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ABSTRACT

The proceedings of this seminar, attended by state directors and other leaders in vocational and technical education from 41 states, the District of Columbia, Saipan and Puerto Rico, contain presentations by 18 leaders from industry, government, and education. Specific objectives were to: (1) provide a forum for presentations concerning personnel development, (2) explore and study existing and innovative tools, processes, and systems, (3) conceptualize a model plan, and (4) provide for professional development. Presentations include: (1) "A Rationale for Comprehensive Personnel Development in a State" by Carl Shaefer, (2) "An Industrial Corporation's Approach to Personnel Development" by Robert G. Pecka. (3) Performance Based Teacher Education" by Calvin J. Cottrell, (4) "A Performance Base for Staff Differentiation" by Frank C. Pratzner, (5) "Management by Objectives and Personnel Development in Ohio" by Byrl R. Shoemaker, (6) "Internship and Its Role in Personnel Development" by David Bjorkquist, (7) "Simulation Training Materials for Vocational Education Leadership Development" by Darrell L. Ward, (8) "Exemplary Programs--Highway Safety Occupations" by Ronald D. Daugherty, and (9) "The Delivery System for Personnel Development" by Milton Schwebel. (GEB)

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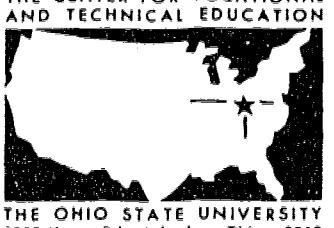
tional Leadership Development Seminar

State Directors of Vocational Education

# Comprehensive Personnel Development For Vocational-Technical Education


THE CENTER FOR VOCATIONAL AND TECHNICAL EDUCATION



THE OHIO STATE UNIVERSITY
1900 Kenny Rd., Columbus, Ohio, 43210

LEADERSHIP TRAINING SERIES NO. 34

## 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 TRAINING SERIES NO. 34

# FOURTH ANNUAL NATIONAL LEADERSHIP DEVELOPMENT SEMINAR FOR STATE DIRECTORS OF VOCATIONAL EDUCATION

*Comprehensive Personnel Development for Vocational-Technical Education*

Compiled and Edited by

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1972

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U.S. DEPARTMENT OF
HEALTH, EDUCATION AND WELFARE

Office of Education
National Center for
Educational Research
and Development

# PREFACE

The Center was pleased to respond to the National Association of State Directors of Vocational Education's request to conduct the Fourth National Leadership Development Seminar for Directors of Vocational Education and to work with their planning committee in structuring this annual meeting.

The continued expansion and ever-changing focus and direction of occupational preparation in America's public and proprietary schools made the theme of this year's seminar, "Comprehensive Personnel Development For Vocational-Technical Education," an urgent and timely topic. Past years' seminars have focused on planning as a critical aspect of state management. Building on understandings and competencies developed during previous seminars the association's planning committee and The Center were anxious to provide continuity and momentum to vocational education leadership development by focusing the 1971 seminar on this integral topic.

Specific objectives of this Seminar were:

1. To provide a forum for presentations and discussions concerning personnel development leading to better conceptualization of the problem, identification of the needs in personnel development, and determination of responsibilities and functions of SDVE staffs regarding this problem.

2. To explore and study existing and innovative tools, processes, and systems useful in personnel development.

3. To conceptualize a model state plan for personnel development which will be useful in developing a state's personnel development plan and programs.

4. To provide an opportunity for professional development to state directors of vocational education and key members of their staffs.

It was heartening to witness the intense interest, enthusiastic participation and effective contributions made by the state directors and other leaders in vocational and technical education from 41 states, the District of Columbia, Saipan and Puerto Rico. This seminar's proceedings contain the presentations of 18 national leaders from industry, government, and education. We trust

that it may provide significant information for states interested in initiating, implementing, upgrading, and/or stimulating professional personnel development in vocational and technical education.

Recognition is due Dr. Darrell L. Ward, Coordinator of Product Utilization and Training, and Edward N. Kazarian, Research Associate at The Center, for their efforts in directing the seminar. The assistance of the officers and planning committee of the National Association of State Directors of Vocational Education is gratefully acknowledged.

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

# TABLE OF CONTENTS

PART I

# A RATIONALE FOR COMPREHENSIVE PERSONNEL DEVELOPMENT IN A STATE

# A RATIONALE FOR COMPREHENSIVE PERSONNEL DEVELOPMENT IN A STATE

*Carl Schaefer*
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Vocational-Technical Education
Rutgers University

Webster defines rationale as, "an underlying reason." The reason for personnel development is quite simple; vocational-technical education, career education, manpower development--call it what you will--will not be any better than the people in it. This, of course, is an oversimplication of a very complex problem that has plagued us for decades. Its solution has eluded even the most imaginative minds that our field has been able to cultivate. And what appear to be new and exciting answers to the problem of personnel development, after short or crash efforts, fade away into the oblivion of the past, leaving their residue to feel comfortable as having been developed and prepared for the tasks at hand. Never has the process been one of a continued thrust over longevity. Never have the plans for the self generation of professionals in the field called vocational-technical education been harnessed as a continuing and lasting state. Yet, at a time when our nation faces a severe test of its way of life we raise the question, "Are those of us in vocational-technical education prepared for the challenge?" I think not!

Witness the approximately 21,000 public school districts in the United States with their superintendents, the about 30,000 school principals in public and nonpublic secondary and junior high schools and the over 70,000 public elementary heads of schools and ask them what they know about vocational-technical education. Ask the host of three million teachers and the nearly 58 million students about the image of vocational-technical education. And compare the expenditure of some 60 billion dollars spent on education with the fragment of 1.8 billion state, federal, and local monies spent on vocational-technical education.[1] Subtract the influx caused by the passage of the Vocational Act of 1963 of over two million business and office education students from the total enrollment for fiscal 1970 of 8,793,960 and see what has happened to our great accomplishment year by year over the past eight years.

[1] For fiscal year 1970 the enrollment in vocational-technical education was 8,793,960 and the total expenditures $1,841,846,345 as reported by the U.S. Office of Education.

But yet we ride the crest of a wave of support. Support comes from everywhere. A U.S. Education Commissioner for the first time has set what he chooses to call "career education" as the number one priority; the National Advisory Council on Vocational Education has mounted a campaign through the public media second to none in our history; the State Advisory Council's voices are beginning to be heard; our American Vocational Association plays a bigger and bigger role in educational policy making and legislative action, and advocates from heretofore unrealized sources raise their voices. One can almost daily pick up the newspaper and read of support by columnists such as Alice Widener and Sylvia Porter. Then on occasion men of vision break into the headlines such as John J. Nevin, President of Zenith Radio Corporation, who came from the Ford Motor Company. Nevin has this to say about vocational education:

> Servicing on almost all products--on everything from plumbing to mufflers--has been miserable for the past five years . . . There has been an explosion in technology, bringing more sophisticated devices . . . at the same time everyone wanted his child in college, and vocational education went to hell. Industry itself has failed to encourage vocational training (*New York Times*, Sunday, July 25, 1971).

Oh, if only we had the personnel to ride our wave to its maximum, we would indeed change education as Commissioner Marland envisioned it to be in his prepared talk before the National Association of Secondary School Principals.

> How absurd to suggest that general knowledge for its own sake is somehow superior to <u>useful knowledge</u>. 'Pedants sneer at an education that is useful,' Alfred North Whitehead observed. 'But if education is not useful,' he went on to ask, 'what is it?' The answer of course, is that it is nothing. All education is career education or should be. And all our efforts as educators must be bent on preparing students either to become properly, usefully employed immediately upon graduation from high school or to go on to further formal education. Anything else is dangerous nonsense (Marland, January 23, 1971).

But the hard cold facts are that we have not prepared the people in our vocational-technical education profession for the challenge we face. Our crash efforts in personnel development have been bland, lacking in continuity and nothing more than small encounters with the big and complex problem.

Looking at the past from another perspective, a study of vocational and technical educational personnel (Office of Education,

1970) projects the need for new vocational education teachers by 1975 to be between 38,800 and 43,700 and the need for state ancillary personnel to increase from a little over 8,000 to well over 22,000. Even more disconcerting, the report goes on to identify the need for some eight million teachers of "cluster curriculums" if 55 percent of secondary school students are enrolled in what is called a general vocational curriculum--such teachers to be retrained and redirected towards this new career education endeavor from the ranks of existing staffs. Although Somers (1971) warns that projections of this nature should carry the label caveat emptor, or let the buyer beware, figures of this magnitude give one something to think about in light of our meager output of vocational-technical personnel, let alone their regeneration or self-renewal, so as to speak.

Let me not admonish the efforts of some in the self-renewal process. Attempts in the education profession to retread and revitalize certain aspects of our profession started with the surge of the first Russian sputnik that triggered the NDEA Act and its resulting summer institute program as well as the NSF effort. States such as Ohio, Michigan and New York have mounted leadership development programs even though they have found them costly endeavors. More and more extension of school contracts are being written to include a week or two at the end of the school year for professional growth type activities. Also let me not forget the efforts of the AVA and the Office of Education in providing special conferences, seminars, and presessions. But even by adding all these up and doubling their sum total for those efforts we may be forgetting to include in the list, the impact still stands as a paucity, nondescript system of keeping the vocational-technical education viable.

The one glowing light on the horizon is Part F of the EPDA Act (Education Professions Development Act). But even this and especially Section 553 will be squandered away by most states for lack of systematic and longitudinal planning if we are not careful. The making available of Fellowships as provided under Section 552 has not stampeded potential talent toward advanced degree programs and the summer institute approach of Section 553 taken by most states finds many a classroom seat unfilled by the volunteers desiring to sample the updating smorgasbord being offered. But to the designers and operators of the EPDA effort our hats should be taken off for it represents a bold first step to a comprehensive system of personnel development. Who and how the states will pick up the "ball" at the end of EPDA is precisely what this conference is all about.

## PERSONNEL VITALIZATION

Much has been written of late about educational accountability, or the lack of it, in the educational process. Accountability, according to Leon Lessinger (1971), is:

> . . . the product of a process in which an agent, public or private, entering into 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.

Such a definition is indeed not outside the grasp of the education profession. It does, however, pose some elements that we have not considered too important in the past, such as being held answerable within a time period, with stipulated resources, and acceptable performance standards. What better segment of the education profession than vocational-technical education is there to prove it is possible to become accountable? Given this as a challenge, provide the reorientation of our teachers and the necessary leadership--we could literally set the rest of education "on its ear" so as to speak, in the area of accountability.

## TEACHERS

Teachers then, no matter how you look at it are in need of continued personnel development. Not just of the nit-picking type that rears its ugly head at the time of granting tenure or merit salary raises, but on a planned and continuing basis. Our New Jersey Educational Association (NJEA Review, 1971) has this to say about personnel development and teacher evaluation:

> Most current evaluation of teacher performance is job oriented. Career development has been sadly lacking . . .
>
> Behavioral psychology tells us that people respond better to challenge than to threat, better to praise than to criticism. The surest way to increase the effectiveness of any professional is to surround him with productive peers, expose him to new ideas and stimulate him into constructive analysis of his own performance.
>
> Many professionals in all fields operate capably in their jobs at less than their maximal level of production or efficiency. Accordingly, industry spends considerable amounts to upgrade the performance of professional-technical and middle management personnel. Schools make little comparable effort to upgrade the efficiency of their professional personnel--the teachers.

If teachers at the elementary, junior high and secondary schools in basic education and academic subjects need help, what about those who profess to teach the skill subjects and psychomotor skill? As rapidly as occupational technology is changing today, how can we expect the teacher of agriculture, business, distributive, home economics, trade and industrial, and technical education to remain up-to-date in their technology? Have you ever sensed that some vocational-technical education content as being taught is obsolescent? That our teachers may come to us with six years of experience--one year repeated six times? That in the profession, it is by chance that they remain updated in a technical sense? And their prestige, within their particular trade or occupational area is not viewed by their tradesmen counterparts as an expert, but as one who has escaped from the trade only to retire in that plush and age-honored profession called teaching? That college preparatory courses for the preservice effort are not what they should be, and that teacher educators are outdated in their subject expertise. Of course, the same indictments could be leveled at the academic subjects, for these teachers could not even get a job if indeed the rewards of the education profession were withdrawn as a means of making a livelihood. But our problem of producing through preservice and keeping teachers viable by means of in-service vocational-technical education has not changed over the years and we really haven't done much about it.

Lest you forget, the present day challenge looks like the following figure (Figure 1) and I won't quibble about the exact grade levels except to call to your attention the expanded challenge incorporated in the "career education" concept. The other point I would venture to make is that teachers must be functional in terms of all styles of learning. All teachers cannot be all things to all boys and girls. Some function better with certain learning styles than do others. This is functional staffing.

## ADMINISTRATORS

For those who choose to leave the classroom or join from some other source the challenge of administration, the problem of their personnel development is even more acute. Here a masters' degree in school administration has been the backbone of our efforts. Thirty semester hours credit has been the magic number. Courses taught only too frequently by those who have been away from the field for far too long constitute "how to do it" recipes. Infrequently are the most advanced techniques of modern business practices injected into the courses and even less frequent do our administrative personnel update themselves in the latest managerial abilities. Once an administrator--always an administrator and for those who experience the rigormortis of the "Peter Principle" the die is cast never to move from a particular assignment until

FIGURE I

INSTRUCTIONAL FUNCTIONAL STAFFING PATTERN

| LEVELS | CONTENT | LEARNING STYLES |
|---|---|---|
| Elementary K-6 | Technology for Children | Slow Learners |
| Middle 7-8 | Career Orientation Introduction to Vocations | Potential Dropouts |
| 9-10 | Occupational Work Adjustment Cluster Occupations | Disadvantaged |
| Secondary 11-12 | Vocational Education | Normal |
| Post-Secondary 13-14 | Associate Degree | Talented (Vocational and Academic) |
| Adult | Job Preparation Updating | Bright |
| | | Gifted |
| | | Mature |

NUMBERS NEEDED (Pre and In-Service)

retirement. So schools become Mr. Henry's and Miss Smith's school because they represent a lifetime of the Henry-Smith stagnation and stalemate. Did it ever occur to you that once the peculiar yet effective characteristics of an administrator are identified, that he or she might be able to apply these attributes to a number of situations and locations where they are needed? That when an exceptionally talented administrator builds a building, his talents and knowhow could be used to build more than that one building. When an administrator particularly sensitive to curricula needs in one school and the interpersonal relations with staff needed to implement that curriculum could be as effective in a subsequent situation. That indeed, administrators are different in their style and roles and they should not become married to a single location or staff. Sherwood Dees (1971, p. 164) takes this position in the new book *The Courage to Change - New Directions for Career Education* when he states:

> . . . The state vocational educational agency must encourage initiative. Its professional staff should not have tenure or civil service status. Instead, performance should be subject to regular review under administration supervision of the state board of vocational education.

