrollment. On most campuses areas of plenty and areas of need exist side by side. In the past, colleges have paid little attention to instructional cost per curriculum. However, in this decade of tight money, institutions must think in terms of meeting the needs of a majority of students before meeting the needs of a few.

Graduate programs are often kept alive through the use of graduate assistantships. Jobless Ph.D.'s in physics in the northeast blamed their major professors for enticing them into graduate programs. They demanded that the institutions which granted their terminal degrees employ them until they could find suitable positions. Thus, the students were holding the institutions accountable for their lack of employment. In its present state of development, it is difficult to determine the degree to which the concept of accountability can be carried.

Implication No. 4

Accountability suggests that the profession, individually and collectively, assumes responsibility for the profession. Teaching is one of the few professions controlled by lay people and lay boards. Certification requirements, standards, budgets, textbooks are just a few of the areas which are dominated by laymen. It will be difficult for us as educators to be accountable for our actions when we have little authority over the activities of our profession. If accountability really means placing the responsibility where it belongs, perhaps we educators will be granted the same privileges in our profession that doctors and lawyers have in theirs.

Vocational education has an element not found in other teacher education programs. It is often a joint effort of the state department of education and the university. Seldom are the lines of responsibility clearly drawn. State plans exist in abundance, but frequently do not clarify the situation.

Implication No. 5

If universities embrace the concept of accountability there undoubtedly will be a number of internal changes. While college of education enrollments are large, not every curriculum is overloaded with students. For example, agricultural education has lost ground in undergraduate and graduate enrollments compared to industrial education, trades and industry. In the adjustment of internal funds and positions, agricultural education programs in many institutions could lose funds and teaching positions. To prevent serious losses on the graduate level institutions have already begun to develop interdisciplinary programs.

In a battle of costs and priorities, vocational education may lose ground. Per student cost for instruction places industrial education at the top of most teacher education programs. After analyzing the cost of teaching per output, programs may be dropped or combined. I am not aware that vocational education programs have been dropped by any college. However, what is happening in engineering can easily happen in education: some institutions have or are in the process of abolishing expensive colleges of engineering.

Implication No. 6

The application of accountability may require considerable changes in the content of graduate education programs. Where they now tend to emphasize teaching fields, such as agricultural education, industrial education, social studies, the new curricula must

provide extensive training in educational techniques: preparing objectives, developing educational strategies, devising systems of evaluation. A considerable number of media specialists capable of developing and evaluating materials must be trained. This education and reeducation of faculty will require considerable planning.

While capitalizing on effectiveness and efficiency, accountability demands the development of expensive research design and use of innovative practices. However, innovation must be in a "sound practical way,"[6]--no flying by the seat-of-the-pants theories nor as Lowery Davis says, no Mother Hubbard approaches. Accountability emphasizes curriculum development with total involvement of students and the community. It implies continuous evaluation and revision.

Aside from the cost aspect of research designs and innovations, teachers are often wary of change. Too often, innovations are more of a public relations device than aids to education.

Accountability has gained in popularity in many circles because of its glib use of terminology: "research design"; "learning as an outcome"; "student performance as a product"; "human capital"; "cost-reducing innovations"; "systems analysis."

The term suggests a scientific approach to evaluating education. It implies that education can be broken into small, measurable entities. It purports to identify and quantify with scientific accuracy factors which detract, are dysfunctional, and are neutral.

Proponents of accountability indicate that education can be managed and evaluated by scientific decision-making processes. They expect to reach a consensus of agreement on educational goals and then develop standards to serve as competency models.

The concept of accountability has not captured the imagination of everyone in education. Many feel it will not be able to measure up to the expectations of its advocates. To some it is a fad which utilizes "catchy phrases and terms." To others it tries to reduce the complex processes of education to formulas. "Schools," writes Everett Reimer in his new book, *School is Dead*, "treat people and knowledge the way a technological world treats everything: as if they could be processed . . . "

Critics point out that advocates make unwarranted comparisons with industry. "If one automobile in every four went out of

---

[6]Robert W. Locke, "Accountability Yes, Performance Contracting Maybe" (Princeton: Educational Testing Service, 1971), p. E-8.

control and produced a fatal accident, Detroit would be closed down tomorrow," writes Stenner as he develops his case for accountability.[7] "If one is analyzing a transportation company . . . " introduces an analogy made by another advocate of accountability. Critics indicate that using transportation analysis methodology could only bring our educational system to the same fate as public transportation.

Accountability purports to spend money more efficiently. Critics point out that innovations, no matter how practical, involvement of the educational community in planning, and devising strategies and evaluation devices require considerable outlay of funds. They indicate that economists have done little to aid a faltering economy, to prevent increasing unemployment, to improve working conditions, or to bolster the depreciating dollar. Why then should educators trade one set of "unworkable" methodologies for another?

Others see the concept as becoming a battle ground for experts with arguments and counterarguments in plentiful supply. It has been labeled a good publicity gimmick which serves more as fodder for politicians than instructional improvement.[8]

Though vocational education did not use the term accountability, early vocational education practices have had great influence upon the modern concept. Vocational education techniques and philosophy have formed much of the basis of the current usage. "If the student hasn't learned, the teacher hasn't taught" is an early application of the concept.

During the 1930s and 1940s vocational education teachers were preparing objectives, planning learning activities, and evaluating students in terms of the stated objectives. Significant efforts have been made in the development of product and process evaluation. Currently state guides using behavioral objectives and containing standards of measurement are being prepared for vocational education courses in South Carolina and elsewhere.

The various ramifications of accountability have had little impact upon the various academic areas. Though persons in higher education are seeking means of reform and improvement, they have not embraced accountability and there doesn't seem much likelihood

---

[7]Jack Stenner, "Accountability By Public Demand," *American Vocational Journal*, February, 1971, p. 36.

[8]Wilson C. Riles, "Public Expectations," *Proceedings of the Conference on Educational Accountability* (Princeton: Educational Testing Service, 1971), p. G-2.

that they will during this decade. It could be a tragic omission; for accountability offers many implications for educational improvement.

Second: Dr. Carl Schaefer
Professor
Vocational and Technical
Education
Rutgers University
New Brunswick, New Jersey

Recently an article appeared in our *Rutgers News and Comment* (Jameson, October, 1970) which reflects the image graduate education casts. Although somewhat lengthy, let me read what Reynard Jameson has to say:

> In the spring of the junior year the liberal arts major begins to wonder what he's going to do with that degree he'll win next June. Not being particularly eager to launch on a career into the dead sea mud-flats of responsibility, he obviously thinks of graduate school as an easy way out of a nasty fix. If his grades are above average he can probably even be accepted to a graduate school of sorts somewhere. So it is to the junior liberal-arts student with above-average grades that I'm addressing a word of advice. That word is 'Don't.' I'll expand on that: 'Don't go to graduate school.' . . .
>
> If you are a student with high grades, you'd probably enjoy it and think that you'd like to learn more about it. You assume, or you've been told that graduate school is the place to go for the lion's share of higher-higher education. This is the first illusion that I want to dispel. Graduate school is not an educational affair, whatever it has to do with education is quite incidental to its primary goal, which is vocational training. In graduate school you are taught to use the tools of your future trade so that you can be licensed to practice in public. The goal of graduate school is what is called, rather cynically by those, who hold it, 'the union card.' . . .
>
> Education is an industry, and students are the workers. Teachers are not the workers, students are the raw material, and graduates are the finished product, to be marketed to business, to industry, to government, or back into education--that is called capital investment. So graduate school is a self-perpetuating cycle, a circle-jerk, and students are holding the buckets.
>
> Graduate schools exist because they give prestige to the universities, hence to faculty and administration.

Professors want to teach at prestigious schools because they like prestige. To teach in graduate schools, they have to publish; but publication gives them prestige too, so they're glad to do it, to pile up a whole string of little muck-heaps. But no one's going to pay them for just publishing, not for publishing the kind of thing that scholars write anyway.

So they have to teach, but if they can teach courses in their specialty, if they can get students to sift around in their mud with them, then teaching and research can feed on one another. So they demand, and get, graduate courses, courses in higher mud-mucking.

But teaching doesn't build power, at least not the kind of power that comes with 'national visibility' (Never heard that phrase before? you will if you go to graduate school) so they want to spend as little of their time as possible in teaching and as much as possible in writing and research. So they demand, and get, very light teaching loads. How do they do it? Because the administration wants 'nationally visible' scholars on its faculty, scholars who are in demand at other universities, admired in their own professional organizations, and probably resented by their students, because they have built large piles on their little claims . . .[1]

Our accountability for graduate study or should I say creditability--being worthy of esteem--certainly isn't very great in the eyes of some of the Jamesons. And it wouldn't be so bad if there was not some truth in the cynical words he has propounded.

Accountability obviously has something to do with the input-output sides of the picture. It starts with the selection of the raw material we have to work with; implies a processing of this raw material and, hopefully, a quality control frequently called an evaluation. What then is, or should be, the selection and the evaluation of graduate education? Knowing that vocational-technical education will be no better than the people that make it up--it would appear that these two components (input-output) of graduate education need be highly important.

---

[1]Reynard Jameson, "Pile It Higher and Deeper," *Rutgers News and Comment*, New Brunswick, New Jersey, October, 1970.

We are all aware of the usual admission requirements to graduate study--a bachelor's degree, references, successful teaching experience, taking of some standardized test such as the GRE and the like. But are these the best or only criteria that should be considered in selection for graduate work? I think not!

Consider, if you will, what an advanced degree should be, rather than what it really is. Consider the goal of producing master teachers instead of teachers with a master's degree. And consider the development of true educational administrators, contrary to a teacher who may also hold a director's or principal's certificate. The input into such programs might take an entirely different selection emphasis if looked at in this manner. For example, those who would aspire to become master teachers while pursuing a master's degree--they might be selected on a far different basis than the traditional, which could include among other things:

Demonstration of mastery of the subject matter they teach.

Show a commitment to the classroom and extracurricular activities of students in a superior way.

Provide evidence of leadership among other classroom teachers.

Demonstrate an energy level superior to ones peers.

Of course such criteria, if imposed, might rapidly distinguish an institution from the master's degree production line now in operation and could well put an institution out of business for being too tough. Graduate students do shop around, you know, for the "best" deal.

Those who aspire to leave the classroom and inherit all the discrete problems of an administrator might be selected on an entirely different basis, such as:

Their ability to interact with groups and individuals.

A display of leadership in terms or organization, problem identification and personal energy.

A personal commitment to the "business end" of operating a school enterprise.

An emotional stability and persistence to complete a job or assignment.

And in both cases (master teacher or administrator) it may be well to keep the door propped open (as Rutgers Graduate School of Education has) for those individuals who do not hold a baccalaureate degree, but who have by accumulative experience displayed significant competency in either teaching or administration and now want to join in the education endeavor.

Given this kind of input and by applying the appropriate processes, the output of graduate education in the vocational-technical field might be quite different than we are used to. Evaluation of our output would be conceivably based on performance as a "master" teacher (the holders of our master's degrees) and administrators who truly are dynamic in the process of management of the total enterprise. But based on a more limited evaluation--or at least one at graduation from a program such as a master's or doctorate, the following might well be considered as an assessment means of both process (program) and product (graduates):

> Recommendations by others than faculty as to the proficiency of the individual as a master teacher or administrator.
>
> Assessment at various points throughout the program, and at the end by a group diagnostic process.
>
> Evaluation by peers or peer groups.
>
> A combination of the above, not to the exclusion of some of the present day measures used in assessment for graduation from advanced degree programs.

As unwieldy as the suggested evaluation process may appear to be, the fact remains that something must be done to assure a better product out of our graduate programs. The amassing of more credits just isn't providing the "quality control" needed to prove the worth of graduate work.

I suppose few here would argue with the notion that graduate education smacks of vocationalism and in many cases provides the "union card" for occupational entry. Many here would say he (Jameson) has blown out of proportion the role of graduate faculty relative to power grabbing through research. And some would concur that the graduate faculty teaching effort leaves much to be desired. But the real problem is in the image we cast and that has something to do with the word accountability.

According to some, "accountability" in regards to education is going to be heard much more. Stenner (1971) for example says:

> If one airplane in every four crashed, as passengers we would be in a lynching mood. If one automobile

in every four went out of control and produced a fatal accident, Detroit would be closed down tomorrow. Yet our schools . . . are somehow failing one youngster in four, and we have not acted effectively to arrest the social and economic failures which every school dropout represents.[2]

The August, 1970 issue of *Time* came forth with this:

> When a baseball team finishes last, the manager is fired. If no one buys Edsels, no more are made. But one of the nations' biggest enterprises, education, is virtually unaccountable when it fails its customers.[3]

Leon M. Lessinger (1971) defines accountability as:

> the product of a process in which an agent, public or private, entering into a contractual agreement to perform a service, will be held answerable for performing according to agreed upon terms, within an established time period and with a stipulated use of resources and performance standards.[4]

Any definition of accountability does contain some elements that have not been too prevalent in the minds of we educators such as: established time periods, the stipulated use of resources and the performance of a service. We have sat rather high and mighty behind our academic regalia and assumed the product we have been turning out has met certain standards even though these standards may have been nothing more than meeting certification requirements and not necessarily meeting performance criteria--which may be quite different.

Therefore, I would like to spend my remaining time talking about the simple fact that accountability in graduate education must assure adequate and continued performance of our personnel. And you will have to excuse me if I emphasize the word "continued" because the problem goes well beyond mere graduate programs which most of you realize can be a one shot deal--even compressed into a year or two of concentrated study. Accountability in graduate education, if it is to embody the concept of continued service to

---

[2]Jack Stenner, "Accountability by Public Demand," *American Vocational Journal*, 46 (February, 1971), pp. 36-37.