The picture facing us regarding administrators looks like Figure 2 with its threefold increase in administrative types. But who is preparing them at the proper level of sophistication and at the needed rate?

## ANCILLARY SERVICES

When ancillary services are taken into consideration, we open up a whole new area of personnel development. The notion of the paraprofessional joining the education profession is only now becoming popular. We have been well aware of the need for Youth Specialists, Teacher Educators, Research Specialists, Guidance Specialists, Curriculum Specialists, and the like. But what about teacher and clerical aides, instructional resource technicians, media technicians, administrative assistants and such? Figure 3 gives some idea of the need for ancillary services for vocational-technical education that goes well beyond those normally provided through state staffing. Note that what is being suggested here is an ancillary team effort especially at the local level for providing improved instruction.

## THE DELIVERY SYSTEM

It is estimated that industry invests approximately five percent of its capital in personnel development per year. At

FIGURE 2

ADMINISTRATION[a]

| Function | Projected Need 1966 | 1975 |
|---|---|---|
| State Directors and Supervisors | 378 | 860 |
| State Assistant Directors | 420 | 1,080 |
| Local Directors and Supervisors | 3,080 | 9,420 |
| State Area Supervisors | 257 | 1,230 |
| State Guidance Specialists | 46 | 150 |
| State Research Specialists | 59 | 150 |
| Other | 125 | 320 |
| TOTALS | 4,444 | 13,360 |

[a]Data from *The Educations Professions*, Washington: Office of Education, 1970.

FIGURE 3

ANCILLARY PERSONNEL

| Function | Projected Need 1966 | 1975 |
|---|---|---|
| **State and Local**[a] | | |
| State Youth Specialists | 32 | 240 |
| State Teacher Trainers | 160 | 150 |
| State Itinerant Teachers | 182 | 400 |
| Institutional Teacher Trainers | 2,145 | 5,666 |
| Local Curriculum Specialists | 123 | 320 |
| Local Guidance Specialists | 1,009 | 1,980 |
| SUB TOTAL | 3,652 | 8,756 |
| **Local**[b] | | |
| Administrative Assistants | - | 1,500 |
| Research Specialists | - | 500 |
| Teaching Aides | - | 5,000 |
| Clerical Aides | - | 1,000 |
| Media Technicians | - | 2,500 |
| Other | - | 500 |
| TOTALS | 3,652 | 19,756 |

[a]Data from *The Educations Professions*, Washington: Office of Education, 1970.

[b]Data estimates only.

this rate, we should have invested somewhat over $92 million in personnel development for the fiscal year 1970. Looking at it a different way, and only for federal vocational funds available we should have spent $15 million. Because personnel development is a "hidden cost" in our reporting system, it is impossible to accurately ascertain what is being spent each year but the total expenditure for even providing ancillary services was less than five percent of the budget. Therefore, personnel development as a discrete cost was drastically less and I would guess somewhere around one-half to one percent.[2]

If industry sets the worth of personnel development at five to 10 times the value of the education profession in the process of producing a physical product, how in the world can the education enterprise feel comfortable with its personnel investment when it is held responsible to produce an intricate human product? If industry budgets for its personnel development investment, why is it near to impossible to find figures for the personnel development of vocational-technical education? The answer is, of course, that we have not placed personnel development high enough on our list of priorities; that it is a problem easier to ignor than to solve and since this is the attitude of the total education profession why should vocational-technical education be any different?

A picture of the physical arrangement itself shows our low priority given to personnel development.[3] Later on in this program you will see what the Western Electric Corporation Educational Center looks like just for contrast. And I hope you observe the difference in physical arrangement, teaching media and educational hardware from that which we use in our personnel development efforts. Vocational and technical education, or career education if you like, needs to have the spotlight of attention focused on it as a preparation center, par excellence to none. Your, nor my teacher education institution does not reflect that image and we are still in the basement even though they now call it the "lower level." The point here is that our locus is not the prestigious place to return to for updating and professional development as is a GM Training Center or a Western Electric Corporation Education Center. For each of these carries with it a sense of pride for having been selected for the developmental

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[2]Five percent of an estimated $1,841,846,345 having been spent on vocational education. A total of $83,932,380 was spent on providing ancillary services of which $28,164,754 was federal money.

[3]Three slides were shown here of a facility to develop curriculum materials for vocational-technical education which is housed in a part of old Camp Kilmer.

program both in the participant and from his peers. To be singled out and recognized as worthy of upgrading is a learning principal called motivation we only too frequently forget about within our own ranks. In fact we don't single out. We leave the process of in-service updating to the individual, to his own motivation and to his own resources. Summer is usually the golden time for the magic of personnel development; never to emerge during the academic year.

The psychology of the situation is that those in the education profession want to improve; want to become better, want to be successful. This is the American dream--that we as individuals can be the best; that we can better our last record, that we don't stand still throughout life and we can reach--an unreachable star. Let's listen to the words of an inspiring ballad.[4]

So why is it that personnel development is low on our vocational-technical list of priorities? Why is it that comprehensive planning for providing such development has eluded us throughout the years? Why is it that knowing vocational-technical education will be no better than the people in it--we hesitate and falter. It is time something was done about it and to the state directors, the profession looks for the leadership.

---

[4]*The Impossible Dream* from "Man of La Mancha" sung by Jim Nabors.

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"A RATIONALE FOR COMPREHENSIVE
PERSONNEL DEVELOPMENT IN A STATE"

CRITIQUE BY PANEL MEMBERS

*Charles J. Law, Jr.*
Director
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State Department of Education
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*Wesley P. Smith*
State Director
Vocational Education
State Department of Education
Sacramento, California

*Glen H. Strain*
Assistant Commissioner
Vocational Education
State Department of Education
Lincoln, Nebraska

"THE FLIGHT OF THE PHOENIX"

*Charles J. Law, Jr.*

We listened to the song "The Impossible Dream" and I think each of us finds much in it which has application to what we are trying to do. As I begin my presentation today, I would like to make reference to another song which has been made popular recently by Frank Sinatra in which he makes the point that "Whereas he did not do things in the way that everyone else would approve of, he did do it in his way." With this in mind, I am going to do this presentation my way.

I have been asked to react to the excellent presentation which has been made by Dr. Schaefer today on Personnel Development. However, I prefer action to reaction, so I have used prerogatives given a speaker, and I would like to make it a very different kind of presentation. I have thought about this presentation many long sleepless hours, as to how to make the presentation to you. I made up my mind five minutes ago to do it in the way I will move.

I realize that I take my life into my hands as I do what I am about to do. I realize full well the danger in what I am doing, and yet I say respectfully, very respectfully, I do not care whether you like my method or not. Consider me a maverick, consider me an upstart, I am going to do it my way.

Let's look at occupational education in North Carolina and let me tell you some of the things that I am hearing there. I hear that occupational education is dead. There are many people who are saying this kind of thing, some of them are saying it gleefully, some of them are saying it morosely as you can well imagine. You can imagine also where these comments are coming from. For example, one of the first reasons that they say occupational education is dead in North Carolina is because we have gone to a method of allocation of resources that does not guarantee an agriculture teacher that his will be 12 months of employment; instead, it gives the prerogative to the local board of education to decide how to use the resources which they get.

Secondly, I hear that occupational education is dead because State Leadership has suffered. We no longer have head state

supervisors and thus teachers in the field are not able to get access to help from the state level as they used to. Of course, no one mentions the fact that the help they used to get was inspection and not consultation.

Thirdly, I hear that occupational education is dead because we have a young, inexperienced director who can be outtalked at every turn by any group of people, who can be outmaneuvered politically, who, in essence, is offering very weak leadership, and in short has, "No Guts."

I hear occupational education is dead in North Carolina because we are now under an assistant superintendent who is being characterized as an enemy of Occupational Education. In addition, because of this, there is no longer any direct access to the State Superintendent for the State Director.

Occupational Education is dead in North Carolina, I hear, because we have less in-service education than ever. This is true, these people say, because there is no longer any connection between the University and the Occupational Programs in the field.

Occupational Education is dead in North Carolina, they say, because there is less State Board support than ever. All of the money is going to community colleges. Remember, I tell you only what I hear; not what I believe.

In the song which I mentioned earlier, *The Impossible Dream*, there is a line that talks about a man who fights through hell for a heavenly cause. What I have described to you is the personal hell that I am fighting through for a heavenly cause.

So Occupational Education is dead, so be it. Let's bury it. Let's bury it with all our petty excuses and all our red tape. Let's bury it with the old image and the old tactics.

If you remember your mythology, you know of the Egyptian bird, The Phoenix, which when consumed by fire arose in a new and much more viable form.

Let us look to what has happened upon the death of occupational education in North Carolina, if in essence it has died, and let's see what has come out of it. Let me tell you what is going to happen in our state. I tell you what is going to happen, not what I think will happen, or not what I hope will happen.

By 1980 there will be an occupational awareness program in every school for every child in the kindergarten through the third grade. In this program, the students will be made aware principally what it is to work in this world in which we live, how they should spend their lives in order to prepare for this

work, and, in fact, that the work is an opportunity; not just a requirement. You think I am kidding about putting these kinds of occupational awareness programs in our schools? Our State Plan calls for 16 of these in 1972.

Built upon this, there will be an occupational information program for all students in all of our schools in grades four through six. Not a course just designed to teach students about occupations, but instead information that is relevant, up-to-date and shows them how to use what opportunities they have.

Beyond this, in grades seven through nine, for all students there will be an occupational exploration program--a program designed to give students hands-on experiences in terms of discovering what their ambitions are, what they like to do, and perhaps just as importantly what they do not wish to do.

For 80 percent of our students who enter the first grade, there will be for them in grades 10 through 12, an occupational specialization program--a program designed to provide each student with a salable skill when he enters the competitive job market.

Beyond that, I predict that by 1980 there will be at least 50 percent of our students who enter grade one and matriculate through our system, will enter our very fine comprehensive community college and technical institute system.

Now there are those people in North Carolina who do not take us very seriously. I think they are guilty of poor judgment, because I talk to you not of what I dream, but what I know will be. Why do I know that it is going to happen? Basically because of three reasons: (1) We are right, (2) We have the support of the State Board of Education, and (3) We will have the money.

The big question that arises now is "How do we get ready?" How do we know that we can handle the massive task that is being placed before us? North Carolina has the very fine arrangement made between the U.S. Office of Education and the American Management Association in which we are planning by American Management Standards our program in this state. With this in mind we have developed the Master Plan for Occupational Education in North Carolina, a plan which pulls all aspects of the program and, for the first time, tells everyone in the state who is interested in our program what each aspect is about. Too long we have talked about allotments without talking about teacher certification and teacher education. Too long our teacher educators have not known what our standards were in our programs, and teachers have not known what kind of teacher education and in-service they were going to be put through. This Master Plan is designed to get rid of that problem. In this Master Plan there are several components:

1. Rationale for planning

2. Definition of Occupational Education

3. A Pattern from K-14

4. Here is where we get to the meat of the issue, a section on Curriculum Development. We are ready to throw aside, in our state, the old program areas of T&I, DE, Agriculture, etc., and go to the new 14 clusters that are set by the USOE.

Beyond this, there is something of much more importance, however, that is occurring. We are breaking down, at the present time, our total curriculum offerings to teaching units. All of you are familiar from your teacher education days as to what a teaching unit is. This is the use of it in the best terms. A teaching unit will be designed to teach one bite size bit of instruction to students who may proceed through it at their own rate. We anticipate that there will be many hundreds of different teaching units devised in Occupational Education. We will offer this veritible smorgasbord to administrators and teachers who may select from these teaching units. The local DE teacher, for example, will sit down and will ascertain, with her principal, what her needs are and what she would like to teach. She may then select from these units those that she likes to teach and leave the others alone.

Another example would be in brickmasonry. An administrator and a teacher might select enough teaching units to teach one six-month course on elementary brickmasonry for those who wish to use it for avocational purposes, or if their need is for a qualified brickmason, they will select teaching units which would guarantee proficiency in that occupation, once the student leaves our schools.

What good are teaching units without assistance from some kind of leadership agency in the state? How can the State Agency be of the most help to LEA's? We anticipate that this can be done by the establishment of standards, a standard for each of the teaching units which has been so described heretofore. A standard which would detail, not to be restrictive, but to give leadership, the kind of behavioral objectives that must be met by the students in their program, the kind of teaching competency which is needed, the space which is needed, the equipment which is needed, the length of time in a range of time due to individualized differences in which the unit should be completed by different students and the number of students who should be involved in a class teaching this kind of unit. I believe that this will lead us toward individualized instruction in our state. I have seen and I know to be a fact that you can better teach the use of

a framing square through individualized instruction that you could ever teach it under the old system.

What good are standards without evaluation? There will be a statewide assessment of student achievement by the use of proficiency tests as well as other evaluation instruments. Every administrative unit will be evaluated by a team comprised of their peers, as well as State Department Staff, businessmen, industrialists, and students to determine two things: (1) Are they following the standards which go with the unit which they have selected? and (2) Are they making the most profitable use of the resources they have? This is the key.

In-service education must be a part of this, because teachers have not been taught to teach in the way we are talking about. We are moving in North Carolina to remedy this. We held in-service education workshops this past summer for over 1200 of our teachers in 60 different workshops. Do you know where we held them? For the most part, they were not held at teacher education institutions, instead they were held at our community colleges where teachers were given an opportunity to brush up and become more proficient in their skill areas. We think this is essential.

Teacher education must also be included in this Master Plan. We at the present time are developing guidelines and standards for teacher education in our state, and we guarantee we will have impact upon the development of teachers in our state over the coming years.

Local planning is an aspect that we are pushing also, and this is a part of our Master Plan. In this local planning effort, local administrators and teachers will be led to see their need for staff development and their need for program redirection.

I have talked about what could be a good program, but a program that never could be operated unless somebody had some teeth to put into it. Our State Board of Education will reach, on a formula basis, a basic minimum foundation program for all of our schools in one more year. Beyond that point of time we intend to do an incentive funding basis. A program that is designed to reward administrative units which do two things: (1) Those which follow the standards and, (2) Those which are making the best use of what they have. This is the old "carrot approach." Only those administrative units which were approved by the evaluation teams would be granted additional funds over and above the basic minimum program. We believe that this is the way that the State Agency can best use its monetary powers to guarantee success. Does this mean that we will not help those units which are in a poor situation? Does this mean that we will make the rich richer and the poor poorer? Not at all. For example, if an administrative unit is not approved because of lack of facilities, we will turn right

back around and pour facilities money into their unit to build them up where they can be approved. The same is true with equipment.

I have laid out for you our Master Plan. This is where we are going. This requires a certain kind of leadership. As I look across North Carolina, I do not see very much of this in evidence. I wonder if it is in evidence in your state. I think that we need four different kinds of leadership to move where we are going.

First of all, informed leadership. Leadership that knows the latest practices in education and knows how to implement these practices. Leadership that is based on sound philosophical foundations and most important of all informed leadership that knows where to go and how to get there.

Secondly, we need confident leadership. There is a Persian Proverb which says it much better than I and it goes as follows: "He who knows not, and knows not that he knows not, is a foolshun him; he who knows not, and knows that he knows not, is a child-teach him; he who knows and knows not that he knows, is asleep-wake him; he who knows and knows that he knows, is wise-follow him."

Thirdly, we need positive leadership. We need leadership that is for something, not just against something else. We need leadership that says let's build up total education, not occupational education at the expense of something else, but at least to give occupational education its fair share. We also need positive leadership that is specific. Too long we have talked about "The Whole Child" and have done nothing about it. We have dreamed and then failed to act upon the dream. I, too, believe that we should educate the whole child, but I believe you do that by starting with one segment of his intellect and moving him a piece at a time.

Fourthly, we need aggressive leadership. Teddy Roosevelt said, and I quote, "No man is worth his salt who is not ready at all times to risk his body, to risk his well-being, to risk his life, (and I add to risk his job) in a great cause." I think it is time that educational leaders have the plain old-fashioned guts, to get up and lay it all on the table, to take a stand and not worry about what the repercussions are.

In conclusion, I would like to say that if there are those in North Carolina or here who are timid souls, now is the time to bow out; if there are those who offer the old excuses, get out of the way; if there are personalities involved, this program is bigger than any one man or group of men; if there are those who believe that Occupational Education is dead in North Carolina; my

answer is simple, "Occupational Education Dead, Like Hell." The South is going to rise again and North Carolina is going to be leading the pack.

# REACTION TO: A RATIONALE FOR COMPREHENSIVE PERSONNEL DEVELOPMENT IN A STATE

*Wesley P. Smith*

Dr. Schaefer noted that Webster defined "rationale" as "an underlying reason"--but this was Webster's second choice! In a much more productive manner, Webster's first choice suggests that a rationale is an opinion or belief. With no intention to demean either the efforts or the thoughts of the author of this paper, my reactions are of disappointment and of compassion!

- With disappointment because traced out in this paper is a regurgitation of why there is need for professional development in vocational education--instead of a strategy for meeting the needs that have been identified--and reidentified--in every descriptive report in this country over the past 10 years.

- With compassion because the strategy we seek is so very, very difficult to either delineate or to effect. This reidentification of need--this escape from confrontation--this universal cop-out--is our despair from state to state. WHY--but too seldom HOW!

In no sense is this critique intended to be a substitute for the paper submitted by Dr. Schaefer. Instead, its purpose is to goad him to take the much more provocative step toward a proposal for operational practice for professional development within a state. Surely, this is our need. Surely, this is what we seek. And surely, this would be a remedy to our admitted Achilles' heel!

For example, let us for once set a sharp focus upon the role and responsibility of the state--as represented by its State Board and its State Vocational Education staff. Can we agree that the state--as a governmental unit--should in some positive manner be involved in this mission? Then we must determine the degree of such involvement.

It is not in my personal comprehension that the state agency responsible for vocational education should be silent in this arena--either by acquiescence or by abdication. But how much activity? What should be the parameters of involvement?

It is my notion that it is too much to expect that, by chance, the multi-institutions of higher education will swiftly concentrate painstaking attention upon such emerging professional developments as Career Education, Performance Objectives, Product Accountability, Program Budgeting, Management by Objectives, Cooperative Vocational Education, etc.

It appears obvious that we should not permit the needs identified by Dr. Schaefer to continue to go unmet because colleges and universities make only catch-as-catch-can contributions that too often abuse rather than enhance our mission.

But how far should the state agency go in meeting the needs overlooked or not acknowledged by the very institutions established to contribute to professional development?

I'm concerned that Dr. Schaefer delivers the challenge to State Directors of Vocational Education--for in doing so, the circle closes once again:

- The need is identified
- The problem is delineated
- The responsibility is assigned to State Directors of Vocational Education

And then Dr. Schaefer--and his thousands of counterparts all over the nation retreat to more sheltered havens!

This critique may appear to move far afield--as I mount an attack upon colleges and universities--but if there is just one defect in vocational education in this nation, it has to be the absence of commitment and contribution by so many of our hallowed institutions of higher education!

In the increasingly complicated nature of our expanding enterprise of vocational education, there must be some division of labor. It is one thing to sense the existence--or the possibility of a problem. It is often another matter to actually deal with that problem.

To a significant degree, isn't the task of professional development one for those who by assignment and by responsibility are developers of professional performance? Even though the state agency has some part of the leadership role--should this be construed to be an exclusive franchise of both role and responsibility? And if such direction does not emanate from the state agency, does this give licenses for the thousands of professional practitioners to wring their hands in frustration--and continue to walk away from the problem with a clear conscience?

Dr. Schaefer observes that "one glowing light on the horizon is Part F of the E.P.D.A. Act"--and further observes that even this resource might easily be squandered away for lack of systematic planning. He suggests that the task of this conference is to prevent such squandering.

Perhaps so, but, again, why not propose a strategy for us to work on--or to work out? How can we capitalize upon this new resource--and how can we internalize it within our total operation?

These observations are rooted in frustration--for the problems posed in this paper are only a single facet of the problems facing State Directors of Vocational Education.

While I join with Dr. Schaefer in the concerns he has expressed, I am not so certain of the degree of failure he suggests. That we lack a systematic approach to professional development, there is no question. But that we lack competent, resourceful, enthusiastic, committed and eminent practitioners, however, is belied by both our progress and our attainments!

Somewhere over this country there must be the pieces of the system we seek to fashion. Somewhere the answers to Dr. Schaefer's questions have been found. It seems possible that the model is somewhere--and needs only to be assembled. We solicit Dr. Schaefer's help--and that of others of like eminence and interest--to take a more active part in this task!

# REACTION TO: A RATIONALE FOR COMPREHENSIVE PERSONNEL DEVELOPMENT IN A STATE

*Glen H. Strain*

Dr. Schaefer has done a very commendable job in developing "an underlying reason" for comprehensive personnel development in a state. However, it seems to me that he was quite pessimistic and somewhat negative in his inferences. First, he spoke of the solution of personnel development having eluded the most imaginative minds that our field has been able to cultivate. Certainly this is difficult to accept when you look at the track record which vocational education has had over the past 50 years. Could vocational education have survived during this period, despite all of the adversaries, if competent capable personnel had not been developed?

He raises the question, "Are those of us in vocational-technical education prepared for the challenge?" He answers, "I think not." Many of the challenges which we face today are new; however, I would argue that those persons in vocational-technical education who have been well-grounded in the basics of problem solving techniques are as well prepared to meet the challenge as others who have faced new educational challenges.

Another real negative thrust was developed when Dr. Schaefer attempted to belittle the efforts of vocational-technical education since the passage of the 1963 Vocational Education Act. His statement to see what has happened to our great accomplishments over the past eight years, if we subtract the influx caused by business and office education, reminds me of the proverbial story of the ostrich that strode out of the bathhouse which was surrounded on the beach by a great number of fellow fowl, stuck his head in the sand and said, "Where is everybody?"

What I am saying is that there have been so many other important facets, turnarounds, redirections, etc. since 1964 that it is almost trite to infer that business and office education accounts for so much. I am not familiar with other states' statistics, but the total vocational-technical enrollment for the State of Nebraska has increased from 31,696 in fiscal 1964 to 67,614 for fiscal 1971.

This is an increase of 35,918 or more than double that of 1964. The increase or total enrollment for business and office is 7,152 which accounts for less than one-fifth of the growth.

It is interesting to follow the negative pattern established as our presentor goes into the oft overworked usage of the image of vocational-technical education as it is viewed by a variety of academic school administrators and students. I would remind you that the image of vocational-technical education evidently wasn't too bad to some of the persons engaged in the burnings and riotings of only a short time ago, when it was cited in several instances that vocational-technical facilities were not damaged even though they were in the midst of the destruction. It must be somewhat of a classical paradox for vocational education to have such a poor image and yet be riding the crest of a wave of support from so many sources.

I think it is also interesting to note the negative nudge which was tossed in by quoting from a so-called man of vision who was complaining about the miserable servicing of all products . . . on everything from plumbers to mufflers. I do not know whether this gentleman was one of those in the not too distant past from industry who used to wave the banner of general education. Many of you will recall that so-called experts in training of personnel in industry would say to the schools, "Give us people who have had a broad general education and we will teach them all they need to know about the job." Now this gentleman is saying, "Industry has failed to encourage vocational training."

Since the passage of the 1963 and 1968 Vocational Education Acts, a comprehensive personnel development plan for a state has become a necessity. Prior to the passage of these acts, personnel development seemed to be adequately handled by teacher education and state staffs in the various occupational areas. For example, those in agricultural education, or those preparing to enter the profession, depended upon the agricultural teacher education department staff and the state agricultural education staff to take care of the training for preservice and in-service.

However, particularly with the passage of the 1968 Vocational Education Amendments, many areas became common and cut across all of the various occupational fields. Teachers in all these fields were suddenly confronted with areas such as prevocational, disadvantaged, handicapped, cooperative Part G, career education, work-study, research, innovative and exemplary proposals, and local applications for vocational education with five year projections. The problems of documented needs, placement and follow-up all became common type needs. The new acts focused upon levels of training and made all occupational fields eligible for vocational training except those requiring a baccalaureate degree. Many teacher

education agencies now function as separate entities when in reality there exist many commonalities. This cannot economically nor philosophically be supported under the new legislation. Perhaps what I am suggesting is that a new rationale exists for providing comprehensive personnel development in a state.

The pressures on educational institutions are coming from students looking to future employment, and from business, industry, and government as they look for certain types of trained manpower. It has been said that education is too important to be left solely to educators.[1]

> A master plan for vocational-technical teacher education should be developed for each state by a broadly representative commission or group with long-range projections for the future development and financing of these programs. This master plan should include projected teacher education enrollment, programs, and institutional responsibilities for specific vocational-technical areas. A systematic method for anticipating vocational-technical needs should be balanced by plans for optional utilization of available resources.[2]

> The establishment of the Vocational-Technical Education Personnel Development Program in the state is a manifestation of the state's responsibility to assume a major leadership role to ascertain that an adequate supply of personnel is being developed to operate the program of the state. If the tenets of Section 553 under the Education Professions Development Act are accepted, such a program should involve other resources including institutions of higher learning, local educational agencies, federal and state agencies, and business and industry in the state directed toward improving the social and educational welfare of its people through providing an adequate supply of qualified personnel.[3]

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[1]The Emerging Role of State Education Departments with Specific Implications for Divisions of Vocational-Technical Education, Report of a National Conference on State Department Leadership in Vocational Education, Chapter IX, Ewald B. Nyquist, Commissioner of Education, New York.

[2]Seminar for Preparation of Professional Personnel for Vocational-Technical Education, Roy D. Dillon, University of Nebraska, June, 1969.

[3]Vocational Education Leadership Training Institute - A Vocational-Technical Education Personnel Development Program for a State, John K. Coster, J. K. Dane, Wm. Ballenger, and Robert L. Morgan.

I would agree with Dr. Schaefer that Part F of the EPD Act represents a ray of hope to assist in setting up a comprehensive personnel development plan in a state. However, I would caution those who think this is a magical means that there are yet a lot of unanswered questions that need solving. The involvement of the many groups as mentioned above perhaps provide a means of public relations more than functional help at this stage. We have found that priorities are not the difficult thing to determine, but the process(es) and resource(s) of reaching our objectives to obtain the product.

We would agree, if we are not careful, that funds under Part F of the EPDA will be squandered away unless proper systematic planning has been achieved. However, at the same time, unless flexibility is permitted, then even the systematic planning may go for naught. We have made the same observation as Dr. Schaefer regarding Section 552--that potential talent toward advanced degree programs has not stampeded forward to take advantage of getting a doctoral degree. I think it is unfortunate that the fellowships to date have been for doctorate candidates only. Perhaps this is not the problem as may be evidenced by the lack of standby candidates.

In discussing personnel vitalization, Dr. Schaefer asks the question, "What better segment of the education profession than vocational-technical education is there to prove it is possible to become accountable?" In applying this to the preparation of personnel in the past, I believe that too much emphasis has been placed on evaluating the processes and resources and not enough on the certificated product.

> Coster, Dane, Ballenger, and Morgan, in their paper on the Vocational-Technical Personnel Development Program in a state, said, "Evaluative criteria and accreditation are based on a taut assumption of high positive correlation between the process and product of vocational education. Value judgments are used extensively in application of process evaluative criteria and accreditation standards. Although the value judgments are based on experience and expertise, although they are based on the best evidence available as to what constitutes "good" or "sound" programs, and although they provide a motivation for program improvement, they are generally more subjective than objective and they generally do not provide for quantification or qualitative data. There is little evidence that the assumption of correlation between process and produce variables is valid.[4]

[4]John K. Coster and Loren A. Ihnen, "Program Evaluation," Review of Education Research (October, 1968).