[3]"Free Enterprise for Schools," *Time*, 58, August 24, 1970.

[4]Leon M. Lessinger, "Teachers in Age of Accountability," *Instructor* (June-July, 1971), pp. 19-20.

vocational-technical personnel, goes well beyond a year or two--indeed it becomes a lifetime service to the professional.

The changing role of the school administrator, for example in the area of teacher negotiations, curricular and media developments, staffing patterns and the like imposes the continued education for administrative types. But look around you--it is sadly lacking and school administrators are floundering in their attempts to cope with such problems.

The notion of the early founders of vocational and technical education, as evidenced in 1918 by the Federal Board for Vocational Education, when they pointed out the need for vocational and technical teachers to be up-to-date in their technology has not been achieved. Barlow (1967) in his book *History of Industrial Education* quotes one of our early teacher education reports as follows:

> It is, of course, essential always that the teacher shall be able to teach, but it does not follow that he shall always qualify as a professional teacher. It is much more important that the instructors in carpentry, for example, at least in regards to shopwork instruction, shall be a competent carpenter than that he shall have attended normal school . . . That is the prime requisite and all other qualifications are secondary.[5]

This early concern for the "technology" or up-to-date subject matter that a vocational teacher must possess must be one of our continuing education problems.

Yes, the service aspect of accountability in graduate education adds up to a substantial challenge. And I'm not sure graduate faculties can measure up to it unless they become true managers of our total personnel development system.

As you know on some campuses there exist several divisions. One is concerned basically with undergraduate education; another graduate, and a third with extension or continuing education. I suppose the assumption here is that the problems of each population being served is so much different that it takes a unique and different faculty to relate to each. We at Rutgers have, for example, a Division of Engineering Extension which operates quite differently from our School of Engineering. In fact, it has its own budget (which is mainly self-supporting) and runs courses out in the field usually for extension credit and not "graduate credit."

---

[5]Melvin L. Barlow, *History of Industrial Education in the United States* (Peoria, Illinois: Charles A. Bennett Company, Inc., 1967).

Industry frequently releases the time of its employees to attend the classes and has established the practice in more cases than not of paying the cost of the instruction. A better example and one which I don't have to describe to you is the Agricultural Extension Division (usually called Service). Education and especially vocational-technical education does not possess any such organized approach to its updating of personnel or if we do its done through a hit and miss workshop or institute endeavor.

What I'm suggesting is that accountability of graduate or post-baccalaureate education be provided for in our personnel development scheme on a continuing basis. Just how this might be accomplished could take on several different models.

One might be that graduate faculty devote their summers to the role of the continuing education of our personnel. Such a plan would impose the operation of workshops, institutes, and courses designed for the specific purpose of updating vocational and technical personnel. This is not to say graduate faculty would do all of the instruction, but they would become the organizers of such, and tap the resources of not only their entire institution but business and industry as well.

A second approach might be through the exchange of roles of graduate faculty from semester to semester or on an academic year basis serving as extension specialists out in the field so as to speak; rather than in-house program specialists. The concept of in-service teacher education has never been fully realized by the practitioner and to have a teacher educator possibly in-residence in the larger school systems or on call to the local school could prove quite vitalizing.

And a third approach might well be to have a special extension or continuing education faculty much the same as the Agricultural Extension Service whose sole job it would be to work out in the field to upgrade vocational-technical personnel. Following this model, it would be comparable to having periodic visitations by the extension expert to individual and small groups of teachers to help diagnose their problems and to update them so as they can produce more effectively.

Naturally, all three models would have to be based on some rather specific postulates--or prerequisites--such as:

> In-service teacher education will become a part of a contractual agreement possibly through an extended yearly contract.
>
> As in industry, local school systems will be willing to pay their fair share of the extension teacher education costs.

Teachers will be released during the regular school day and throughout the school year to receive extension type updating.

Extension type training will be accepted in lieu of college credit which add up to degree requirements. And performance is basically what is deemed desirable within each school system not mere college credits.

That, as managers of the personnel development process, teacher education faculties possess the ability to keep vital local staffs (administrators and teachers).

Appropriate physical facilities or centers for personnel development will be made available for carrying both managerial and technological updating of vocational-technical personnel.

Yes, accountability in so far as the service aspect of graduate education has been overlooked for far too long in our profession. Our personnel are too frequently outdated, in a rut, tired and lack vigor. It is high time the notion of extension education service becomes an integral and continuing component in our system of personnel development. For without this we will continue to display professional lethargy and continue to be looked upon as unaccountable for our personnel.

Third: Dr. John W. Struck
State Director
Vocational, Technical and
Continuing Education
Department of Public Instruction
Harrisburg, Pennsylvania

I am indeed honored by your invitation to meet with you here in Atlanta to discuss graduate programs in vocational and technical education. The newly popular word of "accountability" can mean different things to many people, but basically it means:

1) being responsible for;

2) capable of being explained;

3) a written or oral explanation, as of blame or cause; or,

4) answerable.

I wish to make it very clear, before I go any further, that any comments I make this morning are in no way intended to "throw stones" or to be considered as criticism. On the contrary, I feel that higher education institutions and prospective employers of these institutions' products such as state departments of education and school districts, must join hands in a mutual effort to produce the best possible.

Our fast changing society and economy makes it essential, even imperative, that improvements and changes be made in vocational education programs, particularly those supported by public funds of one source or another.

A move in congress to have the nation's needed skilled manpower trained by agencies other than the public schools and institutions is more than a gentle reminder of the massive dissatisfaction by many.

The effectiveness of the vocational-technical programs, as well as all other educational programs, is to a great extent dependent upon the leadership that directs such programs. Not only must we have well-prepared teachers and good facilities, but we must have able administrators capable of providing the leadership to make the educational programs and services both realistic and viable to society's needs.

The term "graduate programs" is used not only in the preservice context of preparing new administrators but in the very vital in-service programs of providing administrators and supervisors with knowledge and understanding of new problems, methods,

and factors affecting education. The in-service program of providing opportunities of improvement to those about to undertake larger or different responsibilities in the field of administration and leadership is an extremely vital one in vocational education because of the changing nature and role of this field of education to meet the fast changing nature of the economy and manpower needs.

The state and local education agencies are the purchasers and consumers of the products of the colleges and universities. They are the ones who will experience success or failure, dependent, to a large extent, on the quality of those granted degrees by such institutions. Their needs reflect factors which should be incorporated in developing teachers, administrators, and supervisors.

Although the actual arrangement for vocational teacher education and the development of vocational education administrators varies considerably among the states and in the various areas, most schools and institutions have a great many common areas of need when it comes to leadership, administration, and supervision. New relationships between teacher education institutions, business and industry, state departments of education, and local educational agencies must certainly be developed if more realistic programs of advanced study are to be forthcoming.

While the preparation of vocational education teachers and administrators is primarily the responsibility of colleges and universities, the content of such programs should arise directly from the cultural and economic needs of people in our demanding, rapidly changing, technological society. A teacher education institution has an obligation and a responsibility to assure its public that quality education takes place. The economic necessity of this becomes greater in the more costly programs of advanced study. My comments this morning are an attempt to make constructive suggestions toward this end.

Opinions From EPDA Awardees

For over a year now, 17 institutions have been involved in special programs to train 68 outstanding young men and women in vocational education graduate programs under EPDA. Many new and exciting things have been intrcduced by these institutions, and I strongly commend them for their leadership.

This past summer these EPDA awardees pooled their reactions to their first year's experiences, and I thought you might be interested in their requests for improvements. I'll not take your time with all of their specific recommendations, but five or six categories can summarize their main concerns. These have not

previously been widely published or made readily available, so I thought it might be of interest to you.

1) The first general category is one which I have listed as Program Flexibility and Involvement. The recommendations that are related to this category are as follows:

   A brochure should be developed which contains information on programs of the various institutions and it should be made available to all initial EPDA applicants in the future.

   Selection criteria for acceptance into the graduate program of each institution should be resolved before a student makes contractual arrangements to become an awardee at that institution.

   Mechanics should be constructed to improve communications between the awardees at the various institutions. Awardees should be supplied with information as to what EPDA activities are occurring at the various institutions. This EPDA communication system could be in the form of a newsletter.

   Specific goals and objectives for each program and each institution should be developed. EPDA awardees should become familiar with these goals and objectives and become instrumental in preparing said goals and objectives for future programs.

   Each EPDA awardee should be provided a copy of the proposal submitted to the U.S. Office of Education by the institution he is to attend, so that he may appropriately evaluate the program.

   Future EPDA proposals should be written to accommodate more flexibility with regard to individual programs.

   Awardees should have greater opportunity to formulate their own academic and intern programs.

   Provisions should be made for continuous self-evaluation and evaluation of institutional programs by awardees.

2) The next general category that the recommendations are related to is research:

   It is recommended that the awardees coordinate their efforts on the research aspects to make a united impact on appropriate vocational education needs.

Funds should be provided to offset expenses incurred during research activities. These funds should also be provided for the preparation of the dissertation.

A portion of the EPDA communication system, or newsletter, should be designated to identify dissertation titles, name of the writer and short description of the study for the purpose of informational interchange.

3) The issue of internships stimulated the following recommendations:

It is recommended that the widest discretion possible be given to the individual in the selection of his internship to meet his particular needs, and that he be considered an employee of the institution with all the rights and privileges of that institution, and further that he receive equivalent compensation for duties performed.

4) This next general category is short and relevant:

There has to be greater attention paid to the involvement of minority persons in EPDA 552 programs.

5) In the general area of leadership enrichment, the following recommendations were made:

All programs should make provisions for professional enrichment such as attendance at AVA conventions, EPDA regional meetings and other professional gatherings.

A possible social gathering of EPDA awardees during AVA conventions should be encouraged to renew contacts and exchange ideas.

6) And lastly, it was suggested that:

A procedure be established for direct mailings from U.S.O.E. to all awardees that information relative to vocational education legislation so that leadership may be assumed by the awardees and their respective legislative representatives.

These recommendations represent a nationwide concensus of opinion among the EPDA awardees. What these points don't tell of course, are the many applaudable things that have been developed and included in these graduate programs.

Some New Challenges

It would be a waste of your valuable time to come to Atlanta to have some speaker enunciate fine plaudits about the graduate programs you have already developed. I'd like to briefly say that many individuals and institutions have done a truly commendable job in developing leaders in vocational-technical education through their graduate programs.

From that point, let me take on the role of a devil's advocate, since at a meeting such as this the angels are in such great abundance.

While it is often very foolish to generalize about vocational teacher education programs conducted by different institutions, I would like to mention several of the most glaring and common inadequacies found in many institutions.

Absence of training in all or even most of the areas I will mention is never found in one single college or university, but far too few can claim that they are doing very much, in their advanced study for the vocational education teacher or administrator preparation programs, about many of these areas of concern.

Most states are experiencing a serious shortage of competent administrators for the fast-growing number of new vocational schools, technical institutes, and community college technical programs. Since a majority of the doctoral programs and advanced study programs are concerned with training and developing administrators of one level or another, many of the problem areas are concerned with teacher education institution shortcomings of this nature.

Obviously, numerous institutions provide some offerings in these problem areas, somewhere in the college or university. Few graduate students in vocational-technical education programs, however, are guided into, offered opportunities, or even required to take some of these things as they seek to develop their competencies as future administrators.

No relative importance should be concluded from the order in which I mention these concerns:

1) Internships for Administrators: We have long provided for "practice teaching" or internship opportunities for prospective teaching personnel. It is just as logical to provide and require administrative internship experiences. With the complexities of the administration of today's large schools, internships need to be more than observation and minimal involvement experiences. One major problem regarding this is insufficient time for real and meaningful involvement on the part of graduate student administrative interns.

2) Preparation for Teaching or Administering Inner-City Programs and Schools: A number of universities are beginning to offer courses including experiences in this, but seldom is this found in vocational teacher-administrator preparation programs. Administrators and teachers who can competently cope with inner-city school problems, and who have had some special training for this, are sorely needed.

3) Techniques of Working with Disadvantaged Persons: This is closely associated with the preceding problem, but is actually needed in all types and sizes of schools. All teachers and administrators must develop competencies for working effectively with disadvantaged persons of all types, and teacher preparation institutions must rapidly include such training in their requirements for advanced degrees in education.

4) Special Education Techniques for Regular Teachers: Special education techniques is an important but often neglected aspect of regular teacher and administrator preparation. Teachers of all kinds, including academic as well as vocational-technical teachers, need to be able to deal more effectively with students who are handicapped in their regular classes. This is different from those specialized programs designed to train specialists who will deal with handicapped students in segregated situations, classes, or schools.

Many authorities now estimate that between 50 percent and 60 percent of the students who can be classified as handicapped in one way or another, are in regular schools, in regular classes, under the jurisdiction of regular teachers and counselors.

Greater sensitivity on the part of these regular personnel will make it possible for more of those handicapped students to stay in regular classes and to learn well and do well.

Providing an opportunity for teachers to learn of other specialized educational activities through visits to vocational rehabilitation centers and other programs of this type can also be most helpful in helping regular teachers to better understand the educational problems of handicapped students.