> It may be desirable to have information regarding the training and experience of teachers, the hardware and software available for the instructional program, the ratio of guidance counselors to student enrollment, and the size of the classrooms and shops. However, such information per se does not ensure that the objectives of the program have been attained.[5]

In developing our State Plan for EPDA, we discovered that very little evaluation is being made by the teacher training institutions regarding the product turned out. Few departments had conducted follow-up studies of their past graduates to determine what they are doing, whether their professional education courses were meaningful, etc. Again it is rather interesting to observe Dr. Schaefer's comments comparing the amount of money that industry invests in personnel development to the amount that education invests. If only part of the products which industry produces contributed to the overall operation, I am afraid they wouldn't be in business very long. Yet, we find that many teachers who have been trained to teach never go into the teaching field. Many of those that do, don't teach very long. Can you imagine industry stepping up their investment of expenditures in an area such as this? Would industry be in business very long if they did not continue to follow-up their product? It seems they even recall cars in industry after they have been in the field two or three years, if they discover there were flaws in the product. Is there some way we could pattern some of our ways after industry in developing personnel?

We also found that many of the teacher educators could not tell you the number of students that would be completing in the next two to three years. In many cases they had no idea about the cost per pupil nor how their cost compared to other similar situations. I would hope as comprehensive personnel development plans are refined that proper formats can be found to answer a lot of questions which are certainly time consuming now to trail down.

Less than two years ago we organized in our state the "Nebraska Council on Occupational Teacher Education." I think this has been a great thing in getting all of our teacher educators together a couple of times each year to discuss personnel development in vocational education in our state. Various workshops, etc. have developed as a result of some of the happenings at these meetings. This organization, at my request, has had an EPDA committee since they organized. This committee has been active and has helped keep

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5John K. Coster, J. K. Dane, William E. Ballenger, and Robert Morgan, *Ibid.*

this group informed about EPDA. They also help handle the fellowship selections under Section 552. This group has most of the expertise in the state when it comes to proposal writing. They are anxiously eyeing the possibilities of some supplemental help from EPDA.

We have utilized an Advisory Council the past year under the EPDA plan. They assisted our staff in developing priorities for Personnel Development. Only time will tell whether it will be comprehensive. Since the priorities were set, we have already focused in on one of the top priorities and are utilizing research money to help in the developmental stage.

I agree with Dr. Schaefer, if something isn't being done in your state toward a comprehensive Personnel Development Plan for Vocational-Technical education the time is right.

# PART II

## ROLES/RELATIONSHIPS FOR PERSONNEL DEVELOPMENT OF INDUSTRY, UNIVERSITIES, STATE AND LOCAL AGENCIES

# AN INDUSTRIAL CORPORATION'S APPROACH TO PERSONNEL DEVELOPMENT

*Robert G. Pecka* — Training Development Manager
Western Electric Company
Corporate Education Center
Princeton, New Jersey

My topic, fortunately, has a few very important words which I would like to underscore at the outset.

FIRST . . . There is the word

"AN" . . . of course this means <u>just one</u>.

SECOND . . . The word

"APPROACH" . . . and this is defined as a way, a passage, an access.

Therefore, I plan to talk about The Western Electric Company's approach to developing its employees, especially professionals such as engineers and managers.

I'm sure as we proceed you will note that much of my terminology is similar to that you use and the processes I'll talk about, too, may have a familiar ring. Some of this is due to my biases, but not all. As you are well aware, education, government, and industry mirror organizational structure and certain operational techniques. For example, there are references to illustrate facilities, curriculum, faculty, and students. You will also note (1) that our industry has internal education/training needs, (2) that continuing education and career development are not just the jargon of U.S. Commissioner of Education Marland, and (3) that we are held accountable. If we in industry fail to give an adequate account to our stockholders, to our employees, to the marketplace, and to the community in general, our tenure won't be long. In fact, the hard facts of business are: "Get the biggest bang for the buck" and "shape up or ship out." To paraphrase Peter Drucker, it is not a new or startling fact that change is always with us. The breadth, the depth, the direction and impact are the challenges we face. Change is what training is all about.

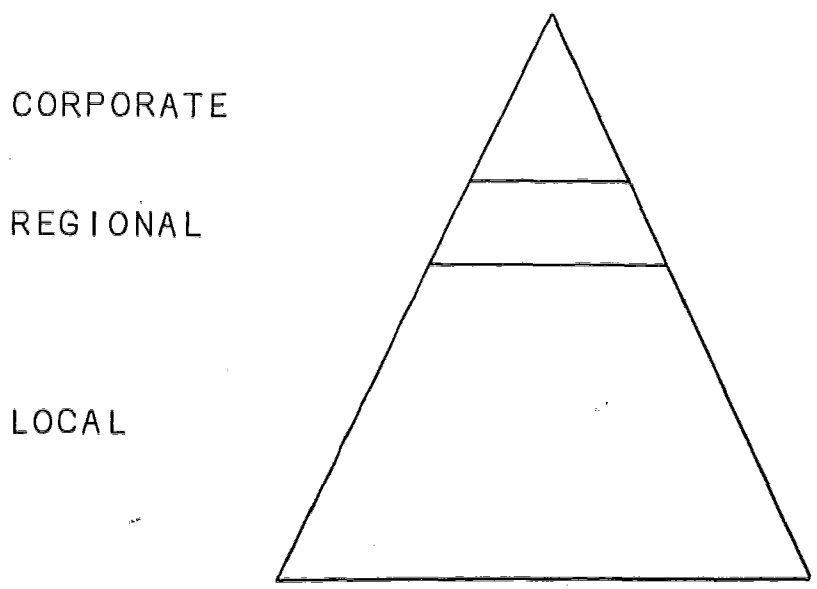
I would like to start by orienting you to The Western Electric Company. We make telephone equipment for the Bell System, we warehouse, distribute, and install it. In order to do this job, we need people, we need strategic locations, and we need expertise.

At the present time, we have about 216,600 employees. Spread across the nation are some 22 manufacturing locations, 34 distribution/installation sites, 12 service centers, and six administration points. All that brick and mortar, equipment and tools represent about 1,770,000,000. This spread also applies to the variety of occupations, vocations, and professions that are involved in our enterprise. These jobs range from managers to office boys, accountants to programmers, engineers to draftsmen, technicians to maintenance men, tool and die makers to bench hands, and secretaries to clerks. For quick reference, a numerical breakdown divided into just six broad categories reveals:

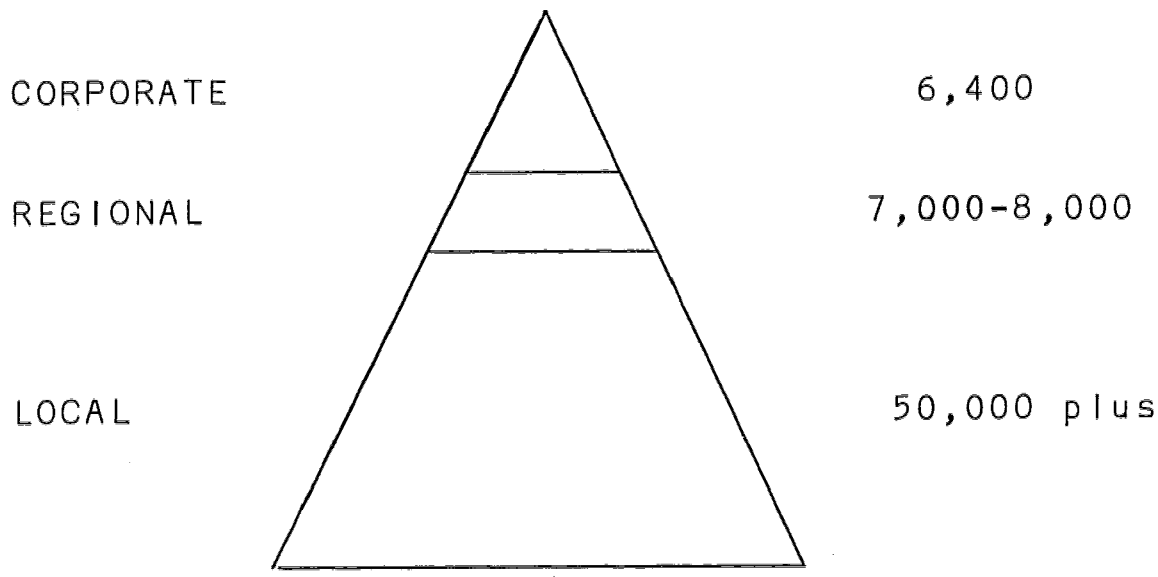
OCCUPATIONAL GROUPS

| | |
|---|---|
| Management | 18,100 |
| Engineers | 15,100 |
| Technicians | 11,800 |
| Clerical | 33,800 |
| Craftsmen | 30,000 |
| Operatives | 107,800 |
| Total | 216,600 |

Keeping in mind the people, jobs, and dispersion, let's look at a chart to give the broad overview of our total training effort.

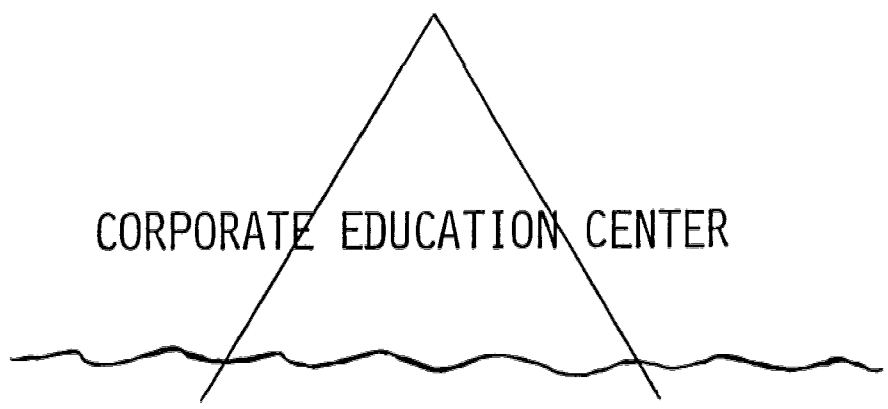


The lion's share of our programs is carried on by local training departments out where the action is: at the manufacturing locations, distribution and installation sites, and regional service centers.




At the corporate level in 1970 we handled about 6,400 students for 18,000 weeks. Regional sites had about 7,000 for 14,000 weeks and in local units we estimate that about 50,000 employees were trained or retrained for two to 13 weeks each, totaling well over 200,000 weeks.

At this time, I intend to concentrate only on the top of the triangle--the tip of the iceberg. We refer to this segment as the Corporate Education Center. Its purpose is to provide courses and training that are corporate-wide in nature, that have corporate-wide application and which are generally centered on new technologies, leadership skills, management and social responsibility.




We'll discuss the facilities, i.e., what the center looks like and its various spatial allotments. The faculty will be described. Student enrollment and typical curricula will be

mentioned. Finally, we'll review one special innovative program that illustrates a training development process leading to accomplishment of specific purposes.

The center, located near Princeton, New Jersey, on 360 acres of gently sloping land with many acres of woods, is a rather beautiful, relaxed campus that includes a residence building with some 300 rooms.

A floor plan of the Education Building shows an auditorium, library, conference rooms, classrooms, laboratories, and office space.

The auditorium seats 140 persons at tables. It can accommodate 250 theatre-style, and it has all the latest audiovisual capability and equipment. Controls for the carousels, movie projectors, audio equipment, TV, and screens are right on the console of the speaker's podium.

The library can hold 10,000 volumes, has a full-time librarian, study carrels, and comfortable furniture.

The conference room doubles for seminar use. You will find in most industrial training facilities dual purpose spaces--flexibility is a watchword. Nine buzz rooms are used by small groups to work out group problems. A conventional classroom (an example of flexibility--a "quad" room) with movable walls becomes full, half and quarter-size rooms, and three labs.

Although we are proud of our facility and recognize that it provides us with a pleasant environment, we also are well aware that the building doesn't make it and that hardware is quite sterile if the software and the practitioners aren't viable, vibrant, and responsive.

Let's move next to the faculty. This profile provides a capsule of information. About 50 staff members are technically oriented. Areas of technology represented are either mechanical or electrical engineering or computer science. The rest are trained in such areas as the social sciences, business administration, and education.

FACULTY PROFILE

| | |
|---|---|
| Number | 75 |
| Academic Background | 34 advanced degrees |
| Company Experience | 10 years |
| Teaching Experience | 3 years + |
| Average Age | 36 years |

In addition to those on the staff, another 50 or more people are invited to present a class, a course, or to be consultants.

Next, we will review briefly student enrollment and typical curricula. First we have Engineering and then Management. Enrollment in our various programs is shown.

ENGINEERING

STUDENT ENROLLMENT - 1970

| | |
|---|---|
| New Engineers | 398 |
| Experienced | 930 |
| Engineering Supervisors | 222 |
| Computer Personnel | 520 |
| Information Systems | 587 |
| Masters Candidates | 60 |
| Total | 2717 |

Just a bit of explanation: New engineers are just that--they come right from the college campus to ours within three to six months. Experienced engineers receive updated training in advanced technology. Information Systems people, too receive updated information. Computer personnel learn Western Electric's application of computer techniques. The master's condidates are a part of the Lehigh Program.

This is an example of a curriculum for the new engineers. Most lack knowledge of economics, and all of them need orientation to our products and processes.

INTRODUCTION TO WE ENGINEERING

FOR NEW ENGINEERS

| | |
|---|---|
| Communication Equipment Systems | 40 |
| Planning for Manufacture | 40 |
| Engineering Accounting & Economic Analysis | 60 |
| Manufacturing Processes and Material Properties | 40 |

| | |
|---|---|
| Oral and Written Communications | 56 |
| Administration | 4 |
| Total hours | 240 |

The other side of our Education Center activity deals with Management. We have 10 levels, from Section Chief to President. More than 18,000 are in this category and, as you see, more than 20 percent attended the center in 1970.