5) Teacher Education Programs Designed to Meet Competency Requirements Instead of Credit Requirements: This of course is a joint problem of both state departments of education and teacher education institutions. Both must move toward a competency or performance-based approach and away from the usual credits and courses approach in deciding whether or not people are qualified to do certain kinds of things in

education. This requires specifying what they expect people to be able to do, in fairly specific ways. It means identifying the performances that they want teachers, administrators, counselors, teacher-aides, etc. to be able to do. Following this, training programs and experiences must be designed to enable them to perform in these ways. By this method, then, it can be determined whether persons should be certificated, promoted, hired, or given tenure on the basis of their ability to perform.

This is a radical change from most states' approaches to certification, which often says that when a person finishes "X" courses in education and "X" number of courses in this and that, he is then qualified to perform whatever it is! The EPDA program is supporting pilot efforts in this area in the States of Washington, Florida, and Texas. The Texas effort especially is quite extensive, with five institutions all preparing teachers and administrator training programs which are based upon performance rather than on the usual courses and credits criteria.

6) Techniques of Flexible Scheduling: Public schools have long been criticized for "lock-step" or inflexible scheduling. Leading educators are today acknowledging this shortcoming and urge all schools to use new scheduling techniques that permit students' educational programs to be highly individualized. Prospective administrators can't learn these techniques by simply talking about them. In many instances, the use and programming of computers for scheduling purposes must be included in the training bill-of-fare. Actual examples must be given to administrators-in-training if they are to really learn how to use these techniques.

7) Practice in Teaching or Administering Cluster-Type Programs:

8) Understanding of and Experiences in Team Teaching: Items number seven and eight are closely related, as team teaching does involve teachers from several disciplines. Graduate programs should not only discuss these techniques, but advanced study students should actually have an opportunity to work in such situations.

Prospective administrators should also have an opportunity to learn what can and should be done by an administrator in order to facilitate and improve the effectiveness of team teaching and of cluster-type programs.

9) Teacher and Employee Negotiation Skills: Knowledge and skill in this area of administration will unquestionably be not only valuable, but a necessity. Many universities are thinking about offering something in this area of concern, but because

of the urgency to develop negotiation skills and knowledges in all administrators, state departments of education and school administrators' organizations have taken the leadership in conducting seminars, workshops, conferences, and short courses on this topic.

Universities have just moved too slowly, for the most part, or else have taken a hands-off policy with the attitude that labor negotiations are an unprofessional activity and not the university's problems.

There is an urgent need for colleges and universities, with all their capable staffs, to want to and be able to rapidly initiate new educational programs to meet these newly developing educational problems.

10) Legal Aspects of School Contracts and Administration: Many institutions presently provide some instruction concerning "School Law," but it is most important that this be up-to-date. Defining the role of teachers and administrators as they relate to: (1) the administration of contracts, (2) school board policies, and (3) teacher and other employee groups, is extremely vital today.

11) Techniques of Dealing With Sit-Ins, Demonstrations, Strikes, etc.: Although skills in this area are closely tied to the immediately proceeding problem, many special knowledges and skills have been developed by those who have faced demonstrations and strikes. These experiences have gradually developed into teachable techniques which are of significant assistance to those administrators or prospective administrators who have yet to face this problem personally. When a strike or demonstration suddenly develops, it's then too late to learn what to do!

Again, administrator organizations and state departments of education have taken the lead in providing this type of training because of either university apathy, disinterest, or lethargy.

12) Techniques for Meaningful Involvement of Students and Teachers in Policy Determination: Some administrators have been most successful in involving both students and teachers in policy determinations, while many others have been spectacularly unsuccessful. An understanding of these successful techniques is almost a must for today's administrators.

13) Food Service Management and Contracts: Administrators of large school systems may not deal personally with school food and cafeteria problems, but certainly any single school principal or administrator faces this constantly. Poorly run

appear to be a "must" for today's competent administrators and teachers.

18) School Facilities Design, Maintenance, and Contracts: Of course, we have professional architects and able school boards, but a great many educational monstrosities and monuments to poor judgment and knowledge have been built recently because the chief school administrator knew next to nothing about facilities design. It is essential that new facilities be tied in with program and teaching needs, new developments in materials, heating and cooling systems, sound and traffic control, etc.

Regulations and policies relating to construction and expansion of school facilities are continually being updated by state agencies and state boards of education. Too often university staff are not teaching the latest revisions of such regulations, and more attention must be given to this problem.

Universities and colleges must reevaluate their present efforts in this area to see if prospective teachers and administrators are really obtaining an understanding of the new problems, techniques and regulations.

19) Federal and State Reporting Requirements: Reports, forms, applications, etc., have long been a time-consuming, but an essential part of a school teacher's or administrator's job. Usually, new administrators must learn about these on-the-job, with little or no previous knowledge of what is required by state education agency pupil accounting offices. Failure to submit various forms or reports on time may cause loss or delay of funds to the school, thus resulting in much criticism of the administrator.

Teacher and administrator preparation institutions must work closely with state department of education officials in order to keep abreast of new developments and requirements in this area.

20) Money Grantsmanship: Techniques of designing research, pilot and experimental activities in education, and preparing proposals to secure funding, are of considerable importance today. Many administrators have new and excellent ideas but never get them put into practice. Often, this is due to a lack of familiarity with necessary procedures to obtain adequate funding from state, federal or foundation sources.

The difference between an average job of administration and an outstanding one may often be the ability to attract and obtain outside financial resources to a school or

institution in order to do a number of "extra" things in education and educational services.

21) Improving Staffing Patterns Through Career Ladders and Differentiated Roles for Supporting Personnel: This innovation in administration techniques has been given some attention by numerous teacher education institutions. Additional efforts must be made to inform current administrators about how to initiate such procedures in their existing systems. State educational agencies and administrator organizations have been conducting numerous conferences on this problem. Only through more effective use of our highly skilled and knowledgeable personnel can our schools hope to adequately cope with today's problems and great numbers of students.

22) Techniques of Resource Utilization: All school personnel experience resource limitations of one kind or another, such as funds, materials and supplies, facilities, equipment, and personnel. A number of recent pilot efforts have shown quite conclusively the advantages of concentration of limited resources, and of developing linkages with other groups which will extend the achievements normally possible within the resource limitations.

Numerous state and federally funded projects show that more seems to be achieved in the solution of school problems if whatever resources are available are concentrated in such a manner as to make a significant contribution and change in a few areas of concern rather than distributing a very limited number of dollars to every area of endeavor whereby no one gets sufficient additional resources to make a real impact or change.

In addition to this, available resources can be made to reach farther if "linkages" are built between the school efforts and community-state-university groups so that the resources of these organizations can be tapped by combining efforts on areas of mutual concern.

Many community groups are interested in assisting our schools to improve programs and services, and by working closely with these organizations many additional resources are available to school teachers and administrators.

Developing cooperative relationships with private profit or nonprofit educational institutions can be mutually beneficial. Many university staff rarely have an opportunity to visit such schools, especially those training students in non-collegiate programs. Many of these schools are doing some exceptionally fine things, and a mutual exchange of ideas for teachers and administrators would be most helpful in many cases.

Prospective administrators need to see this kind of thing in action, in order to fully understand how to make it work effectively.

23) Adult Education: The naive opinion held by many in education that adult programs and classes are very little different from high school classes is indeed regrettable. So is the feeling by many administrators in public school systems that adult education is the responsibility of "someone else." Today's public schools must be responsive to all segments of the community, to whatever extent possible. Special skills, knowledges and techniques must be used if the adults of a community are to be well-served by these educational institutions.

Most teacher education institutions have a tendency to minimize the importance of preparing both teachers and administrators in this fast-growing area of education. Courses in techniques of teaching and organizing or administering adult education programs are often casually treated by advisers of degree candidates as "something nice to take if you have time." This is a serious error in today's society, where education is rapidly being accepted as a necessity throughout life.

24) Coordination of University and State Education Agency Efforts: A lack of coordination between the individual efforts of university faculty and state department of education staff, each of whom are concerned with assisting in the improvement of public school instructional programs and personnel, is a tragic waste of effort.

University teacher-educators visit schools to offer suggestions to the instructional or administrative staff and to assist in the initiation and conduct of pilot and experimental educational efforts. Often, state department staff likewise make themselves available for similar purposes and consultation, and each may be unaware of the effort by university faculty and state department personnel might well achieve far greater results for everyone involved.

25) Need for Integrated Vocational Teacher Education Departments and Programs: A serious void or gap in vocational teacher and administrator preparation occurs when institutions maintain in their administration and programs a distinct separation of each of the areas of vocational education; i.e., agriculture education, business education, trade and industrial education, etc.

Based upon the Smith-Hughes Act (1917) and the George-Barden Act (1945), this administrative and teaching plan was

completely outmoded by the Federal Vocational Acts of 1963 and 1968. The foundations, principles, and many teaching skills and techniques are similar for all vocational education, and it is completely indefensible for universities to maintain old systems, methods, and programs.

Summary: Areas of concern similar to the foregoing can readily be enumerated by researchers, teacher-educators, guidance counselors, special education personnel, etc. This list is mainly indicative of the things which school administrators are most concerned about.

Every effort should be made to discover and explore the vital shortcomings of our teacher-administrator training programs in light of new and changing school and institution conditions.

So What? Now What?

The foregoing problems represent some of the major areas of concern as experienced and expressed by those who employ the products of teacher education institutions: state education agencies, school administrators, and school boards. Perceptive graduates, both teachers and administrators, also often recognize many of these shortcomings.

Many colleges and universities are too concerned with what has traditionally been considered "professional" type courses. Instead, more time and effort need to be spent in developing both teacher and administrator preparation programs based upon an accurate analysis of the day-to-day and month-to-month problems which make up the jobs of teachers and administrators.

Particularly is this critical with respect to administrators, as these jobs have undergone dramatic changes in recent years.

Accountability?

There is little question that the vocational teacher education institutions will shortly, if they have not already, feel the federal government's pressure for accountability of funds. State departments of education are being required to furnish specific answers to very searching questions about what results have been achieved through the increased federal funds for vocational-technical education.

In-depth studies have highlighted the facts that nationally, little changes have resulted from the increased vocational education funds for teacher education. This is a very damning indictment, and something must be done about it--immediately.

As a result, more and more state departments of education are planning to eliminate their continued support for salaries of regular, full-time faculty members of colleges and universities, and will be moving toward some system of the Purchase of Services Technique for financial support of vocational teacher education.

Many state education agency administrators now feel that the operating budgets of each teacher-preparation institution should support all permanent or regular staff, for all schools and departments, including vocational education. Federal funds appropriated for vocational education could then be used to provide those desirable activities that could not be afforded without the federal funds: the federal funds would truly be supplementary, as the law requires, rather than supplanting.

Using federal resources in this manner would put the institutional faculty on a firm ongoing fiscal basis, with opportunities each year to participate in exciting new projects and activities funded through the annual federal appropriation for vocational education. In this manner, the annual fluctuations in federal funding could not jeopardize faculty salaries, but would be available to do many new things in vocational teacher-administrator preparation not possible within regular budgets.

State education agencies could, under this method, put special emphasis upon developing new activities not presently offered by the teacher preparation institutions. State education agencies could in effect say to these institutions: "Here are some areas of concern that we would like to see made available as a part of the teacher-administrator programs. If you cannot afford to add them to your current offerings, we will pay for them, so that we get graduates from your programs with a more comprehensive training."

In other words, this would be a system of purchase-of-stipulated-services. If the institution is interested in receiving these funds, then they must provide the required changes. Federal vocational funds, under this sytem, would not be used for regular ongoing teacher education activities, but rather for new and expanded types of programs and services as intended by the congressional leaders who passed the Vocational Education Acts of 1963 and 1968.

An institution's commitment to vocational-technical education might well be an important criterion for making federal vocational education funds available. Vocational education is such an important area of the total task of education, that the time is certainly here when all education majors should be required to have some vocational education in their total teacher-preparation programs. When this happens, real leadership in this field will spring up, and a university can be said to have a real commitment for vocational education.

Another way of saying it well was expressed at a recent conference: "A measure of commitment can be determined by an assessment of the amount of innocence a university will tolerate on the part of its graduates!"[1]

There is a growing feeling by state education agency leaders that state universities have as much responsibility to prepare teachers for vocational education, as for any other area of elementary or secondary education. These schools or departments of vocational teacher education should be a part of the regular institution budget, as are the costs for preparing teachers for other specialized types of education.

It seems axiomatic that state universities have as much responsibility to prepare teachers for vocational education as for any other area of elementary or secondary education, but so far it doesn't appear to be borne out in practice. Fiscal support in this manner would then enable the available federal dollars to support new, innovative, pilot, and experimental activities so badly needed to update our vocational teacher-administrator preparation programs.

Other current ideas involve the Educational Vouchers Technique, or the technique of basing financial support upon productivity instead of faculty salary needs.

Each of these has its particular merits, and through one way or another, graduate institutions are rapidly going to be forced into severe accountability for what they are doing, just as are school districts and state departments of education.

It's a whole new ball game called "accountability." Each state and each institution has unique vocational teacher-administrator education problems, requiring individualized solutions. It is hoped that the ideas I have expressed today will stir your imagination for either adoption or adaptation, and that additional and even better ideas will be generated as a result of these beginning suggestions, and from my playing the role of the devil's advocate.

---

[1]Comment by Dr. Gordon I. Swanson, University of Minnesota, at an EPDA Committee Meeting, February 16, 1971, Washington, D.C.

Discussion Leaders Summaries

The ideas and challenges provided by the three presenters on the accountability panel formed the bases for the second discussion session. For guidance of group discussion, an accountability matrix and some questions were used. The group discussion leaders again made summary reports for the seminar participants. These follow:

Group J: Leader Thomas White

The consensus of the group is that we would hate to see the accountability concept tear apart the relationships that have been established over the years within our institutions, within our departments, and between our institutions, and the state department. We did feel, however, that accountability is not as great a threat as it appeared initially. We do have elements of evaluation within our present system in the institutions; we have checkpoints throughout our system. For example, we do have checkpoints in admission, we do have examinations, we do have checkpoints during proposal development, and we do have checkpoints in the dissertation stages of the doctoral program. In looking at the total picture of accountability, we also felt that the people who are pressuring for accountability must be aware, when dealing with institutions, of the constraints within which we work.

Group I: Leader Warren Meyer

We felt that there was little disagreement among the speakers since they really dealt with different facets of program evaluation of teacher education. Problems in implementing the accountability concept are derived perhaps, from the state department not having communicated sufficiently with teacher-educators and vice versa, regarding the needs of either the state department or of the LEA's. There is a lack of liaison between the service areas in the teacher education institutions. We lack measuring instruments and the clearly stated objectives which they are to measure. We need to know more about change agents at the teacher education level. We agree that there is a lack of flexibility in the curriculums of the teacher education institutions.

Group H: Leader Lucille Patton

We decided that one of our biggest problems is that we need to open up the lines of communication. It was mentioned in our group that, perhaps, some of our arteries of communication have been severed, particularly since the 1968 Amendment to the 1963

Act because of reorganization at the state department level. We had one man in our group, a member of a state advisory committee, who had just returned from a seminar for state directors in Las Vegas, and who is now meeting with us as teacher-educators. As in this case, somewhere along the line we need to get together, since it is always easy to blame the group which is not present. We were inclined to say that if we had better communication with state department personnel then we could do more about implementing our accountability responsibility. We also discussed such ideas as the role relationship between the state department and the graduate schools regarding educational programs. We further felt that we need better communications between state departments and institutions of higher education in regard to our graduate programs. We have certification problems in that state supervisory personnel have the responsibility for certifying while teacher-educators are accountable for the general excellence of the product.

We need better communications within the institution such as between the director of vocational teacher education programs and other teacher education program directors. We realize, as vocational teacher-educators, that we need to restructure our programs and to allow more flexibility for special education and other areas of study.

We are concerned about the project method or innovative program concept as a new way of funding programs. We are also wondering if emerging needs in training administrative and supervisory personnel might best be met at the state rather than the institutional level. Credit could then be transferred to the institution from which a graduate degree is desired.

Group G: Leader Cas Heilman

Discussion by and large was centered around the varying organizational structure patterns in the various states. It further evolved around the relationship between the state departments of education and the teacher education institutions as it affects their funding patterns. Another implication was developed in terms of the groups which apply pressures to these institutions. As one individual stated, we are asked to involve parents, students, community members, state department people, advisory committees, and various other organizations. To whom and for whom are we accountable?

Another issue evolved around accountability and dealt with certification and who determines it. The group tended to say that the state department had the responsibility for setting educational priorities, hopefully on a cooperative basis. They also had the responsibility for identifying rather precise objectives

relative to these priorities. It then is up to the teacher education institutions to meet those objectives and priorities. The group indicated that they desired a closer working relationship with the state department.

Group E: Leader Steve Lucas

Time is a problem, perhaps due to inertia, historical problems, or whatever. Many of the things that we're used to doing, we're still doing, and how do we depart from doing the old thing and then add a new element, we feel that the addition of accountability, will bring about a staffing problem or time allocation problem. We feel that often under the new accountability concept, short-term results are expected when a long-term process would be of more benefit.

State department people and university people should really be striving for the same goals, but these need to be discussed. There are courses taught somewhere that meet Dr. Struck's complaint list; but, we really don't think they're all under the same roof. Again, communication would help, and we think seminars, like this one, might be the place for more ideal curriculums to be presented with these interdisciplinary, cross-disciplinary, or competency based approaches.

In terms of recommendation we go back to the simplistic model; one that has wide applicability. We would hope in terms of the accountability concept, that a seminar could be held with "hands on" experience for the participants. We're thinking about an accountability package that could be provided to various states upon request. We just don't think people are going to retool instantly and many times we have to do so.

Group F: Leader Mary Marks

A responsibility of our graduate programs is concern for competencies. We felt that we are accountable for relevant experiences which are beneficial to an individual. We found that there was agreement that the teacher-educator was accountable for continual involvement, and that the institution and the state department must commit themselves to permitting continual involvement to take place.

The concept of accountability presented by the second speaker, was aimed at the preparation of the administrator. The consensus of the group was that first we had to set up a philosophical base and that perhaps the concepts presented by Dr. Struck were task oriented rather than overall oriented. We have been turning out graduates who are teacher-educators and researchers not administrators.

Group D: Leader L. C. McDowell

We decided that what we need is a good generalization of accountability; we have definitions of it that some of our speakers have given us. But, we're not sure we have a full understanding of accountability. The degrees of responsibility depended greatly on the organization of the college or the university in which the particular program was located. We also thought that accountability was a major responsibility of the state department of education.

The time available for most graduate programs will not permit the student to gain the competencies mentioned by Dr. Struck. We thought that most of these competencies could be achieved through in-service programs, perhaps without credit; in any case, this is an in-service function and a post program activity. Many of the objectives mentioned could be attained outside formal graduate programs--they might be accomplished through internships, they may be accomplished through workshops, they may be accomplished with "over the shoulder" kinds of work with people in the state department. We also thought that competent graduates were expected to obtain some of these skills on their own. Is the teacher education program accountable for all these skills?

Group C: Leader Margaret Johnson

One problem discussed was the selection process of students for graduate programs and the matter of accountability of instructors in this selection process. We discussed recommendations that were made by previous instructors of graduate students. There was discussion as to what other people might be included in this selection process; that is, previous employers, state department personnel, and others. Other factors that should be included in this process were the aspirations and the goals of the individual; these should be criteria in the selection process.

A recommendation was made to supplement the instructional staff, at the graduate level, with community resources from industry, from business, from the legislature, and other areas. This group also made recommendations for changes in the content and in the methodology, for the training of administrators in vocational education. An example was given that many of the directors of vocational-technical education have not had the necessary preparation for the job that they have been asked to do.

Group B: Leader Mary Helen Haas

We are concerned with the needs for more objective data to go along with some of the subjective kinds of evaluation that we use in our programs, but, hopefully, an evaluation system will do this for us. We are also concerned about the conditions of the

profession where our graduates are functioning, since this reflects a great deal on their preparation. Sometimes this means they cannot use their best skills given the conditions under which they function. We have to work toward change in this instance. And lastly, we need to identify the limits within which we work; we cam not be all things to all men, yet some of us try.

Group A: Leader Aleene Cross

The group felt that the organization of a vocational-technical graduate program, particularly for the administrative group, should be broadly based and deal with concepts, generalizations, and theories of management.

After lengthy discussion, we determined that all groups represented in the matrix were accountable, and that these groups could be involved in the stating of criteria, the development of programs, and in the evaluation process, but in the final analysis, accountability rests squarely on the shoulders of vocational educators. To measure accountability effectively, we have to have an evaluation model which will be of use in all of our programs, since no one else is going to be accountable for our programs but us.

In the Fall of 1962, I entered The Ohio State University to pursue work towards the doctorate, with a major in agricultural education and minors in occupational education, rural sociology, and educational administration. I completed my course work at the end of the Summer Session in 1963 and received the degree in June of 1964. I do appreciate the good feeling that came when I noted that the Program Planning Committee for this seminar listed me as a "recent graduate."

Since 1963 I have worked in three different positions: in the Department of Public Instruction; in a Technical Institute, at North Carolina State University; in the State Research Coordinating Unit; and now, as Executive Director of the North Carolina State Advisory Council on Vocational Education. I also hold an adjunct appointment in the School of Education at North Carolina State University. As you can probably see, my graduate program was not very effective in teaching me how to keep a job. One of my former professors indicates that he hopes sometime I will keep the same job long enough to make a contribution.

In my present role with the State Advisory Council, I assist in carrying out their three major functions: (1) advising the State Board of Education on the development of the State Plan for Occupational Education; (2) advising the State Board of Education on policy matters arising out of the administration of the State Plan; and (3) evaluating programs, services, and activities carried out under the State Plan.

In preparing for this panel we were asked to reflect on six areas or questions concerning the effectiveness of our graduate programs. Let me do this very quickly and then save two to three minutes for some other comments.

Q1. Did you consider yourself adequately prepared to <u>interview</u> for the type of position you wanted following graduation?

Yes, I did. My two major interests at the time were supervision and teacher education, and my plans during my graduate program were to return to the job I had left. I would not have felt quite so adequately prepared to interview for my present job nor for some of the jobs held since then. My additional needs would have been for more work in evaluation, research methods, proposal writing, and post-secondary occupational education.

Q2. What competencies did you develop during graduate school that you use <u>regularly</u> in your present position?

I learned to read. By this I mean I learned to read critically and to read for meaning. I learned to discriminate between those who had something to say and those who just like to write.

I learned to communicate in writing more effectively. One problem I had was that I wrote like I talked, and for a backwoods southern boy, this sometimes lacked clarity. Dr. Gerald James, then at North Carolina State University, used to give me a fit for this. After going through page after page of material and writing on or questioning every sentence, he would write on the margin of a page, "Joe, I think you're trying to tell me something." And on the 22nd page of the first draft of my master's thesis, after writing on or rewriting every sentence, he wrote, "Are you beginning to see what I mean?" Then he went on to say, "Write not so that you can be understood, but so that you cannot possibly be misunderstood."

I learned to think more rationally. Combining this with more effective communication in writing has been especially helpful in both writing proposals of all kinds and in helping others to do so.

I learned to work with and involve people more effectively. One problem I had early, and still do to some extent, was impatience with the slowness that results in working with groups. I wanted to "get on with it." I learned that in doing it my way I was limited to my own experiences, my own reading, my own ideas, my own frame of reference.

I developed an understanding of the broad field of occupational education and its "setting" in the broad field of education. You may not term this a competency but it contributed to effective use of some of the other competencies.

I learned to look beyond state lines for new ideas, new approaches and techniques, and new patterns. Much of this came about because of the many national leaders in occupational education who were constantly being brought to the campus at Ohio State for seminars and conferences and workshops. Let me encourage each of you in graduate education programs to constantly be on the lookout for people coming to your campus who can provide this broadened outlook to your students. Get your students involved in activities with national leaders. Some of this look beyond state lines was assisted by professors who were interested, concerned, and involved in what was going on in the national scene. Unfortunately, I ran into a few professors who thought that everything worthwhile had either been done or was being done within the boundaries of the State of Ohio.

My minor in occupational education allowed me to get some course work, an acquaintanceship with the people, and an understanding of the objectives of home economics education, distributive education, and trade and industrial education. It has served me well. It continues to do so.

Q3. What competencies did you develop during graduate school that are critical for successful performance in your present position?

I have already alluded to these: critical reading and thinking; working with groups; effective communications; looking broadly at trends and direction; and a better understanding of all areas of occupational education.

Q4. What competencies did you achieve in graduate school through experience unrelated to the formal graduate program? How were these achieved (i.e., graduate teaching assistant, etc.)?

This I have mentioned also in terms of national leaders coming to the campus, our encouragement to meet and talk with these people and get involved in the seminars, etc. One most important aspect achieved through experience unrelated to the formal graduate program came about through those informal associations and also work on joint projects with other graduate students from other states--West Virginia, Colorado, California, Missouri. The importance of having graduate students from a number of states cannot be overemphasized in my opinion.

Another thing which contributed greatly to my development and happiness and success, in and since graduate school, was the interest taken in me and my family by the professors both at North Carolina State and Ohio State. They took us on picnics, invited us into their homes, and fed us occasionally. They were concerned with the happiness of our families.

Q5. What did you learn that you believe should be deleted from the graduate program? Why?

The foreign language. I just learned barely enough to pass the exam. I never really used it, immediately forgot it, and haven't felt the real need for it since. That was also the first major hurdle I had to face at the doctoral level and it took up too much of my first quarter's time.

Q6. What competencies do you wish you had attained in your graduate program? Why?

I wish I had attained more technical competence in such areas as program planning, development of objectives, statistics, evaluation, and research design. A good portion of my work the past few years has involved these elements. It would also have been of great value to have had more work in curriculum construction, theories of learning, and working with target groups such as the disadvantaged and handicapped.

Now, let me just throw out a few quick thoughts concerning improvement of graduate programs. In the development of a program for an individual, tailor the program to fit his aspirations, his background, his needs. At the doctoral level, the program should carefully consider the student's undergraduate program, the master's program, other courses taken (if any), and the student's professional experiences. For example, I took too many additional agricultural education and rural sociology courses. Why not force the student into new areas, areas which will make a real contribution to the major--courses such as political science, psychology, economics, anthropology, demography, and business. I say "force," may be what I mean is "strongly encourage." Let me illustrate. I went to Ohio State scared to death: afraid of a new situation; afraid of a large institution; afraid of flunking out; and afraid of letting down my family and friends. I wanted that degree first and foremost. So I selected areas and courses in which I thought I could succeed. However, the "system" was partly at fault too. For a major, you had to have so many hours in the major subject field; this requirement sometimes forced you into courses which were not the most profitable. Also, many departments wouldn't let you take just one course; it was a minor area with nine to 12 hours or nothing. Time in a graduate program is too precious to repeat courses and to take more courses in an area than needed, if the student's background is strong in them. Too, a graduate student ought to be allowed to take a few courses to round him out or to get introduced to a new area. I really wanted to take a "just cause" minor made up of courses selected from various disciplines--"just cause" I believed they would help with my own personal development.