MANAGEMENT

STUDENT ENROLLMENT - 1970

| | |
|---|---|
| New College Graduates | 919 |
| Upper Level | 100 |
| Middle | 646 |
| Department Chief | 574 |
| Section Chief | 1402 |
| Other | 156 |
| | 3797 |

I'm going to discuss the first level, Section Chief, for two reasons: (1) to show the corporate center's curriculum--a one-week course--which concentrates on leadership and motivation, and

MANAGEMENT SEMINAR

FOR SECTION CHIEFS

| | | |
|---|---|---|
| Monday | Man in the Middle | Supervisory Communications |
| Tuesday | Effective Work Climates | Listening--A Critical Skill |
| Wednesday | Upward Communications | Motivation to Work |
| Thursday | Working with Peers | Planning for Improved Work Teams |
| Friday | Planning for Improved Job Performance | |

(2) because this is the management level in our total training effort that is receiving the greatest amount of attention in the way of refurbishing, reorientation, and remodeling.

One naturally would ask the question, "Why so much change?" Because here is where we anticipate the largest number of new supervisors--more than 10,000 by the close of the decade. They will be closer to and share the attitudes and vicissitudes of the "now" generation. They will need administrative skills, basic at first and more advanced as they grow. They will embrace new learning styles.

So, we have been charged with designing, developing, and implementing a new Supervisory Education Plan for the first level supervisor--the Section Chief, as we call him.

What does this plan consist of? Simply stated, this is a skill and knowledge learning process designed as a continuing process for newly assigned first-level supervisors throughout the company. To put this in proper perspective, we note this chart:

MODULE TIME SEQUENCE

| | | | | |
|---|---|---|---|---|
| WHAT | BASIC | ADVANCED | PERSONAL GROWTH | PROFESSIONAL GROWTH |
| WHEN | PROMOTE | 1st 6 MONTHS | 2nd 6 MONTHS | AS DESIRED |
| WHERE | LOCAL | LOCAL | LOCAL & CORPORATE | CORPORATE |

WHAT . . . defines the priority of application for the new supervisor

WHEN . . . indicates timing . . . basic is at a time of promotion or assignment to a new job

WHERE . . . shows the locus of training

All training is tied together by an Individualized Training Plan concept. It is a continuing sequence of training from the local to the corporate level over time. The individualized plan

provides a selection of courses pertinent to a specific supervisor, according to his needs. Further, the plan will be modularized! Separate one- to two-hour courses which will be self-study, self-paced, and taken by the supervisor at his location when it is convenient and then later, on a seminar basis at the CEC. No more waiting until 10, 15 or 20 Section Chiefs have been accumulated and then exposing all of them to the same curriculum. These modules will be using a variety of media such as: booklets, slides, audio tape, TV, or combinations thereof. Most of the material will be very basic, actually referred to as the "nuts and bolts" variety, or what one needs to know.

Courses are being developed in 14 basic subject areas, subdivided into over 200 topics that could become training modules.

BASIC SUBJECT AREAS

| | |
|---|---|
| Personnel | Labor Relations |
| Quality Control | Production Control |
| Efficiency | Communications |
| Contracting | Organization |
| Managing People | Accounting |
| Planning | Job Knowledge |
| Wage Administration | Benefits |

Examples of modules produced and in use now are depicted here. They are in booklet form and require a cassette tape. About half those now being developed are 35 mm carousel and cassette tape--synchronized and self-activating.

MODULE DEVELOPMENT PROCESS

- Task Analysis
- Media Design
- Certification
- Evaluation

Taking a closer look at the Operator Performance Module, as an illustration, we point out that it is used for training manufacturing production shop supervisors to figure individual operator efficiencies. One of the important aspects of our effort is to incorporate what we expect the supervisor-learner to be able

to do at the completion of training. Each module is prepared in a manner to ensure that the learner will know what he is to accomplish and then proceeds through training to achieve the objectives. His competency is evidenced by performance behavior in the process of training and on a post-test. Modules of the type displayed are fashioned through a task analysis process and are combined into curriculums for each supervisory job function. There are some 25 different identifiable functions in our company.

SOME OF THE

SUPERVISORY OCCUPATIONS

| | |
|---|---|
| Production Shop | Installation |
| Inspection | Warehouse Foreman |
| Accounting | Engineer Support |
| Assistant Buyer | Personnel |
| Maintenance | Quality Control |

A curriculum for Production Shop Supervisor may be as indicated. Of course, this is just representative and very much abbreviated. Many more courses are involved because there are 14 basic subject areas. Those to be applied at the CEC would be programmed at a later period.

CURRICULUM

PRODUCTION SHOP SUPERVISOR

| # | SUBJECT |
|---|---|
| 4102A | Determining Operator Performance |
| 4103A | Handling Grievances |
| 4104A | Checking Time Cards |
| 4105A | Job Planning |
| 4106A | Quality Control |

An Individualized Training Plan is worked out for each new supervisor. It is shaped according to the individual's needs. His background is considered, his assignment/curriculum is selected, the specific characteristics of the particular contextual situations are reviewed, and then the plan is tailor-made. He trains on what he needs--nothing more, nothing less.

INDIVIDUALIZED

TRAINING PLAN

Priority Name_____

| # | Subject | Schedule | Date |
|---|---|---|---|
| 4102A | Determining Operator Performance | Yes | 9/2 |
| 4103A | Handling Grievances | No | --- |
| 4104A | Checking Time Cards | No | --- |
| 4105A | Job Planning | Yes | 9/2 |
| 4106A | Quality Control | Yes | 9/3 |

Again, this is just an abbreviated representation. To personalize this one a bit, picture the individual as a former shop steward, a labor representative who becomes a section chief in a production shop on September 1st. He didn't need subjects 4103A or 4104A because of his background. The other three were a must: he will have 35 to 40 operators working for him (4105A) and their wage incentive bonus is based on their efficiency (4102A). And at the present time, the particular product is at a critical point relative to its quality level. Thus, blocking in the specific "Quality" module early is important, too.

Now that we have discussed the plan, the product, the training modules and their application, let's spend a few minutes on process and answer the question, "What process is being used?" It is essentially a systems approach. We call it task analysis. Robert Mager describes the process as:

> . . . A systematic procedure of collecting, recording, and analyzing data concerning what a person does when performing a job, group of tasks, or single task.
>
> . . . It identifies what knowledges and skills are necessary to efficiently and effectively perform the job.
>
> . . . It includes procedures for identification of problem areas and for determining which of these areas can be solved by training. The data is used to determine what a trainee should learn in a training situation.

Discussing this in a very abbreviated fashion, we have data collection: some 20 former supervisors have been assigned to gather information from their colleagues throughout the company,

interviewing 25 to 30 supervisors to learn what they do on their job to accomplish the specific task involved. This data is organized into a pattern (a sequential list showing item frequency and activity involved). Then they take each item and detail it. Those items of high incidence, frequent mention, and substantive import provide in-depth information. All this results in identification of most appropriate items to describe as "objectives." These are stated in performance terms such as:

. . . Write a description
. . . Locate and fill out a form
. . . Define the term
. . . Review, decide and indicate

And during criterion testing, the proficiency of the individual is tested--how well does he do the item described?

Actually, the performance of experienced incumbents (control group) is compared against that of inexperienced aspirants (experimental group) and specific objectives are either kept in or ruled out. In fact, if aspirants know all the answers, training isn't actually necessary, and in practice . . . if we have collected our data properly! The criterion test feature verifies or validates the specifics and enables the developer to recognize appropriate adjustment.

Module preparation connotes training material design:

1. Deciding on key points to be trained

2. Determining appropriate strategy to be employed

3. Settling on the particular medium or media

Here, one must consider the "hands-on" aspect, i.e., what the supervisor does--the physical and/or mental activity such as filling out forms, referring to manuals, using a checklist, figuring out a problem, or compiling a list. Also, the context or situation in which the supervisor operates, must be considered, be it office, shop, reel yard, customer premises. Is he at a base location or in the field? Is he near sophisticated training facilities or not? Field test means just that--to take the module to the locations and try it out, finding out what bugs or wrinkles remain and "de-bugging" or ironing them out. Then, the CEC certifies the module for distribution to the respective field trainers at the many locations previously mentioned for application to the newly assigned supervisor. It is certified only when we have reasonable proof that the data is sound, that it is technically accurate, that it teaches, and that the student learns.

In closing this description of the new training development plan, I would be remiss if I gave the impression that we have achieved success. Actually, we have just started. The four modules produced to date do teach. The learner is able to demonstrate by performance that he has acquired the skill or knowledge involved. One might say that we are teaching the test and I would have to agree and quickly add that that is exactly what we want to do. The objectives in the post-tests are performance statements which are what the successful supervisor does on the job.

In conclusion, I believe that it would be appropriate to ask a few questions:

1. Is there a message in this presentation?

2. How can these experiences *et al.* provide a benefit to you?

Yes, there is a message. Industry is involved in education/training in a big way and must be involved for its own survival. The industrial approach to education/training is not unlike that found in the public sector.

What benefit has our approach for you? Industry needs you and is willing to work with you, shoulder to shoulder, to bring about change. As has been said, " . . . if the purpose of training is change . . . our nation must demand a full measure, for the future is yet to be discovered."

Let us discover it together.

# PERFORMANCE BASED TEACHER EDUCATION

*Calvin J. Cotrell* — Research and Development Specialist
The Center for Vocational and Technical Education
The Ohio State University

This presentation provides a brief overview of two Center research and development projects in teacher education which relate to the personnel development theme of this seminar. These efforts are referred to as performance-based teacher education. While the focus is on performance-based teacher education, many of us at The Center believe the model would be applicable to performance-based personnel development for all kinds of educational personnel--from paraprofessional to supervisory and administrative personnel for both state and local-level operations.

Present efforts at The Center developed in response to demands for improved systems of teacher education and are based upon a study of the common and unique elements of pedagogy in the project entitled Model Curricula for Vocational and Technical Teacher Education. Over 1,000 vocational personnel representing all states and vocational services participated, thanks to your cooperation. The project was concerned with learning what the pedagogical performance requirements were for vocational and technical teachers and what differences in requirements existed among the vocational services.

An occupational analysis methodology was used to identify the competencies of teachers. Task forces and a critical incident study were used to verify the competencies.

Phase I was concerned with the performance requirements of teachers of conventional types of programs in agricultural, business, distributive, health occupations, home economics, technical, and trade and industrial education. Two hundred and thirty-seven performance elements or competencies were identified. Only minor differences were found in the pedagogical performance requirements for teachers of the various vocational services.

Phase II was concerned with the performance requirements of teacher-coordinators of cooperative programs in off-farm agricultural, office occupations, distributive, wage-earning home

economics, trade and industrial, and special needs education. Again little difference in the pedagogical performance requirements of teachers was found among the vocational services. This phase identified 385 elements, which were verified and divided into 10 categories: program planning, development, and evaluation; planning of instruction; execution of instruction; evaluation of instruction; management; guidance; school-community relations; student vocational organization; professional role and development; and coordination; and then into 50 clusters, for example:

Category: Planning of Instruction

Cluster: Plan a Lesson

Performance Elements:
- Identify the specific objectives for a lesson.
- Select teaching techniques for a lesson.
- Plan student learning experiences for a lesson.
- Write a lesson plan.

The data from the two phases were merged to form the foundation for the development of 384 performance-oriented general objectives for use in guiding the development of new professional education curricula. It is felt that the information will also be useful in revising existing curricula, evaluating teaching, and establishing certification requirements.

We are now moving into a developmental project based upon the findings of these earlier efforts to produce modules of model curricula. During the first year our goal is to develop and pilot test 72 modules. The project, known as Cooperation Development of Professional Education Curricula, is designed to develop and evaluate viable teacher education curricula which will be performance-based and will emphasize: individualized instruction, the core concept and the cooperative education concept.

The curricula being developed are performance-based, that is, based upon competencies which have been identified as being important to successful teaching and relevant to the needs and duties of teachers. While the curricular modules are being designed to be used primarily as directed self-instructional packages to facilitate individualized instruction of preservice and in-service teachers, we expect them to be useful to teacher educators as guides for planning group instruction.

Since very few meaningful differences were found in the pedagogical performance requirements among the teachers in the various vocational services, we are identifying the essentials and are attempting to eliminate many of the present duplications in offerings by developing as many core-type modules as possible which may be used as common offerings by teacher educators and common learning experiences by teachers in each of the vocational services. Thus, development and teaching energies may be channeled and merged to provide greater efficiency in module development as well as in personnel preparation. Certainly, we can expect greater quality in instruction and learning.

By applying cooperative education concepts in teacher education we expect to effect greater efficiencies also. In preservice programs, we propose to get the prospective teacher into the school setting as soon as possible as a paraprofessional and let him grow to the level of professional teacher in an organized program of those experiences. At the same time he will be acquiring the correlated and integrated related pedagogy through the small modules of directed individualized instruction.

Wouldn't it be great to have preservice or in-service teachers take only the modules of instruction that they need and at the time they need it?

Small units of curricula of teacher education that are performance-based permit the correlation and integration of related pedagogy with the job needs of the teacher or prospective teacher.

In many preservice programs, much of the pedagogical methods are pumped into prospective teachers prior to student teaching. They find it of little value because they do not understand the need until they get involved with students in a real school experience. If prospective teachers can get more real school experience in the early years of their preparation and get the pedagogy when they see the need for it, we believe teacher educators will find their efforts to be more productive.

If candidates may take performance tests to prove their capability in certain teaching competencies without having to take a full semester course for certification credit, we will have saved much teacher education time and will have happier in-service teachers. If a teacher can take a small unit of instruction that he or his supervisor feels is needed to improve instruction and take it when he needs and wants it, we will have more efficient teacher education. Too often in the typical semester extension program, particularly for the beginning teacher, certain courses may not be offered at the time a teacher needs them. That is, often when a teacher needs help in lesson planning and/or course construction, history and philosophy courses may be the only ones offered.

We believe that it is possible to eliminate much of the overlap and duplication that currently plague vocational and technical teacher education, i.e., the same courses being offered by each of the different services. If this can be accomplished and good instruction can be provided, another efficiency will be experienced through endeavors to apply the core concept in teacher education.