I would suggest that consideration be given to making internship-type experiences part of the doctoral level experience. This internship or this internship-type experience should be in a "new setting." For example, if the graduate student has had work experience in the area of the major, provide an internship related to one of the minor areas. Get your students actively involved in "real world" situations.

Use seminar experiences to examine current and developing trends. A seminar experience provided one of my best experiences and perhaps one of my worst and most frustrating experiences at Ohio State. The time was Spring Quarter of 1963. The President's Panel of Consultants Report was being drafted and there was evidence of a new Vocational Act emerging. The seminar group was made up of graduate students from all areas of vocational education and industrial arts; faculty members from the several areas were involved. We examined "bootlegged" copies of drafts of the panel's report. We examined its meaning for new legislation, new vocational programs, new areas of emphasis, professional development of personnel, administrative structure of divisions of vocational education in state departments of education, etc. It was truly

an exciting experience. The current career education thrust provides a somewhat comparable situation for a similar seminar experience.

Get your students personally introduced to the leaders in the field. Take them to professional meetings, state and national, and introduce them to the people involved in setting direction for the profession.

Now, let me recap hurriedly. There were some problems and concerns in my graduate program. These included: (1) failure to develop sufficient competence in such areas as evaluation methods and statistics; (2) frustration because of lack of being able to explore a new area by taking a single course. It was either a minor of nine to 12 hours or nothing; (3) internal personal conflict between getting it over as soon as possible and staying long enough to get the competence I thought was needed; (4) academic exercise of language requirement yielding few positive benefits and reducing time available for much higher priority items.

There were also many positive aspects. These included: (1) broadening of horizons in occupational education beyond state lines, beyond single program area, and beyond the professor himself; (2) significant personal and professional growth during graduate program; and (3) broader introduction to the people and the literature of occupational education.

My graduate program provided a tremendous experience for me. You can't sit at the feet of the Bob Taylor's, the Ralph Woodin's, the Ralph Bender's, the Bill Logan's, the John Ramseyer's, the Larkin's, the Mary Helen Haas', the Marie Dirks', the Bob Reese's, the Cayce Scarborough's, the Gerald James', the Selz Mayo's, etc. without it being so. They helped me to get that dream in my eye. It has served me well.

Second: Dr. Marjorie Jerry
Assistant Professor
Home Economics Education
Indiana State University
Terre Haute, Indiana

The task we face is a difficult one; and yet, I think we are attempting to fulfill one of the functions of the university, that of making graduate students be self-aware and continually inquiring into the state of their graduate program. When you go back to your offices, I think your powers of perception will be functioning at a little higher level than they were when you left. You're going to see things about your office and its operation that you didn't notice the week before you left. I think it's after this period of detachment that you do come to grips with some of the concerns or questions that you have.

Being the only woman on the panel, I exercise this prerogative by restructuring my comments a bit from the list of six questions. First, what is the purpose of this degree? Two, for whom was it designed? I will be speaking to you from my viewpoint as a woman in a doctoral program, and how pure should it be? I'd like to share with you the statement made by a foreign graduate student, in one of the curriculum seminars very near the end of my program, when he assessed the situation by saying that the only commodity for which the American people do not want their money's worth, is education. I've never quite been able to erase his comment from my mind. What was he really saying to us? It seems to me that I got my money's worth; now, as a teacher-educator, the question is--am I giving or contributing to the money's worth for those people with whom I work?

So first of all, I view the doctoral degree as being for the purpose of increasing the measure of excellence. The degree should be a qualitative one and not a quantitative one. I think major emphasis should be put on sustaining the intellectual power of students, rather than acquisition of facts. Now, let's look at a few needs that I felt as a teacher-educator; the things that I needed to know how to do. Dr. Clary has already mentioned communication, and I feel that I need real competency in communication, to use and to help others develop the ability to use. We need, in vocational-technical education, real depth in communication in order to be able to tell our story to people outside our area. I think we have to be perceptive in diagnosis. This is an area in which I feel I do have a measure of weakness. We have to be skilled in evaluation of subjective human development both cognitive and affective.

One could have dealt with the course work, per se, and I chose not to deal with it. You heard the informal aspects of the

curriculum mentioned by Dr. Clary. I feel, too, that this is a very strong part of the program. The curriculum at the doctorate level is made up of a variety of aspects of university life--the classes and the lectures, but in addition, the friendship groups, the honorary fraternities, the informal contacts with faculty, independent and rich reading, and ties to present and future professional position. At the time I did my program, I was already in the position that I currently hold, a teacher-educator at Indiana State University. I also feel that the presence of faculty members as models and examples was very important to me; but, the exposure to other peoples' life styles, which I received when I moved into graduate housing with my husband and two children, had a great impact on my university life.

If doctoral students change, now perhaps that's a poor choice of words, as doctoral students change, how much can be attributed to the impact of the formal parts of the curriculum and how much to the informal parts; I haven't had time to use that evaluation model yet. But, for teacher-educators, I stand firmly in support of the residency requirement for doctoral programs. I take strong issue with those programs which permit this requirement to be met with the commuting resident.

At the doctoral level, perhaps more than at any other level in higher education, there is this matter of self-selection of institutions. Now we have heard during the seminar, great emphasis that we are a credentializing society. I think we all share the view that our doctoral degrees are not a union card to competency. Another aspect of this question may be the purpose of the degree for teacher-educators. I think we need to take a look at the proportionate emphasis on preparation for teaching and preparation for research. You can read research in support of the fact that college and university professors tend to reflect the value system that was prevalent during their own program. Now, if we perpetuate the feeling that the greatest emphasis is on research and that the greatest status as it applies to teaching is when it's done at the graduate seminar level, you see what we are doing to our future student.

Now we face the pressure for promotion and status the same as anyone else. We are currently, on our campus, reviewing instrumentation for promotion and tenure. And within the recent weeks the proposed instrument came across our desks and it was oriented on a 10-point scale with six points for research. Now when you see that kind of rating, it certainly does tip the scales to one side. I do not want to discount the value of research for the teacher-educator; however, I do have some concerns about using the same program in preparing both researchers and teacher-educators. Might this practice produce fewer excellent, highly functioning people in both areas? I would say that a real strength for my own programs came from my adviser, particularly the director

of the dissertation. I felt at the end of this experience that this had been another type of learning experience (without undue pressure being put on this) which enabled me to contribute new knowledge. I feel this is the course of action that should be encouraged for teacher-educators, perhaps, saving the emphasis on the contribution of new knowledge for post-doctoral work. Fortunately, or unfortunately, one member of my committee expressed very strong views on this feeling and I'd like to share it with you. He said that he felt that at the doctorate level, there were very few dissertations that merited more than 100 pages of the writer's professional time or of the reader's professional time. Now, as a member of my committee, this had some influence on the way I approached this. You've read lots of dissertations from teacher education programs; how would you operationally state the quantity and the quality of these?

To date, the most serious weakness, I feel in relation to research, is the need for more experience in evaluating research. Currently, as I work in curriculum development, I have had real frustration in functioning as a change agent, in implementing the findings of research.

If the number and the kinds of doctoral degrees continue to proliferate, I feel strongly that we should give some attention to alternatives to research. If we hear so much about accountability, I think the dollars that are going into research, if there is not a product which is disseminated, or if there is not an educational change, is maybe an area or a prime target for investigation. A large time block is used for this in the doctoral program. For example, could this block be used more effectively for real experiences with a wider variety of cultural and ethnic groups? This would delay original research for post-doctoral work.

Now, let's turn to the question for whom is the degree designed? Here I would like to relate my comments primarily to women students. We hear a lot about manpower and womanpower. I'd like to coin a term, if I might, and call it "scholarpower"; now I'm not talking about intellectual snobbery, but I'm talking about that sustained intellectual power. I think if we do not include women in this classification that we will have lost a great deal of "scholarpower" that's available. And, I'm not a woman's lib person either. But, when the purposes of the degree have been assessed, then the abilities and background of the candidate, or the potential candidates, need to be reviewed. A very real strength of my program centered on this, and it was when I had the opportunity to demonstrate proficiency and move on without taking some of the basic program courses. We promote this philosophy of individualizing instruction at the public school level, and I feel strongly that we can have more of this at the doctoral level.

Closely related to this option to demonstrate proficiency for women, is the need for the degree to have a broad base of professional flexibility. To illustrate what I mean, I had been in three different types of positions related to teacher education--as a resident coordinator for secondary student teachers, as the traditional teacher-educator, and as a state coordinator for curriculum development. Now, I'd like to assure you, as Dr. Clary did, so you do not feel too badly about the products you're turning out, that I was not dismissed from any of these positions. But, the reason for my move, was following a husband who is also in higher education. Now, as I observe my fellowmen and women in this respect (this is not a research finding, it's a reflection), I think that men tend to move from position to position based upon an advancement in a closely related kind of position. I think women tend to move in the most nearly related occupation that's at the locus of their husband's employment. So in this respect for women there is a need for flexibility.

Another problem that faces women in doctoral education is discontinuity of attendance. Counseling and advisement are crucial; this is just a real strong point in my mind. I think we, in teacher education, have to come to grips that we are not going to learn all there is to know with a doctoral degree. I am not willing to say that the degree is failing if it does not include all the specifics. It is not a terminal degree, and I feel that the doctoral degree which is really not doing the job is the one that does not orient the graduate student for continuing education.

Now, let's turn briefly to the question of how pure should the doctoral degree be for vocational teacher-educators? I will return to my first major point--the purpose of the degree is for sustaining intellectual power. Now, my background as a vocational teacher-educator, probably differs from that of many of you in this room. I had vocational education at the undergraduate and at the master's degree levels. This was capped at the doctoral level with a more liberal degree in secondary education, higher education and sociology. Now, in home economics, we have for a long time been on the bandwagon that vocational home economics is general education for all boys and girls. When the consumer and homemaking aspect come into the picture along with occupational home economics, we spoke even louder. So, we face this question of vocational education versus general education, and I would heartily recommend on the educational continuum, from undergraduate to graduate to the doctoral degree, that somewhere there be this liberal segment included. I'm not sure where it should come for all people for this is an individual matter. From my rather narrow midwest background, I had to have some breadth and I wasn't ready for it earlier. I think it was right for me to do it at this level. It may not be right for everyone. But no one discipline holds all the wisdom.

Again, I would recommend for teacher-educators, who are going to be working as college or university faculty members, that some preparation in the organization and administration of institutions of higher education is important. We include this preparation in undergraduate education for those men and women who are going to work in elementary and secondary schools. Why not include it in the doctoral level for those of us who are going to function at the university level. It has been extremely valuable to me. If I could nonoperationally define the way I feel about the purity or the restrictiveness or the prescriptiveness of the degree, I would say that I found very valuable a program which permitted me to develop a sense of direction from the required foundations but also permitted me to retain some measure of integrity for organizational and educational synthesis. I think I have gone beyond the mere absorption of facts for I know where some of my deficiencies are. As yet I have not learned how to schedule my time and energy to investigate this post-doctoral study.

As a vocational teacher-educator, I'd like to paraphrase for you the words of Emerson, when he said, "It's amazing how much can be done if it doesn't matter who gets the credit," and I think that there is a message for us in this and that is that it's amazing how much we can contribute to the strength of the total educational program for all boys and girls if it doesn't matter who gets the credit.

Last week on our campus we had a conference on higher education and the changing society and one of our principal speakers was Dr. Lyman Glenny from California, and I wanted to share with you one of the trends he gave. Now, we know that in the 1970s, we are going to experience some cutbacks; but, he told us at this conference that he anticipates the greatest emphasis or concern in the 1970s will be on certificate programs and on vocational education. So I thought that was a real challenge to us. He went on to say, that in our search for relevance for students who are seeking vocational-technical degrees that students must be provided with opportunities for the kind of breadth liberal arts can give. Now, you've heard of selective hearing, I liked what he had to say so I heard that part.

I don't consider myself educated; probably the greatest dissatisfaction I feel is not with the program but is with me. If I point my finger at the doctoral program and say to it or to the people involved in it, you have not given me the competencies I need, there are three fingers pointing back at me. I am accountable to a considerable degree for what the program did or did not do. And as a teacher-educator, I think the same thing happens if I point my finger at you as the person whom I have helped to prepare; those three fingers are pointing back at me. I am accountable.

Third: Dr. Terry Puckett
Dean of Instruction
State Technical Institute
Memphis, Tennessee

As have the others I've been asked to reflect upon my advanced graduate preparation and relate to you the competencies which were acquired there and perhaps offer some suggestions for improvement of graduate programs which are aimed at preparing persons in vocational-technical education. Also, I was asked to identify competencies required in my present position as Dean of Instruction. To say the least I found this to be a very difficult task. First of all, because as most students do, I entered graduate school with some competencies already, since I had been functioning as dean for some three years, in addition to the other educational and industrial experiences which I had acquired. Secondly through the many formal and informal experiences obtained while in graduate school, it is difficult in many cases, to determine exactly where the seed for an idea or concept was first planted. However, there are four general areas, general competency areas which stand out.

It is evident to me that many specific competencies related to these areas were gained through my graduate preparation. These general areas are: (1) competencies related to a general awareness and better overall perspective of the many facets of vocational and technical education; (2) competencies related to an awareness of the various theories and principles and practices which have been proven and generally accepted in education today; (3) competencies related to awareness of new innovations in education, especially those related to curriculum and instruction; (4) competencies related to recognizing, initiating, interpreting, and evaluating action oriented research studies related to effective teaching-learning experiences and procedures. Competencies related to the above general areas are most important in my present position and my graduate work played a major role in their acquisition.

Now, some might question whether or not any competencies in these areas had really been acquired by me while in graduate school or whether maybe I was functioning under some sort of illusion. To help answer this question I would like to describe to you briefly a portion of the personnel evaluation and improvement process which we employ at the State Technical Institute of Memphis. Since this conference is concerned with such items as evaluation and accountability, perhaps, it will be doubly appropriate. First, we recognize that whether we like it or not, there are four groups within the institution who evaluate us. They are our students, our peers, our supervisors, and ourselves. With this in mind, a scheme was established whereby each of these groups was involved

in the personnel evaluation and improvement process. Consequently, within the instructional affairs area, each person from dean through instructor-aide is evaluated, up and down the ladder, by appropriate members of these various groups.

This portion of the evaluation is accomplished primarily through constructive questionnaires with statements selected primarily from the job description of the person being evaluated. Additional personal traits are also included in this instrument. The evaluation instrument for the dean of instruction consists of some 44 such statements which each of the 80 faculty members, including division heads and department heads are asked to complete. In a recent administration of this instrument, the faculty rated me very high in areas closely associated with several of the general competency areas mentioned previously where proficiency was directly related to my graduate program. They were: (1) assumes leadership in promoting instructional innovation; (2) develops and implements an effective program of orientation and in-service training for faculty; (3) maintains a continuous program of evaluation and improvement to sustain accreditation; and (4) provides leadership in developing and evaluating the curriculum. Now, I did not present these results in any way to be boastful, instead they are intended to identify for you, based upon the response of others, areas where graduate preparation seemingly was beneficial to me. There are many other competencies which I am certain were brought to fruition while in graduate school, either directly or indirectly, but these that I have mentioned seem to be the most evident.

The key to success in the program which I took at Ohio State was flexibility. There were recommended courses to be taken but none required. This allows the student and his program chairman to completely tailor a program to the needs and aspirations of that individual student. So many good prospective graduate students in education have been turned off by requirements which they thought were not necessary due to their work experience in education. This is primarily true in some areas of vocational and technical education where so many have not had formal education courses prior to their study at the graduate level. They find themselves having to take a number of prerequisites in undergraduate work first.

I would be remiss if I didn't give part of the credit for any success which I encountered while in graduate school to The Center for Vocational and Technical Education where I worked as a research associate. The work experiences and formal and informal encounters with leaders in the field, proved most rewarding and provided me with insights and experiences which cannot be measured.

In closing I would like to leave you with the following thoughts and considerations as you seek to improve your graduate programs. Some of these could be classified as means, some as

ends. They are: (1) incorporate into your program structure a flexibility which will allow you to meet the individual needs of your students; (2) consider the consolidation of those courses which transcend the traditional service areas into a unified program of vocational-technical education; (3) apply a systematic approach to the development, implementation, and refinement of both programs and individual courses, that is, employ the procedure of defining goals, seeking alternatives, implementing, evaluating, and revising on a continuous basis; (4) utilize the concepts of behavioral or learning objectives in your courses and make these available to your students. Further, one may want to utilize objectives not only in the formal course work, but in the planned internship experiences of your students.

The fifth point is to constantly assess the effectiveness of the teaching-learning experiences which you develop for your students and compare the results with the intent of the objectives towards which they are directed; (6) encourage directed independent study among your students in order that their specific interests may be fostered; (7) develop meaningful (objectives based) on-the-job internship experiences for your students which will relate to their needs and aspirations. This means you should consider new avenues of inter-institutional or agency relationships such as those with regional and specialized equipping agencies which could provide important learning experiences for your students. Number eight is to consider establishing program advisory committees with membership including practitioners in the various facets of vocational-technical education (including state and local level administrators, supervisors, researchers, and specialists, as well as university-based teacher-educators).

Number nine is to instill not only a general awareness of, but a working knowledge of, such concepts as instructional systems, evaluation models, and accountability practices in your students; (10) develop your curriculums around the job description and analysis of tasks to be performed by your graduates rather than local intuition; (11) devote more time to some of the more mundane and seemingly simple and straightforward tasks to be performed by your graduates, but which if not accomplished properly, may generate both inefficient and ineffective results for more complex tasks; (12) acquaint the students with the accountability factors and standards which may be applied to them in their position of employment. Finally, more effort should be devoted to the leadership aspects of his potential position, and consideration should be given to the use of content and expertise found outside the college of education, perhaps, in the social and behavioral science areas. I overall would just like to indicate that I feel that the program which I have taken at Ohio State has been very effective as far as I'm concerned, and as Marjorie Jerry mentioned, you certainly get out of it what you put into it.

APPENDICES

APPENDIX A

5th ANNUAL
NATIONAL VOCATIONAL-TECHNICAL
TEACHER EDUCATION SEMINAR

ASSESSMENT OF GRADUATE PROGRAMS

October 25-28, 1971
Sheraton-Biltmore Hotel
Atlanta, Georgia

MONDAY, OCTOBER 25

		Room
3:30-5:30 p.m.	Registration	Crystal Lounge
6:30-8:00 p.m.	Registration	Crystal Lounge
8:00 p.m.	Opening Session	Ballroom
	Presiding Anna M. Gorman	
	WELCOME Honorable Jimmy Carter Governor, State of Georgia	
	WELCOME Robert E. Taylor	
	PRESENTATION OF AWARDS Robert E. Taylor	
	ORGANIZATION OF THE SEMINAR Anna M. Gorman	
	KEYNOTE ADDRESS Philosophical Design for Graduate Programs in Vocational and Technical Education Gordon Swanson	

TUESDAY, OCTOBER 26

		Room
8:00-5:00 p.m.	Registration	Crystal Lounge
8:30 a.m.	First Session Presiding Darrell L. Ward	Ballroom
	The Evaluation of General Staff Officers Programs in the United States Army Ivan Birrer	
	The Evaluation of Management Level Training Programs at the A.T.&T. Company Richard J. Campbell	
10:00 a.m.	Coffee Break	Crystal Lounge
10:20 a.m.	Implications of the Models for Evaluation of Graduate Education Programs Doris E. Manning W. R. Miller J. A. Williams	Ballroom
11:45-1:30 p.m.	Lunch	
1:30 p.m.	Second Session Presiding William Hull	Ballroom
	Model for Evaluation of Graduate Programs in Vocational and Technical Education Robert Hammond	
	Group Activity Explanation Sid Borcher	
2:30 p.m.	Coffee Break	Crystal Lounge
2:50 p.m.	Discussion Sessions	
Group A:	Leader Aleene Cross	Seminar A, Arcade Level
Group B:	Leader Mary Helen Haas	Seminar B, Arcade Level
Group C:	Leader Margaret Johnson	Seminar C-D, Arcade Level
Group D:	Leader L. C. McDowell	Virginia Suite, 10th Floor
Group E:	Leader Steve Lucas	Florida Suite, 10th Floor
Group F:	Leader Mary Marks	Tennessee Suite, 10th Floor

Group G:	Leader Cas Heilman	Louisiana Suite, 10th Floor
Group H:	Leader Lucille Patton	Mississippi Suite, 10th Floor
Group I:	Leader Warren Meyer	Arkansas Suite, 10th Floor
Group J:	Leader Thomas White	Alabama Suite, 10th Floor

WEDNESDAY, OCTOBER 27

		Room
8:30-5:00 p.m.	Registration	Crystal Lounge
8:30 a.m.	Third Session Presiding Bud Miles	Ballroom
	Discussion Group Reports	
9:30 a.m.	Coffee Break	Crystal Lounge
9:50 a.m.	Accountability for Graduate Programs in Vocational and Technical Education Hal Landrith Carl Schaefer John Struck	Ballroom
11:30-1:30 p.m.	Lunch	
1:30 p.m.	Fourth Session Presiding Calvin J. Cotrell	Ballroom
	Group Activity Explanation Sid Borcher	
	Discussion Sessions	
Group A:	Leader Aleene Cross	Seminar A, Arcade Level
Group B:	Leader Mary Helen Haas	Seminar B, Arcade Level
Group C:	Leader Margaret Johnson	Seminar C-D, Arcade Level
Group D:	Leader L. C. McDowell	Virginia Suite, 10th Floor
Group E:	Leader Steve Lucas	Florida Suite, 10th Floor
Group F:	Leader Mary Marks	Tennessee Suite, 10th Floor
Group G:	Leader Cas Heilman	Louisiana Suite, 10th Floor
Group H:	Leader Lucille Patton	Mississippi Suite, 10th Floor
Group I:	Leader Warren Meyer	Arkansas Suite, 10th Floor
Group J:	Leader Thomas White	Alabama Suite, 10th Floor
3:00 p.m.	Coffee Break	Crystal Lounge
3:20 p.m.	Discussion Group Reports	Ballroom

4:20 p.m.	Rebuttal Hal Landrith Carl Schaefer John Struck	

THURSDAY, OCTOBER 28

8:30-11:00 a.m.	Registration	Crystal Lounge
8:30 a.m.	Fifth Session Presiding Edward Ferguson, Jr. Program Assessment by Recent Graduates Joseph R. Clary Marjorie Jerry Terry Puckett	Ballroom
9:30 a.m.	Coffee Break	Crystal Lounge
9:50 a.m.	A Design for Graduate Education Programs of the Future Jack A. Culbertson We Share With You Anna M. Gorman	Ballroom

APPENDIX B

FIFTH ANNUAL NATIONAL
VOCATIONAL-TEACHER EDUCATION SEMINAR

Program Participants

Dr. Joseph Arnold, Head
Division of Vocational, Technical and Adult Education
Florida International University
Miami, FL 33144

Dr. Ivan J. Birrer
College's Educational Advisor
U.S. Army Command and General Staff College
Department of the Army
Fort Leavenworth, KS 66027

Dr. Sid Borcher
Research and Development Specialist
The Center for Vocational and Technical Education
The Ohio State University
Columbus, OH 43210

Dr. Richard J. Campbell
Division of Personnel Research
American Telephone and Telegraph Company
New York, NY 10007

The Honorable Jimmy Carter
Governor
State of Georgia
Atlanta, GA 30334

Mr. Joseph F. Clark
Research Associate
The Center for Vocational and Technical Education
The Ohio State University
Columbus, OH 43210

Dr. Joseph R. Clary
Executive Director
State Advisory Council on Vocational Education
Raleigh, NC 27607

Dr. Calvin Cotrell
Research and Development Specialist
The Center for Vocational and Technical Education
The Ohio State University
Columbus, OH 43210

Dr. Aleene Cross
Professor and Chairman
Home Economics Education
College of Education
The University of Georgia
Athens, GA 30601

Dr. Jack A. Culbertson
Executive Director
Council on Education Administration
College of Education
The Ohio State University
Columbus, OH 43221

Dr. Edward Ferguson, Jr.
Research and Development Specialist
The Center for Vocational and Technical Education
The Ohio State University
Columbus, OH 43210

Dr. Anna M. Gorman
Research and Development Specialist
The Center for Vocational and Technical Education
The Ohio State University
Columbus, OH 43210

Dr. Mary Helen Haas
Head, Home Economics Education
Department of Vocational Education
Colorado State University
Ft. Collins, CO 80521

Dr. Robert L. Hammond
Professor of Education
Evaluation Officer
Center of Advanced Study of Educational Administration
University of Oregon
3666 Vine Maple
Eugene, OR 97485

Dr. Cas Heilman
Assistant Professor
Vocational Education
Oregon State University
Corvallis, OR 97331

Dr. William Hull
Research and Development Specialist
The Center for Vocational and Technical Education
The Ohio State University
Columbus, OH 43210

Dr. Marjorie Jerry
Home Economics Education
Department of Home Economics
Indiana State University
Terre Haute, IN 47809

Dr. Margaret H. Johnson
Professor, Business Teacher Education
Teachers College
University of Nebraska
Lincoln, NE 68508

Dr. Harold Landrith
Dean
College of Education
Clemson University
Clemson, SC 29631

Dr. Steve Lucas
Teacher-Educator
Distributive Education
University of North Carolina at Greensboro
Greensboro, NC 27420

Dr. Doris E. Manning
Professor and Chairman
Division of Home Economics Education
University of Arizona
Tucson, AZ 85721

Miss Mary V. Marks
Education Program Specialist
Teacher Education Program Development
U.S. Office of Education, DVTE
Washington, DC 20202

Dr. James D. McComas
Dean, College of Education
University of Tennessee
Knoxville, TN 37916

Dr. L. C. McDowell
Professor, Trade and Industrial Education
Department of Vocational Education
University of Kentucky
Lexington, KY 40506

Dr. Warren Meyer
Professor, College of Education
University of Minnesota
130 Peik Hall
Minneapolis, MN 55455

Dr. Bud Miles
Assistant Professor
Distributive Education
School of Business and Economics
The University of North Carolina at Greensboro
Greensboro, NC 27420

Dr. A. J. Miller
Project Director
CCEM Project
The Center for Vocational and Technical Education
The Ohio State University
Columbus, OH 43210

Dr. W. R. Miller
Chairman, Department of Vocational Education
The University of Missouri
Columbia, MO 65201

Mr. George Mullins
State Director
Vocational and Technical Education
State Department of Education
Atlanta, GA 30334

Mr. Don Neff
EPDA Student
The Center for Vocational and Technical Education
The Ohio State University
Columbus, OH 43210

Dr. Lucille W. Patton
Distributive Education
Central State University
Edmond, OK 73034