The current development project is being conducted in conjunction with the state departments and one university in each of two states, Missouri and Oregon. The curricular modules are being prepared through the cooperative efforts of Center staff on site at each university (The University of Missouri and Columbus and Oregon State University). The efforts of the agencies are being coordinated by The Center. We are very grateful to the state directors, B. W. Robinson and Leonard Kunzman, for their encouragement and support of this project in their states.

Some 25 institutions and 32 criteria for the selection of the sites were considered in planning the project. You may wonder why it is "the cooperative development project" and why two cooperating institutions were selected. We could have contracted with one institution or we might have developed the curricular modules at The Center and then tried to install them in teacher education institutions. But we believe the teacher education curricula will be of higher quality and more acceptable to others as a result of their development in the real world and the involvement of many vocational personnel, all vocational services, different geographic locations, and different educational agencies.

The cooperative agreement and project management structure call for the Center site team to work cooperatively with the department heads (W. R. Miller and Henry Ten Pas) and faculty in the development and testing of the modules. Each Center site team consists of two full-time research and development specialists, one half-time graduate research associate, and one full-time clerical person. These personnel will work with the faculty of the cooperative institution, which is contributing 12 man days per week or more (or 2.4 FTE) to work on the writing and reviewing teams.

A coordinating board, consisting of the project director, the site team leaders (James Hamilton and Robert Andreyka), the department heads, and the state directors, has been established to resolve problems and expedite the work of the project. This board is scheduled to meet quarterly.

A review board, consisting of the state directors, the deans (Bob G. Woods and Keith Goldhammer), the director of The Center (Robert E. Taylor), and the Center coordinator for development

(Donald C. Findlay), will meet twice a year to evaluate the progress of the project.

Stage I of the effort, which is just beginning (our Center site teams arrived on the two campuses during the first week of September), will consist of writing and reviewing of modules. We plan to have six modules in development at each institution simultaneously. Each of our research and development specialists will lead writing teams for three modules and reviewing teams for three modules at a time. Each module will be written by a small team, reviewed by another small team, and then revised as necessary. The module will then be reviewed by the faculty of the vocational education department and sent to the other cooperating institution and to The Center for review. Suggestions for improvements on the module will be synthesized by The Center project staff in Columbus. The modified module will then be returned to both institutions for pilot testing. After pilot testing (Stage II) with a small number of volunteers, suggestions by the faculty and students for improvement of the module will be sent to The Center, where they will be synthesized and the module revised again.

Every effort will be made to develop modules which are acceptable and usable for teacher educators and their students and to ensure that a module produces an expected change in behavior or helps the teacher or prospective teacher develop the competencies desired.

In the second year, we hope to develop an additional 36 modules, though we expect to concentrate our efforts on intermediate testing and final testing (Stage III). The modules will be revised and hopefully made available to other institutions. In the intermediate testing, 18-20 students will be involved at each institution. The final testing will involve 30-50 students at each institution. These are our present plans which are subject to change and revision if results are not forthcoming.

Incidentally, the module package or booklet, as presently conceived, will consist of:

Title

Prerequisites

Directions

Introduction

Performance Objectives

Pre-Assessment

Learning Experiences

Alternate Learning Experiences

Post-Assessment

Reference List

While we are currently short of funds for the preparation of new media for all the desirable resources for learning experiences in the modules, we will make the most of what is available and also hope for some additional support for this aspect of the project from other funding sources.

I personally would like to see this effort in teacher education expanded to include the development of curricular modules for the preparation of paraprofessional personnel and other types of specialized educational personnel, including supervisors and administrators. The processes and systems which are viable in this present project should be applied to these other areas to make a programmatic thrust in personnel development for the next several years.

We trust that we will be able to offer some preliminary results of this development project in the form of small conferences at the Missouri and Oregon sites in a few months to share with state leadership personnel our experiences in developing and testing the teacher education modules.

SYMPOSIUM: ROLES AND RELATIONSHIPS FOR PERSONNEL DEVELOPMENT OF STATE DIVISIONS OF VOCATIONAL EDUCATION, UNIVERSITIES, AND LOCAL EDUCATION AGENCIES

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# ROLES AND RELATIONSHIPS FOR PERSONNEL DEVELOPMENT OF STATE DIVISIONS OF VOCATIONAL EDUCATION, UNIVERSITIES, AND LOCAL EDUCATION AGENCIES

*George B. Brain*

Several years ago John Dewey delivered the warning, "that the real danger is in perpetuating the past under forms that claim to be new but are only disguises of the old."

Hopefully, the changes that must occur in the roles and relationships of state departments of vocational education, universities and local education agencies will prove to be not mere disguises of the old about which Dewey warned, but rather will be based on serious thought and substantive commitments.

Most of our universities are now publicly on trial by their students, alumni, laymen and representatives of the several professions whose members depend in part on our institutions of higher learning to provide the leadership in both preservice and in-service education for the further development of professional personnel. And if universities ignore--or prove to be ineffective in helping to meet--these newer expectations, they may well expect to be redesigned in major ways or replaced altogether. Society established them and society can and will replace them if necessary. Success in the critical and significant task of preparing vocational educators to meet present and future needs will not be experienced by our universities if they merely attempt to add some measure of difference to their existing efforts. The needs are so great that the approach must first generate a total commitment to career education which heretofore has not characterized most universities. Thus while universities have typically embraced without quibble obligations to educate all kinds of professional workers, equal treatment for the occupations has been viewed with visible reservations.

The imperative of career education is inescapable despite the fact that it is fraught with contradictions for the universities. The existence of an unprecedented need for vocational technical competence is extremely well documented. That this need is the subject of concrete, powerfully vocalized and strongly promoted demands for a higher level of vocational technical education is also certain. It is doubtful that any university can

respond to these demands in the same manner that it has in the past and equally questionable that it should do so if it could.

The weight of the present demand supports the proposition that the total establishment for education must now be geared up to make vocational technical education a prime commitment and engagement.

It is my belief that universities are now beginning to overcome their traditional reluctance to accept major responsibilities for career education because increasingly universities are recognizing that they possess special resources to deal with vocational technical needs and because a variety of university publics are demanding that universities exercise leadership in providing programs and services to the vocations. It is also my belief that as institutions of higher learning assume their long delayed responsibility for the preparation and development of vocational technical educators that no radical restructuring of the university nor of its typical roles in research, teaching and service will be required. What will be required--and this requirement is more easily stated than accomplished--is a total university commitment to the importance and to the need for the preparation and development of personnel for the world of work. There must also be willingness on the part of the university to involve many more people in the process of preparing vocational educators than has usually been the case.

Many in higher education have not yet recognized it but a quiet revolution affecting career education is now in process and has been underway for almost half a decade. The reason its efforts have not been more visible is that its principal leaders have hardly taken on the appearance of revolutionaries. They are not vocal persons intent on the creation of a new movement in education. Rather, they are a generation of observant and serious minded scholars and practitioners who are essentially realistic about vocational technical education and what the university must do to discharge its responsibilities to it. Their plan is to change the roles and the working relationships among the people involved rather than attempting to bring about improvement by imposing a new structure on vocational education or the university.

While it is clear to them that career education is a necessary component of general education--that is, of education common to all persons--it is not quite so clear where the preparation agencies should make a distinction between education for work and training for a particular occupation. I still hold to the idea that career education is an integral part of general education and that everyone in the field of education has to some degree a vocational education responsibility. And by the same token every vocational education practitioner has to some degree a general education responsibility. We all need to be certain that everything

we do in preparing personnel for their responsibilities in the field of vocational technical education is, in fact, directly related to the development of the competence they are going to need. We need to put aside the debate over academic vs. work experience preparation. Evidence that education per se is the essential factor or that the training itself is on the beam of what is needed is still scarce. There is also the persistent problem of what constitutes vocational technical education of high quality, and of how high quality career education can be staffed and provided.

A comment about a new concept which has a bearing on the development of vocational technical personnel is also in order. It is the surge toward professional status for educators. Educators at all levels have long aspired to full professional status and recognition. The emphasis on competence and the development of performance-based criteria for entry into the field are visible signs of the thrust which educational leaders are making to achieve professional status. But even as education is trying to fulfill all the old criteria for professions, the criteria themselves are changing and a new conception of professionalism is developing. Practically gone is the self-sacrificial, emotional kind of devotion to duty and dedication with mainly internal psychological rewards. In its place is a new militancy calling for more generous external social rewards. There is also a new sense of political skill and power, a willingness to do political battle with citizen groups and even legislatures. But the real question before vocational educators is whether they can shore up the quality of their professionalism by giving more rigorous attentio: tc the need for more systematic organization of both the theo: and practice contained in the sustaining body of knowledge The professional, as I define it, is that man or woman who in sts every task or duty with consistent competence, with the disc pline of mind and spirit which always precedes the doing of the job. The professional is one who has trained himself in whateve it is that he pursues. He confronts each new challenge, no matter how small or large, with an absolute zeal to do what needs to be done with excellence, as nearly perfect as a human can do. I would count the foremost asset a man can possess is to be respected by his peers for the discipline of self that instructs him in the knowledge of his craft. This means a dedication and a work schedule that sometimes can be rather dismaying, but there is no other way to learn to do what needs to be done without that zest for excellence which is the mark of the professional and incidentally, the specification for achievement. Universities, SDVE and LEA personnel all share a mutual obligation for developing this attitude of professional commitment.

We are also going to have to learn to use the political process more astutely and more effectively to open roads for further educational advancement. There are currently a number of very

productive efforts engaging members of the executive and legislative branches of government as serious students of education. The Legislative Work Conference of the Education Commission of the States is furnishing one classic example. It is significant to observe that state officials and legislators are making these learning efforts succeed by a desire to be studious about education. They are just now commencing to concentrate their attention on career education. As a result more and more legislators are creating the opportunity to consider "educational programs" produced by careful collaborative endeavors involving many groups and bearing the power of organized backing so necessary in the way we have opted to get most things done in America. But this legislative awareness, which at the outset tends to be supportive, will quickly shift to a negative posture if career educators fail to produce the results promised.

A final problem that confronts the development of vocational technical education personnel is the matter of certification. The regidity of certification and accreditation requirements--spawned in an era when courses and compliance with minimum expectations was a real problem--is undoubtedly outmoded in an era when career education is in the hands of a wide array of workers. Some of these may require almost no preparation measurable in university semester hours. A few efforts to meet this new look of the staff for vocational education have been made in some areas. But the emergence of statewide plans to define the approaching new look in terms of workers foreseen, and to develop the requisite preparation and certification programs as needed is not yet a visible phenomenon. State leaders of vocational technical education need to speak out boldly on this issue.

In a society built on the principle of division of labor--differentiation of functions in order to accomplish specific tasks--we should be able to identify and emphasize certain distinctive functions of the local education agency, the state department of vocational education and the college and university segments of our educational system. Keeping these relatively clearcut identifications of duty and allocation of responsibility clearly before us should help to define the role and the relationship of the several agencies in personnel development. It is not a question of which of the levels of the educational organization and operation is most important. There is not a certain amount of power that has to be divided up among competing enterprises. The world of power is not a closed world, but an open one. Adding power somewhere does not diminish but rather tends to increase the power of other units in the education family. What is needed in our complex educational relationship is not to cut anyone down to size or build up somebody else; what is needed is the joint effort of every segment, an effort which will increase the power and enlarge the opportunity for each part of our educational organization.

It is not enough just to suggest that joint efforts of one educational level will strengthen all of the levels; ways must be found to make these joint efforts integrated and effective.

We can summarize only a few of the techniques to deal with the problem. We can:

1. examine honestly and openly the basic assumptions upon which a cooperative program is going to operate, being sure to make a realistic evaluation of political considerations as well as educational relationships.

2. utilize the current economic squeeze on education to provide a positive force for developing new and different relationships among schools of education, state departments and local education agencies (State Supreme Court Decision on Educational Finance in California).

3. design teacher training efforts so they involve a true partnership among state departments, local education agencies and universities.

4. assume that no single model or pattern must necessarily apply to all areas or to all levels.

5. develop incentives, recognition and rewards for collaborative efforts.

6. recognize the earlier development of young people and the need to avoid prolonged adolescence and to experiment boldly with alternative career educational forms.

7. give attention to problems of articulation to avoid artificial separation and division among various levels of education. Government agencies, foundations and others now tend to differentiate vocational technical education from general education with unfortunate consequences. There is a need for an operational understanding that education is and can function as a continuum for maintaining certain discrete units.

8. carefully consider questions of certification, accreditation and other legal and institutional requirements.

9. evaluate programs and relationships among all agencies and not shy away from items difficult to measure or only focus on the quantifiable.

10. provide more and better information about career education to power groups and decision makers (legislators,

regents, school boards, community groups) and disseminate information on sound and realistic educational practices.

We can assume that certain trends and developments are here to stay, at least for the near future. This condition in and of itself will contribute to an improved image for vocational technical education. To have a dynamic orientation to the future, individuals must be provided with usable understandings of processes. Instead of preparing persons for new roles, preparation must focus on what a role is, how roles are created and how to move in and out of roles. Instead of preparing the person to operate in a fixed organization, preparation must focus on the dynamics of modifying organizations to meet changing objectives. Instead of learning set patterns of how to relate to other individuals, the learning must be on how to move in and out of relationships without losing humanness. Instead of learning vast sets of knowledge, generalization and methods of inquiry about the knowledge areas must be learned.

# ROLES AND RELATIONSHIPS FOR PERSONNEL DEVELOPMENT OF STATE DIVISIONS OF VOCATIONAL EDUCATION, UNIVERSITIES, AND LOCAL EDUCATION AGENCIES

*John R. Guemple*

The title of this discussion stimulates a variety of responses. It tempts the respondent to compose a list of desirable teacher competencies and then assign areas of responsibility to the various cooperating institutions. Among the people assembled here, however, are many outstanding teacher preparation leaders who are quite well informed regarding the pedagogical needs of personnel and the multitude of ways these needs may be addressed. It is, also, tempting to consider listing accreditation criteria. But we can identify the people in this group by stating that they have a background of teaching and administration in local education agencies and of attempting to solve problems related to instruction, facilities, equipment, finances, and the like. With these realizations in mind, it seems that a more appropriate and fruitful approach should include an investigation into some recent activities that promise several desirable new roles and relationships for personnel development between state departments of vocational education, universities, and local educational agencies.