Dr. Terry Puckett
Dean of Instruction
State Technical Institute at Memphis
Memphis, TN 38128

Dr. Carl J. Schaefer
Professor
Department of Vocational Education
Rutgers University
New Brunswick, NJ 08903

Dr. John W. Struck
State Director
Vocational Education
Department of Public Instruction
Harrisburg, PA 17126

Dr. Gordon Swanson
Professor and Coordinator
International Education
University of Minnesota
Minneapolis, MN 55455

Dr. Robert E. Taylor
Director
The Center for Vocational and Technical Education
The Ohio State University
Columbus, OH 43210

Dr. Darrell L. Ward
Coordinator
Product Utilization and Training
The Center for Vocational and Technical Education
The Ohio State University
Columbus, OH 43210

Dr. Thomas White
Coordinator
Vocational Education Program Area
School of Education
Indiana University
Bloomington, IN 47401

Dr. J. A. Williams
Dean
College of Education
The University of Georgia
Athens, GA 30601

APPENDIX C

FIFTH ANNUAL NATIONAL VOCATIONAL-TEACHER EDUCATION SEMINAR

Seminar Participants

ALABAMA

William H. Armstrong
Director of Vocational Program
University of Alabama
1919 7th Avenue South
Birmingham, AL 35233

Edwin L. Kurth
Professor
Vocational and Adult Education
Auburn University
Auburn, AL 36830

R. W. Montgomery
Professor and Head
Vocational and Adult Education
School of Education
Auburn University
Auburn, AL 36830

Nathaniel A. Sheppard
Teacher-Educator
Tuskegee Institute
Tuskegee, AL 36088

George T. Stephens
Associate Professor, Vocational Education
University of Alabama
P.O. Box 6243
University, AL 35486

Alford Stone
Head, Teacher-Educator
Alabama A&M University
P.O. Box 351
Normal, AL 35762

Vera P. Tisdale
Teacher Education
The University of Alabama
P.O. Box 795
University, AL 35486

ALASKA

James E. Squyres
Vocational Teacher-Educator
University of Alaska
R.R. 4, Box 4135
Juneau, AK 99801

ARIZONA

Carl R. Bartel, Professor
Industrial Technical Education
Division of Technology
Arizona State University
Tempe, AZ 85281

Doris E. Manning, Chairman
Home Economics Education
The University of Arizona
Tucson, AZ 85721

ARKANSAS

Ava A. Gray
Teacher-Educator
University of Arkansas
Fayetteville, AR 72701

John A. Rolloff
Associate Professor, Department of Vocational Education
University of Arkansas
Fayetteville, AR 72701

CALIFORNIA

Melvin L. Barlow, Professor
Division of Vocational Education
University of California at Los Angeles
131 Moore Hall
405 Hilgard Avenue
Los Angeles, CA 90024

James W. Becket
Coordinator of Professional Development
State Department of Education
721 Capitol Mall
Sacramento, CA 95814

Nancy Goff
Administrative Assistant
University of California at Los Angeles
131 Moore Hall
405 Hilgard Avenue
Los Angeles, CA 90024

COLORADO

Duane L. Blake
Professor and Head
Vocational Education Department
Colorado State University
Fort Collins, CO 80521

Mary Helen Haas, Head
Home Economics Education
Department of Vocational Education
Colorado State University
Fort Collins, CO 80521

M. G. Hunt
Assistant State Director
Vocational Education
Board for Community Colleges and Occupational Education
State Vocational Building
Denver, CO 80209

Louise J. Keller
Director/Chairman
Department of Vocational Education
University of Northern Colorado
Greeley, CO 80631

Thomas P. Terry, Head
Trade and Industrial Teacher Trainer
Department of Vocational Education
Colorado State University
Fort Collins, CO 80521

CONNECTICUT

Barbara L. Osborn
Assistant Professor
School of Education, U-93
University of Connecticut
Storrs, CT 06268

DELAWARE

Daniel E. Koble, Jr.
Director, Career Education Division
John G. Townsend Building
Dover, DE 19901

DISTRICT OF COLUMBIA

Addison S. Hobbs, Director
Bachelor of Science Degree Program in Teaching of Technology
Washington Technical Institute
4100 Connecticut Avenue, NW
Washington, DC 20008

Andrea Love
Curriculum Specialist
Bachelor of Science Degree
Program in Teaching of
Technology
Washington Technical Institute
4100 Connecticut Avenue, NW
Washington, DC 20008

Mary V. Marks
Education Program Specialist
Teacher Education Program
Development
U.S. Office of Education, DVTE
7th and D Streets, NW
Washington, DC 20202

Robert McKee
Part F Coordinator
Washington Technical Institute
4100 Connecticut Avenue, NW
Washington, DC 20008

Frank L. Perazzoli
Education Program Specialist
U.S. Office of Education
7th and D Streets SW
Washington, DC 20202

FLORIDA

Earl C. Fowler
Associate Professor
Vocational-Technical Education
Department of Education
Florida Technological University
P.O. Box 25000
Orlando, FL 32816

Roger W. Haskell
Associate Professor
Vocational Education Division
The Florida State University
904 Wildwood Drive
Tallahassee, FL 32306

James W. Hensel
Professor and Chairman
Department of Vocational,
Technical and Adult Education
College of Education
University of Florida
186 Norman Hall
Gainesville, FL 32601

Agnes F. Ridley, Professor
Home Economics Education
School of Home Economics
The Florida State University
110 Sandels
Tallahassee, FL 32306

Carlos Schmitt
Instructor
School of Education
Florida International University
Tamiami Trail
Miami, FL 33144

Thomas W. Strickland
Administrator
Florida Department of Education
Knott Building
Tallahassee, FL 32304

GEORGIA

Lloyd H. Blanton
Assistant Professor
Teacher Education
University of Georgia
Athens, GA 30601

Fannie Lee Boyd
Associate Professor of Education
University of Georgia
604 Aderhold Hall
Athens, GA 30601

Jack Crosby
Instructor
University of Georgia
217 Fain Hall
Athens, GA 30601

Aleene Cross
Professor and Head, Home
Economics Education
University of Georgia
604 Aderhold Hall
Athens, GA 30601

D. L. Karr
Assistant Professor
Teacher-Educator
University of Georgia
Athens, GA 30601

Mary Elizabeth Milliken
Division of Vocational Education
College of Education
University of Georgia
Athens, GA 30601

Marvin Robertson
Evaluation
University of Georgia
603B Aderhold Hall
Athens, GA 30601

Earl B. Russell
Assistant Professor
College of Education
University of Georgia
Athens, GA 30601

Lloyd W. Tindall
Vocational Education
University of Georgia
220 Fain Hall
Athens, GA 30601

J. A. Williams, Dean
College of Education
University of Georgia
Athens, GA 30601

HAWAII

Lawrence F. H. Zane
Associate Professor
University of Hawaii
1776 University Avenue
Honolulu, HI 96822

IDAHO

Kenneth Ertel
Department of Vocational
Education
College of Education
University of Idaho
Moscow, ID 83843

ILLINOIS

Patricia Patsloff
Business Division
Southern Illinois University
Edwardsville, IL 62025

INDIANA

Tali A. Conine
Associate Professor
Indiana University
1100 W. Michigan Street
Indianapolis, IN 46202

Edgar E. Clanin
Associate Professor
Agricultural Education
Purdue University
309 Highland Drive
W. Lafayette, IN 47906

James H. Dekker
Teacher Trainer
State of Indiana
Kewanna, IN 46939

James W. Fair
Graduate Student
Indiana University
908 Redbud Hill Apartments
Bloomington, IN 47401

Gordon E. Ferguson
Teacher Trainer
Indiana State Department
of Public Instruction
Evansville, IN 47711

William Graham
Coordinator
Monroe County Schools
Banta F-102
Bloomington, IN 47401

Lester W. Hale
Professor
Indiana State University
Terre Haute, IN 47809

Robert C. Harris
Assistant Professor
School of Education
Indiana University
Bloomington, IN 47401

Marjorie C. Jerry
Assistant Professor
Department of Home Economics
Indiana State University
Terre Haute, IN 47809

Phyllis K. Lowe, Professor
Home Economics Education
Purdue University
South Campus F
Lafayette, IN 47907

Richard L. Lynch
Teacher-Educator
Indiana University
223 South Jordan
Bloomington, IN 47401

William Middleton
Professor of Industrial Education
Ball State University
400 Alden Road
Muncie, IN 47304

Kenneth Stump
Professional Development
O.S.P.I. Indiana
Corunna, IN 46730

Margil Vanderhoff
Associate Professor, Home Economics
204 Wylie Hall
Indiana University
Bloomington, IN 47401

Arthur W. Ward
Graduate Student
Indiana University
890 Eigenmen
Bloomington, IN 47401

Thomas White, Coordinator
Vocational Education Program Area
School of Education
Indiana University
Bloomington, IN 47401

IOWA

William E. Luck
Director
Technical Education
University of Northern Iowa
Cedar Falls, IA 50613

Jack C. Reed
Teacher-Educator
Business Education Department
University of Northern Iowa
Cedar Falls, IA 50613

KANSAS

Ivan J. Birrer
College's Educational Advisor
U.S. Army Command and General Staff College
Department of the Army
Fort Leavenworth, KS 66027

Robert G. Meisner, Head
Department of Adult and Occupational Education
Kansas State University
103 Holton
Manhattan, KS 66502

KENTUCKY

Harold R. Binkley
Chairman
Department of Vocational Education
College of Education
University of Kentucky
Lexington, KY 40505

Grace Calloway
Teacher-Educator
Home Economics and Family Living
Western Kentucky University
Bowling Green, KY 42101

Jeff Crisp, Jr.
Teacher-Educator
Trade and Industrial Education
Western Kentucky University
Bowling Green, KY 42101

Bernard T. Fagan
Teacher-Educator
College of Education
University of Kentucky
Lexington, KY 40506

Vincent J. Feck
Assistant Professor of Occupational Education
College of Education
Western Kentucky University
Office No. 403C
Bowling Green, KY 42101

Carl E. Hurley, Coordinator
Teacher Education
State Department of Education
Bureau of Vocational Education
State Office Building
Frankfort, KY 40601

L. C. McDowell
Teacher-Educator
Trade and Industrial Education
College of Education
University of Kentucky
Lexington, KY 40506

Floyd L. McKinney
Assistant Professor
Research Coordinating Unit
University of Kentucky
152 Taylor Education Building
Lexington, KY 40506

Charles Ray
Teacher-Educator
Business and Office Education
Western Kentucky University
Bowling Green, KY 42101

Lucile Stiles
Teacher-Educator
Home Economics and Family Living
Western Kentucky University
Bowling Green, KY 42101

Pauline Waggener
Home Economics Teacher-Educator
Murray State University
Murray, KY 42071

Donald Wendt
Teacher-Educator
Industrial Education
Western Kentucky University
Bowling Green, KY 42101

T. A. Zimmer
Teacher Trainer
Western Kentucky University
103 Snell Hall
Bowling Green, KY 42101

MARYLAND

Theodore F. Rybka
Specialist
Vocational Education Division
The Baltimore City Public Schools
2330 St. Paul Street
Baltimore, MD 21218

Kinsey Green
Teacher-Educator
Home Economics Education
College of Education
University of Maryland
College Park, MD 20742

Louise Lemmon
Teacher-Educator
Home Economics Education
University of Maryland
College Park, MD 20742

Joseph F. Luetkemeyer, Professor
Department of Industrial Education
University of Maryland
College Park, MD 20742

Kenneth Stough
Associate Professor
Industrial Education Department
University of Maryland
College Park, MD 20742

MASSACHUSETTS

William F. Carroll
Director of Staff Training and Development
New England Resource Center for Occupational Education
55 Chapel Street
Newton, MA 02160

MICHIGAN

Willard M. Bateson
Professor of Industrial Education
College of Education
Wayne State University
Detroit, MI 48202

Albert W. Belskus
Assistant Professor of Business Education
Eastern Michigan University
Ypsilanti, MI 48197

Margaret Jane Brennan
Teacher-Educator
Western Michigan University
Kalamazoo, MI 49001

George E. Kohrman, Dean
School of Applied Arts and Sciences
Western Michigan University
Kalamazoo, MI 49001

Paul Kuwik
Assistant Professor
Department of Industrial Education
Eastern Michigan University
Ypsilanti, MI 48197

Emmett Mason
Associate Professor
Department of Industrial Education
Central Michigan University
Mount Pleasant, MI 48858

Russell Lee Ogden
Professor of Business
Eastern Michigan University
Ypsilanti, MI 48197

Rex E. Ray
Associate Professor
Vocational-Technical Education
Michigan State University
330 Erickson Hall
East Lansing, MI 48823

H. James Rokusek
Professor
Department of Industrial Education
Eastern Michigan University
Ypsilanti, MI 48197

Richard Warner, Professor
Teacher Education
Ferris State College
Big Rapids, MI 49307

MINNESOTA

William A. Kavanaugh
Professor
Industrial Education Department
University of Minnesota
Minneapolis, MN 55455

Warren G. Meyer
Professor
College of Education
University of Minnesota
130 Peik Hall
Minneapolis, MN 55455

Gordon I. Swanson
Professor and Coordinator
International Education
University of Minnesota
Minneapolis, MN 55455

MISSISSIPPI

Marjorie Savage, Head
Department of Home Economics
Mississippi State College for Women
P.O. Box 1310
Columbus, MS 37901

MISSOURI

Beverly Crabtree
Associate Professor and Coordinator of Home Economics Education
University of Missouri
107 Gwynn Hall
Columbia, MO 65201

K. C. Kazanas
Associate Professor
University of Missouri
103 Industrial Education Building
Columbia, MO 65201

Frank Milton Miller
Assistant Professor
Industrial Education
University of Missouri
111 Industrial Education Building
Columbia, MO 65201

W. R. Miller, Chairman
Department of Vocational Education
College of Education
University of Missouri
Columbia, MO 65201

NEBRASKA

Margaret H. Johnson, Professor
Business Teachers Education
Teachers College
University of Nebraska
Lincoln, NE 68508

NEVADA

Ivan E. Lee
Teacher-Educator
College of Education
University of Nevada
Reno, NV 89507

NEW HAMPSHIRE

Richard L. Barker
Director of Professional Development
Vocational-Technical Division
Stickney Avenue
Concord, NH 03301

NEW JERSEY

Dorothy S. Anderson, Director
Center for Occupational Education
Jersey City State College
Jersey City, NJ 07305

Irving E. Bach, Coordinator
Vocational Teacher Education
Glassboro State College
Glassboro, NJ 08028

Kenneth R. Clay
Vice Provost for Academic Affairs
Glassboro State College
Glassboro, NJ 08028

Charles R. Doty
Adviser in Technical Education
Rutgers University
27 Dexter Road
East Brunswick, NJ 08903

Charles C. Drawbaugh
Professor and Chairman
Department of Vocational-Technical Education
Rutgers University
10 Seminary Place
New Brunswick, NJ 08903

Roger L. Gustafson
Vocational Teacher-Educator
Glassboro State College
Glassboro, NJ 08028

Anthony W. Hantjis, Director
Division of Business
Trenton State College
P.O. Box 940
Trenton, NJ 08625

Elaine W. House
Assistant Professor
Rutgers University
10 Seminary Place
New Brunswick, NJ 08903

William Kistler
Supervisor, CIE
State Division of Vocational Education
Trenton, NJ 08625

Gordon F. Law, Chairman
Department of Urban Education
Rutgers University
22 Huntington Street
New Brunswick, NJ 08903

Carl J. Schaefer
Professor
Department of Vocational Education
Rutgers University
New Brunswick, NJ 08902

Morton Shenker, Coordinator
Distributive Education
Trenton State College
Pennington Road
Trenton, NJ 08625

Peter Yacyk
Chairman, Graduate Division
Rider College
Trenton, NJ 08602

NEW MEXICO

Lowery H. Davis
Dean, Continuing Education
New Mexico State University
Box 3446
Las Cruces, NM 88001

NEW YORK

Richard J. Campbell
Division of Personnel Research
American Telephone and Telegraph Company
New York, NY 10007

F. June Clarke, Professor
Home Economics Education
State University College at Buffalo
178 Allenhurst Road
Buffalo, NY 14226

James E. McCann
Coordinator, EPDA-F
New York State Education Department
99 Washington Avenue
Albany, NY 12210

Julius Paster
Program Head
Occupational Education
The City College
Klapper Hall - 303
Convent Avenue at 138th Street
New York, NY 10031

William S. Reynolds
Director of Vocational-Technical Education
State University College
1300 Elmwood Avenue
Buffalo, NY 14222

Irene von Cseh
Assistant Professor
Hunter College of the City University of New York
New York, NY 10021

NORTH CAROLINA

A. P. Bell, Head
Teacher-Educator
North Carolina A&T State University
Greensboro, NC 27411

Joseph R. Clary
Executive Director
State Advisory Council on Vocational Education
P.O. Box 5312
Raleigh, NC 27607

Jean Cooper, Chairman
Department of Home Economics
North Carolina Central University
Durham, NC 27707

Durwin M. Hanson
Trade and Industrial Education
North Carolina State University
502 Poe Hall
P.O. Box 5096
Raleigh, NC 27607

Mathilde Hardaway
Professor
University of North Carolina at Greensboro
Greensboro, NC 27419

Laura J. Little
Assistant Professor
School of Home Economics
East Carolina University
Box 2743
Greenville, NC 27834

Steve Lucas
Teacher-Educator, Distributive Education
University of North Carolina at Greensboro
Greensboro, NC 27420

Benton E. Miles
Teacher-Educator, School of Business and Economics
University of North Carolina at Greensboro
Greensboro, NC 27420

Texton Robert Miller
Associate Professor
North Carolina State University
Room 510 Poe
Raleigh, NC 27607

Miriam B. Moore, Dean
School of Home Economics
East Carolina University
P.O. Box 2743
Greenville, NC 27834

Vila Rosenfield
Chairman, Home Economics Education
East Carolina University
Greenville, NC 27834

NORTH DAKOTA

Donald Priebe, Chairman
Department of Agricultural Education
North Dakota State University
State University Station
Fargo, ND 58102

OHIO

Ralph E. Bender
Professor and Chairman
Department of Agricultural Education
The Ohio State University
2120 Fyffe Road
Columbus, OH 43210

Joseph F. Clark
Research Associate
The Center for Vocational and Technical Education
The Ohio State University
1900 Kenny Road
Columbus, OH 43210

Sidney Borcher
Research and Development Specialist
The Center for Vocational and Technical Education
The Ohio State University
1900 Kenny Road
Columbus, OH 43210

Calvin J. Cotrell
Research and Development Specialist
The Center for Vocational and Technical Education
The Ohio State University
1900 Kenny Road
Columbus, OH 43210

Jack A. Culbertson
Executive Director
Council on Education Administration
College of Education
The Ohio State University
Columbus, OH 43210

Edward Ferguson, Jr.
Research and Development Specialist
The Center for Vocational and Technical Education
The Ohio State University
1900 Kenny Road
Columbus, OH 43210

Anna M. Gorman
Research and Development Specialist
The Center for Vocational and Technical Education
The Ohio State University
1900 Kenny Road
Columbus, OH 43210

William Hull
Research and Development Specialist
The Center for Vocational and Technical Education
The Ohio State University
1900 Kenny Road
Columbus, OH 43210

William E. Jennings, Professor
Vocational and Technical Education
The Ohio State University
288 Arps Hall
1945 N. High Street
Columbus, OH 43210

Warren L. Lasell
Research and Development Specialist
The Center for Vocational and Technical Education
The Ohio State University
1900 Kenny Road
Columbus, OH 43210

Ralph Orr
Assistant Professor
Vocational-Technical Education
The Ohio State University
1885 Neil Avenue
Columbus, OH 43210

Robert M. Reese
Chairman
Vocational-Technical Education
The Ohio State University
1885 Neil Avenue
Columbus, OH 43210

Robert E. Taylor, Director
The Center for Vocational
and Technical Education
The Ohio State University
1900 Kenny Road
Columbus, OH 43210

Darrell L. Ward
Coordinator
Product Utilization and
Training
The Center for Vocational
and Technical Education
The Ohio State University
1900 Kenny Road
Columbus, OH 43210

OKLAHOMA

Leroy Overstreet, Director
Health Occupation Education
Central State University
Thatcher Offices
Edmond, OK 73034

Lucille W. Patton
Teacher Education
Distributive Education
Central State University
Edmond, OK 73034

Walter L. Starks
Assistant Professor
Distributive Education
Oklahoma State University
Stillwater, OK 74074

OREGON

Robert L. Hammond
Professor and Evaluation
Officer
Center for Advanced Study of
Educational Administration
University of Oregon
Eugene, OR 97485

Cas Heilman
Assistant Professor
Vocational Education
Oregon State University
Corvallis, OR 97331

PENNSYLVANIA

George L. Brandon
Professor, Vocational Education
Pennsylvania State University
257 Chambers Building
University Park, PA 16802

Seymour T. Brantner
Associate Professor
Pennsylvania State University
246 Chambers Building
University Park, PA 16802

Theodore J. Cote
Chairman
Department of Industrial
Education
Temple University
Philadelphia, PA 19122

John W. Struck
State Director of Vocational
Education
State Department of Public
Instruction
Box 911
Harrisburg, PA 17126

RHODE ISLAND

Edward Duffy
Assistant Principal
Vocational Technical School
of Rhode Island
Corliss Park, Providence, RI
02908

Patricia M. Kelly
Associate Professor
Home Economics Education
University of Rhode Island
100 Quinn Hall
Kingston, RI 02881

SOUTH CAROLINA

Robert T. Benson
Assistant Professor
Vocational Education Media
Center
Clemson University
109 Freeman Hall
Clemson, SC 29631

Francis A. Bosdell
Assistant Teacher-Educator
Department of Industrial
Education
Clemson University
Clemson, SC 29631

W. C. Bowen
Teacher-Educator
Clemson University
Clemson, SC 29631

Verner Burkett
Assistant Professor
Vocational Education Media
Center
Clemson University
Freeman Hall
Clemson, SC 29631

Earl T. Carpenter, Head
Department of Agricultural
Education
Clemson University
Clemson, SC 29631

Sam W. Greer
Assistant Professor
Business and Distributive
Education
Winthrop College
Rock Hill, SC 29730

J. Alex Hash
Associate Professor
Department of Agricultural
Education
Clemson University
Clemson, SC 29631

Harold F. Landrith, Dean
College of Education
Clemson University
Clemson, SC 29631

A. E. Lockert, Jr., Dean
School of Industrial Education
and Engineering Technology
South Carolina State College
Box 1992
Orangeburg, SC 29115

Alfred F. Newton
Head Teacher-Educator
Department of Industrial
Education
Clemson University
Clemson, SC 29631

Henry V. Thompson
Teacher-Educator
South Carolina State College
Box 2048, State College
Orangeburg, SC 29115

SOUTH DAKOTA

Howard W. Nichelson
Teacher-Educator
University of South Dakota
at Springfield
Springfield, SD 57062

TENNESSEE

Donald C. Baucom
Graduate Student
University of Tennessee
Box 323
2117 Andy Holt Drive
Knoxville, TN 37916

Garry R. Bice, Director
Tennessee Research Coordinating Unit
College of Education
The University of Tennessee
909 Mountcastle Street
Knoxville, TN 37916

Marquita Irland, Chairman
Department of Home Economics
Memphis State University
Memphis, TN 38111

Nell P. Logan
Professor and Head
Home Economics Education
University of Tennessee
Knoxville, TN 37916

Clarence Maze, Jr.
Professor of Business Education
University of Tennessee
Knoxville, TN 37916

Roy K. Norris
EPDA Fellow
College of Education
University of Tennessee
Knoxville, TN 37916

C. Edwin Pearson, Chairman
Distributive Education Department
Memphis State University
101 Education Building
Memphis, TN 38111

Terry J. Puckett
Dean of Instruction
Memphis State Technical Institute
5983 Macon Cove
Memphis, TN 38128

Charles E. Reigel
Chairman, Office Administration
College of Business Administration
Memphis State University
Memphis, TN 38111

George Vanover
EPDA Fellow
College of Education
University of Tennessee
Knoxville, TN 37916

Juanita Wallace
EPDA Fellow
College of Education
University of Tennessee
Knoxville, TN 37916

George W. Wiegers, Jr.
Head, Agricultural Education
University of Tennessee
308 Morgan Hall
Knoxville, TN 37916

Bettye G. Zinn
Graduate Student
College of Education
University of Tennessee
Knoxville, TN 37916

TEXAS

Janie West Cotton, Head
Department of Home Economics
Texas Southern University
3201 Wheeler Avenue
Houston, TX 77004

Murl Dunahoo
Teacher-Educator
Secondary and Higher Education Department
East Texas State University
Commerce, TX 75428

Lewis Eggenberger
Teacher-Educator
Department of Agricultural Education
Texas Tech University
P.O. Box 4169
Lubbock, TX 79409

Webb Jones
Professor
Secondary and Higher Education Department
East Texas State University
Commerce, TX 75428

Eddye Landers
Assistant Professor
College of Home Economics
Texas Tech University
P.O. Box 4170
Lubbock, TX 79409

Ben F. Teague
EPDA Coordinator
Texas Education Agency
201 E. 11th Street
Austin, TX 78701

Darrel F. Tilton
Teacher-Educator
Secondary and Higher Education Department
East Texas State University
Commerce, TX 75428

UTAH

Lloyd W. Bartholome
Associate Professor and Director of Graduate Programs in Business Education
Utah State University
University Hall
Logan, UT 84321

Gilbert A. Long
Department Head
Agricultural Education
Utah State University
Logan, UT 84321

Neill Slack
Utah State University
Logan, UT 84321

VIRGINIA

Dewey A. Adams
Professor of Education
Virginia Polytechnic Institute and State University
2123 Derring
Blacksburg, VA 24060

Howard G. Ball
Director of Graduate Studies in Distributive Education
Virginia Commonwealth University
901 W. Franklin Street
Richmond, VA 23220

Marvin A. Fields, Chairman
Agricultural Education
Virginia State College
Petersburg, VA 23803

Ardyce S. Lightner
Chairman, Department of Business
Radford College
Box 574
Radford, VA 24141

G. Dean Palmer
Associate Professor
Distributive Education
Virginia Polytechnic Institute and State University
Blacksburg, VA 24061

WASHINGTON

Mike A. Madison
Associate Professor
Business Education and Administration Management
Central Washington State College
217 Smyser
Ellensburg, WA 98926

WEST VIRGINIA

George D. Culnon
Assistant Professor
Vocational-Technical Education
Marshall University
Huntington, WV 25701

Robert B. Hayes, Dean
Teachers College
Marshall University
Huntington, WV 25701

☆ U.S. GOVERNMENT PRINTING OFFICE: 1972— 755-488