We, who are vocational educators, have two paramount concerns--the individual needs of our students and the specific needs of the employers of our graduates. To concentrate upon one and ignore the other is simply not the way we think. Let me give you two examples of what happens from this dual concern.

> A little over four years ago representatives of several trade associations called on people in our department to express a concern they had identified. It seems that someone made a rather comprehensive study of their occupational cluster. The study revealed, among other things, that the average age of the group was quite high and that young apprentices were few in number. The concern was, quite naturally, the fear of a critical shortage in a vital occupational area, and a plea for assistance to attract young blood was made.
>
> At about the same time, in conferences with public school people, we were being told that a significant number of high school graduates were not being employed in occupations for

which they had been trained. A change of emphasis seemed mandatory, but there was a need to identify appropriate alternatives.

The result of these conferences permits us to tell about one of our most successful experiments. With the help of representatives from labor, management, public schools, and post-secondary institutions, a four-year curriculum in environmental technology was designed for public school students. (We define environmental technology as the variety of skills required to make a building habitable--such skills as plumbing, pipe fitting, sheet metalwork, air conditioning, instrumentation, etc.)

In the first year (grade nine) occupational orientation and aptitude determination are the primary activities, with limited periods of time devoted to a variety of broadening and finding laboratory experiences. During the second and third years (grades 10 and 11) specific pre-employment laboratory courses from the "regular" trade and industrial program are provided. The fourth year (grade 12) is used for cooperative part-time training, which provides actual experience in an approved training station.

At the conclusion of this four-year period, a graduate may be encouraged to continue his formal education in an institution of higher education, or he may enter his chosen trade's apprenticeship program with credit being given for the ability he has acquired through the program or he may move into the labor market with entry level skills. Now, how did our three educational components relate to this project? First, and foremost, all three were sensitive and approachable with respect to something that was not cut from a familiar pattern. The state department coordinated the efforts of the public schools, universities, and industry, earmarked sufficient discretionary funds and consultative assistance to design a course of study, equip several pilot programs, fund teaching positions, and finance intensive teacher-training activities. A university designated teacher trainers to provide in-service teacher training in two phases--one phase being designed for on-campus instruction, and the other providing itinerant on-site assistance. Local education agencies, after being apprised of the intended program, volunteered their administrative, counseling, academic, and vocational staff personnel to participate in a coordinated effort. The first class has graduated and the early returns are in. Everything at this point encourages us to discontinue the "pilot" designation and pursue similar methods in our attempts to improve vocational education for our students and their prospective employers.

Another example of the coordination of efforts by these three components can be cited in the case of a large metropolitan school district being concerned about some information that was produced by their follow-up program. It seems that some employers were unable to tell the difference between a high school graduate and a dropout--neither one was able to demonstrate sufficient skill at the time of employment. Several of these potential employers were concerned enough to agree to assist the schools to improve their instructional program by taking teachers into their operation for an intensive orientation. The firms did not have a plan for accomplishing this task and they did not have the personnel to design such a plan. A local college was approached and asked to design a teacher-training plan and, subsequently, implement it for the vocational staff, utilizing the personnel and facilities of local industries. A viable plan was designed and submitted to the state department of vocational education. The final returns are not in on this effort, but here is a case of a segment of the business world responding to a city school's plea for assistance, the school enlisting the readily available expertise of another educational institution, and the state department of vocational education financing the undertaking. It is not difficult to predict that the teachers who participated in this in-service training are going to produce graduates who are better informed and who will have the competence and confidence to secure their first full-time employment.

Well--two examples do not make a complete case, but they do illustrate the fact that there can be an infinite number of ways for the three major components of our educational system to work in concert in a much more effective way than any one of them can in isolation. I am convinced, however, and I hope I can persuade you to agree with me, that we must provide instruction that is realistic in the light of existing and emerging manpower requirements. This can be accomplished, but the prime requisite continues to be instructional personnel who have skill competencies and teaching competencies.

The state department of vocational education must exercise a leadership role regarding the planning of comprehensive personnel development programs. Fortunately, state departments have recently been provided an increased capability to encourage personnel development activities through the Education Professions Development Act. Part F, Section 553, provides funds for the states to improve, increase, and supplement ongoing vocational professional development programs. I suggest that EPDA funds give state departments of vocational education the ability to contract for specific developmental services. This, in turn, provides local education agencies an opportunity to identify and request services that will answer their specific needs. Universities, then, will

have an opportunity to effect some institutional changes as they provide contracted services which may be incorporated into their teacher preparation program. Whether it was the original intention of the law, or not--I do not know; but I have come to think of EPDA as a catalytic agent that has the capability to affect (through new and resourceful approaches) all of teacher education.

# CAREER DEVELOPMENT
# LOCAL EDUCATION AGENCY
# PEOPLE, PROCESS, AND PRODUCT

*George N. Smith*

In the mainstream of new purposes for children, youth, and young adults in terms of career education stands the local education agency. As the local school district assumes its newly-fashioned objectives to extend the range and improve the quality of career development opportunities, certain elements of change affect the probability of success.

The commitment to give young people more choices of, and better preparation for, occupational lives carries a serious responsibility. The responsibility is to avoid reinventing the wheel or to prevent recurrences of programs with little hope of addressing the problem adequately. Perhaps the perpetuation of the little-changed American public school in the past 100 years serves to indicate our unawareness of the needs of the majority of our youth. Seventy percent, more or less, of our secondary school graduates or terminants do not finish college. Most of them go through preparation for college, which seems aimlessness at best.

The demand for a comprehensive needs assessment to identify the discrepancy between what is and what ought to be is apparent. The LEA should plan carefully its destiny. After all, it is better to use a map if one seeks to get where he wishes to go.

The LEA has another important responsibility--the development of personnel. If the people of an organization participate in the total process of planning, organizing, implementing, and evaluating change, they are much more likely to create a better program and help it succeed. All too often, "democratic" institutions fail to involve the "governed." If trust and faith are invested in people to fashion an organizational improvement, the change has generally much higher commitment and higher quality. The LEA must function accordingly in establishing career education. Without participation and shared developmental authority, acceptance and quality may impair the hopes for success.

A key aspect of the LEA's unique role in personnel development centers around the climate to excel. A productive organization is one which tries to build improvement around its staff. Existing staff can reach the goals of career education. The need is to help people become more effective and to create a climate for achievement of the objectives. "Man lives by bread alone only when there is no bread," and school people have little anxiety about basic needs. Consequently, the drive to do well--to develop a feeling of progress--necessarily takes on greater significance.

In helping the learner, the role of the LEA is one of making available to learners (whether children, youth, or adults) a large variety of career alternatives from which to choose, assisting them in gaining the necessary skills needed to make effective personal choices and providing them with a laboratory (the community) in which these skills and the consequences of their initial career choices may be tested.

Thus, the LEA mandates itself to provide for each learner, knowledge of personal growth and development, interaction skills, and individual decision-making skills. If children and youth are to accept primary responsibility for career identification, each must be able to conceptualize, diagnose, and prescribe from a set of constraints which only he knows exist and to which he can assign priorities.

The "academic" program, then, becomes a strategy for implementing a world-of-work curriculum. In such a program, the traditional components of an educational program become viable only when necessary to the learner as he embarks on, and carries through with, a self-diagnosed, intrinsically motivated learning activity which operationalizes that learner's projected lifestyle and his preferable future. In other words, the total educational program is infused into the unifying theme of career development.

The educational program envisioned for career education is one that is learner-verified; one in which the total resources used, both material and personnel, will have been validated to assure a pre-specified degree of accountability. Only through learner-verification can each component of a system, which will necessarily regulate and marshall the available resources for the learner, continually provide a physical and psychological climate favorable to the individualness and uniqueness of that learner. Bandwagons become unfashionable and more effectiveness results.

Career education may be perceived as comprehensive training for one's vocational station in life, but to do so is unduly restrictive. The human organism normally changes occupational modes no less than three to five times during its work life. To

permit such flexibility it is essential for the LEA to open the horizons of youth for diverse decision capability. The LEA should allow and insure the acquisition of human "tools/skills" for self-actualizing choicing. The young adult needs "equipment" to make choices among world of work opportunity alternatives. Integration of this "equipment" is no less than critical.

Perhaps the greatest single constraint faced by an innovative and change-oriented educational program concerned with career development is the total elimination of "disadvantageness" . . . on the part of learners, teachers, administrators, and the community. Every school, every classroom, whether explicit or implicit, has goals. If these goals are expressed in terms of learner outcomes, then, to the extent that a student fails to achieve these goals he is disadvantaged. Such is the plight of teachers, administrators, and parents.

It is true that goals of education have been very broad and encompassing. The goals of schooling in a particular school system, and more specifically of an educational program such as career development need not be.

At the outset, such a program must recognize and deal with those types of "disadvantageness" revealed within the system, whether social, educational, or instructional. In this way differences may be capitalized upon. In doing so, exploration and exploitation of the uniqueness of those human resources involved in the system should occur. Such action will insure that "schooling" will not contribute as an "equalizer" but instead will promote the heterogeneity in our young adults that is so viably a part of their behavior in early childhood.

The LEA has still further tasks to perform. One important task is to coordinate the extension of career education beyond the school. The education of youth requires dissonance with limits upon possible alternatives. The community is the key to opening wider the career education of youth. The career education environment swirls in, out, around, and through home, school, industry, and community. Authentic field learning experiences ("hands-on" exploration, on the job training, instructional teams in industry, field internships, shared learning experiences, etc.) are tremendously important in development of career goals. Exploration and preparation only within the LEA's classrooms seems unduly dreary, indeed.

The LEA can provide the opportunity for young people to choose and prepare for careers. The LEA can provide the climate for success of career education. The local education agency can meet its objectives to prepare young adults for meaningful work for post-high school training. How and whether it does hinges upon its ability to recognize and commit itself to this mission.

# A PERFORMANCE BASE FOR STAFF DIFFERENTIATION

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## THE PROBLEM

Ordinarily, one would not think of calling a pediatrician to perform delicate brain surgery. Yet, traditional practices in education which treat teachers as interchangeable parts persist and fail to make effective use of the diversity in occupational and educational skills, competencies and experiences among a typical vocational instructional staff.

Development of an efficient and effective instructional staff organization is dependent upon the ability to differentiate among individuals with different skills and competencies, as well as the ability to differentiate among instructional jobs. Our failure to get away from traditional notions and staffing practices has not been the result of an inability to recognize differences among individuals. A substantial and growing body of knowledge, sophisticated instrumentation, and interpretive procedures exist for the identification and assessment of a wide range of individual abilities and interests. We will be able to effectively use this knowledge and capability to achieve a better match between a man and an instructional job only after we have comparable knowledge and procedures for analyzing the instructional job component of the man-job relationship.

The identification and degree of differentiation of instructional tasks and responsibilities actually required by the instructional program and performed by the staff is of critical importance. Performance-based staff differentiation involves an analytical breakdown of the tasks necessary to accomplish the goals of the school. It is a process of identifying and classifying the duties, tasks or roles which the educational system requires,

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*The writer would like to acknowledge the invaluable contributions and assistance of Dr. Joseph P. Arnold, one of the originators of the study and formerly co-investigator on the project.

then defining the types of personnel required and their assignment to sets of tasks. A problem with this approach has been the development of valid and reliable procedures for instructional task analysis and differentiation. It was this component of the problem to which this study was addressed.

For this study, instructional tasks "performed" were considered to be indices of the tasks "required" by the instructional system to accomplish the goals of the school. Empirical observation of the tasks performed by instructional personnel was judged to be a valid and direct measure of the tasks actually required by the current instructional system.

## OBJECTIVES OF THE STUDY

Specifically, the objectives or expected outcomes of the study were:

1. An inventory of the most critical pedagogical tasks and functions required by an instructional system.

2. Determination of the distribution of time spent on tasks by a sample of teachers and related instructional personnel in community colleges and technical institutes.

3. Groupings or clusters of instructional-related tasks which:

   (a) were relatively unique, non-overlapping collections of tasks, and which

   (b) collectively accounted for all of the significant functions required by the instructional system.

## STUDY SAMPLE

Data for the study were obtained from a sample of 307 instructional related personnel from six technical institutes and community colleges providing occupational training programs. Table 1 summarizes selected characteristics for the total sample and gives a description of the sample based upon designated Title or Position.

## THE INSTRUCTIONAL TASK INVENTORY

Procedures and guidelines were available from the Air Force for the initial development of a job inventory and included descriptions of: length of inventories; construction, review, and

TABLE I

A SUMMARY OF SELECTED CHARACTERISTICS
OF THE STUDY SAMPLE BY TITLE OR POSITION DESIGNATION

| TITLE OR POSITION | NO. OF SUBJECTS | SEX | | AVERAGE AGE | AVERAGE TEACHING TIME | AVERAGE NO. OF YEARS OF EDUC. | AVERAGE YR. OF LAST SCH. ATTEND. | MEAN NO. OF TASKS PERFORM. |
|---|---|---|---|---|---|---|---|---|
| | | M | F | | | | | |
| ADMINISTRATIVE | 50 | 40 | 10 | 41.5 | +1/4 | 18 YRS. | 1963 | 93.0 |
| INSTRUCTIONAL | 220 | 151 | 69 | 41.1 | +3/4 | 17 YRS. | 1963 | 83.9 |
| SUPPORT | 37 | 5 | 32 | 31.7 | -1/4 | 14 YRS. | 1963 | 22.5 |
| TOTAL | 307 | 196 | 111 | 40.0 | 3/4 | 17 YRS. (S.D.=2 YRS.) | 1963 | 77.5 |

editing of task statements; techniques for reviewing and revising preliminary inventories; and construction of final inventories (Morsh and Archer, 1967). These guides, along with a job inventory developed and used for instructors in the Air Force, and three additional inventories developed by other researchers (Moon, 1969; Andreyka, 1969; Cotrell, 1971), were used in the construction of the task inventory for this study.

The final inventory developed by our project team consisted of 282 pedagogical task statements arranged under eight categories of instructional related activity and required approximately 20-50 minutes for completion.

Each subject checked the tasks he performed as part of his regular job. He then rated each of the tasks he checked on a seven-point relative time-spent scale. A rating of one indicated that he spent very little time on the task compared with the other tasks he performed. A rating of seven indicated that he spent a large amount of time on the task.

## ANALYSES AND FINDINGS

Preliminary versions of our instruments and directions for their use were pilot-tested at the Columbus Technical Institute and revised. The data obtained from our study sample were coded, punched on computer cards, and sent to the Human Resources Laboratory at Lackland Air Force Base, Texas, for analysis.*

The Human Resources Laboratory has developed a comprehensive set of computer programs, called CODAP, which is essentially an occupational information retrieval system. It contains dozens of programs designed to analyze occupational data and provide different information for investigators and program managers. Only selected output obtained from the "Automated Job Clustering" programs will be described, roughly how it was obtained and what it told us about the sample.

The job clustering programs grouped subjects according to the similarity of their jobs. Composite task-level job descriptions were generated for each of the groups identified in the clustering program. Possible job types within an occupation or a career field were then identified and described.

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*The Center would like to gratefully acknowledge the invaluable assistance in the analysis of the data provided by Raymond Christal, Wayne Archer and their colleagues at the Human Resources Laboratory, Lackland Air Force Base.

Perhaps the most important characteristic of the automated clustering program is that groups were formed empirically and objectively. The machine ignored all information about subjects except the report of how their time was distributed among the tasks they actually performed. Job titles, positions held, personality characteristics, years of experiences and all of the other background data on subjects could not bias or influence the grouping procedure.

Before the grouping process began, a job description was computed for each of the 307 individuals in the sample. This was a description of how each individual's work time was distributed over the tasks he performed. Next, the percent overlap of each of the 307 individuals with every other individual in the sample was computed in terms of percent time spent on tasks.

A matrix of the overlap values between all possible pairs of subjects was generated. This matrix, called the "original overlap matrix," was used to begin the clustering program.

At the first stage in the clustering process, the computer searched the original overlap matrix and located the two subjects with the most similar job descriptions. These two cases were merged into a single group and a new matrix of overlap values was computed for the entire sample using the average overlap values for the new group as though it were a new subject in the sample. This matrix was used for the next stage in the grouping process. The process was iterative and hierarchical with new matrices constructed at each stage until all individuals were finally merged into a single group.

Figure 1 is the branch diagram which shows the sequence in which groups were formed in the clustering process. Each circle in the diagram indicates the stage when the group was formed and the number of individuals included in the group.

The problem at this point was to decide which, if any of the groups in the branch diagram, were significantly different job types. A great deal of information was outputted to help make these decisions. For example, for each of the groups in the branch diagram, the average overlap within the group, in terms of percent time spent on tasks, was available as was the percentage of overlap between the two groups which were merged. It was also possible to obtain task-level job descriptions for any or all of the groups formed. Complete task-level job descriptions for each of the 42 shaded circles (groups) shown in the branch diagram were obtained. Based upon the between and within group overlap values for these 42 groups and a visual inspection of their position and sequence in the branch diagram, it was possible that these represented significant job types. Figure 2 is an example of a small part of the task-level job description for group 71. The complete

# FIGURE 1

## BRANCH DIAGRAM OF CLUSTERING SEQUENCE

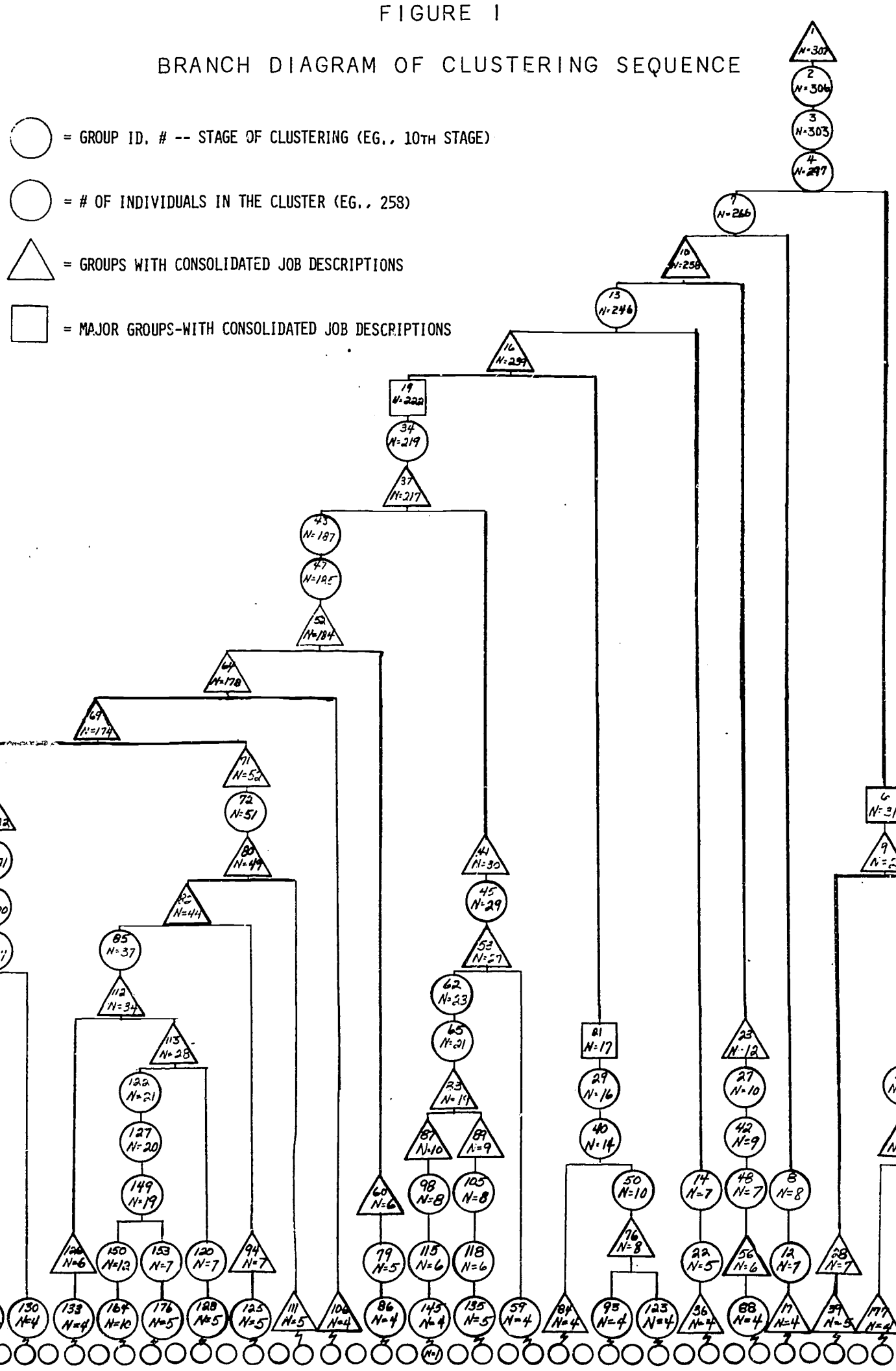

FIGURE 2

GRP071 PAGE 1

JOB TYPE CLUSTER DESCRIPTIONS - OHIO STATE DIFFSTAF SURVEY

TASK JOB DESCRIPTION, CASES= 307, TASKS= 282, DUTIES= 8, MBRS= 52
KPATH ORDER FROM 123 TO 174 GROUP STAGE= 71

| D-TSK | | DUTY/TASK TITLE | CUMULATIVE SUM OF AVERAGE PERCENT TIME SPENT BY ALL MEMBERS | AVERAGE PERCENT TIME SPENT BY ALL MEMBERS | AVERAGE PERCENT TIME SPENT BY MEMBERS PERFORMING | PERCENT OF MEMBERS PERFORMING | TASK SEQ NO |
|---|---|---|---|---|---|---|---|
| C | 6 | DETERMINE FINAL GRADE (E.G. ǂ CLASS, TESTS, AND HOMEWORK) | 94.23 | 1.91 | 1.80 | 1.80 | |
| E | 27 | PROVIDE INDIVIDUAL INSTRUCTIONAL ASSISTANCE TO STUDENTS | 88.46 | 1.99 | 1.76 | 3.55 | |
| E | 1 | ASK QUESTIONS ORALLY | 96.15 | 1.79 | 1.72 | 5.28 | |
| B | 4 | COMPUTE GRADES | 94.23 | 1.82 | 1.72 | 7.00 | |
| E | 23 | PRESENT A LECTURE | 92.31 | 1.86 | 1.72 | 8.72 | 5 |
| B | 18 | RECORD TEST SCORES AND GRADES | 94.23 | 1.82 | 1.72 | 10.43 | |
| C | 24 | EVALUATE ONE'S OWN TECHNIQUES AND METHODS OF TEACHING | 88.46 | 1.87 | 1.65 | 12.09 | |
| E | 25 | PRESENT LESSON USING STANDARD VISUAL AIDS (E.G. ǂ CHALKBOARD, FLANNEL BOARD, FLIP CHARTS, AND MODELS) | 82.69 | 1.92 | 1.59 | 13.68 | |
| B | 24 | SCORE TESTS | 80.77 | 1.86 | 1.50 | 15.18 | |
| E | 28 | REINFORCE LESSON THROUGH SUMMARY AND REVIEW | 78.85 | 1.90 | 1.50 | 16.68 | 10 |
| E | 2 | ASSIGN OUTSIDE WORK | 92.31 | 1.62 | 1.49 | 18.17 | |
| C | 2 | ADMINISTER WRITTEN EXAMINATIONS | 84.62 | 1.75 | 1.48 | 19.65 | |
| E | 6 | DEMONSTRATE A PRINCIPLE OR SKILL | 73.08 | 1.97 | 1.44 | 21.09 | |
| B | 10 | MAINTAIN CLASS ATTENDANCE RECORDS | 84.62 | 1.69 | 1.43 | 22.52 | |
| E | 32 | UTILIZE LIBRARY RESOURCES | 82.69 | 1.70 | 1.40 | 23.92 | 15 |
| H | 10 | ASSIST STUDENTS WITH ACADEMIC PROBLEMS | 82.69 | 1.69 | 1.39 | 25.31 | |
| F | 51 | PLAN THE INTRODUCTION OF A LESSON | 75.00 | 1.84 | 1.38 | 26.70 | |
| F | 54 | PREPARE LESSON PLANS | 73.08 | 1.80 | 1.31 | 28.01 | |
| E | 31 | USE PROJECTION AND AUDIO EQUIPMENT (E.G. ǂ FILM STRIP AND SLIDE PROJECTOR, CLOSED CIRCUIT T.V., MOTION PICTURES, OVERHEAD PROJECTOR) | 84.62 | 1.53 | 1.30 | 29.31 | |
| E | 12 | INTRODUCE A LESSON | 71.15 | 1.74 | 1.24 | 30.55 | 20 |
| F | 22 | DEVELOP INSTRUCTIONAL MATERIAL (INFORMATION SHEETS, TRANSPARENCIES, AND COURSE HANDOUTS) | 69.23 | 1.76 | 1.22 | 31.76 | |
| G | 5 | PARTICIPATE AS A MEMBER OF PROFESSIONAL ORGANIZATIONS | 73.08 | 1.64 | 1.20 | 32.96 | |
| F | 58 | REVIEW COURSE OUTLINES, LESSON PLANS, OR PRESENTATION METHODS | 67.31 | 1.73 | 1.17 | 34.13 | |
| G | 4 | MAINTAIN OR IMPROVE TECHNICAL COMPETENCE IN AREA OF SPECIALTY | 63.46 | 1.83 | 1.16 | 35.29 | |
| C | 31 | FORMULATE OBJECTIVE TEST QUESTIONS (E.G. ǂ TRUE-FALSE, MULTIPLE CHOICE, AND COMPLETION) | 67.31 | 1.73 | 1.16 | 36.45 | 25 |
| F | 31 | FORMULATE OBJECTIVES AND SELECT INSTRUCTIONAL CONTENT FOR A COURSE | 63.46 | 1.81 | 1.15 | 37.60 | |
| B | 11 | MAINTAIN FILES OF INSTRUCTIONAL MATERIALS | 67.31 | 1.69 | 1.14 | 38.74 | |
| C | 27 | EVALUATE STUDENT PROGRESS THROUGH REVIEW OF TEST RESULTS AND RATINGS | 61.54 | 1.83 | 1.13 | 39.87 | |
| F | 2 | ANALYZE SKILLS AND KNOWLEDGE TO BE TAUGHT IN A LESSON | 65.38 | 1.72 | 1.13 | 41.00 | |
| H | 8 | ASSIST STUDENTS TO DEVELOP GOOD STUDY HABITS | 69.23 | 1.61 | 1.11 | 42.11 | 30 |
| F | 57 | RECOMMEND TEXTS AND READING LISTS FOR COURSES | 63.46 | 1.74 | 1.10 | 43.21 | |
| F | 32 | FORMULATE OBJECTIVES AND SELECT INSTRUCTIONAL CONTENT FOR A LESSON | 59.62 | 1.85 | 1.10 | 44.32 | |

job description was much longer and included 241 tasks which accounted for 99.97 percent of the time spent by all members of the group. The tasks shown in Figure 2 were the top 32 tasks which accounted for 44 percent of the total group's time. Notice that the first task in the list, C6, was performed by 94.23 percent of the members who spent an average of 1.91 percent of their work time on the task. The list of tasks and the four columns of figures give an idea of how the majority of this group distributed their work time. It seems apparent that most of this group's time was spent on teaching-related tasks. It was more apparent when the tasks from the bottom of the list were reviewed. Those tasks, mostly clerical and business affairs tasks, accounted for a very small percentage of the time of one or two members of the group.

After studying all of the available information for each of the 42 groups in the branch diagram, including the task-level job descriptions for each group, five groups were identified which appeared to form significantly different job types.

Three groups in the branch diagram (Groups labeled 6, 21, 19) appeared to be significant groups. Visual inspection of the diagram shows that these three groups were formed at the end of three separate and long sequences of clustering. Examination of the task-level job descriptions for each of the groups revealed major differences in the kinds of tasks performed. One of the groups (Group 6) was characterized as a general support or a clerical and maintenance type of group. Most of the tasks accounting for the way in which 80 percent of the group's time was distributed were clerical-administrative or equipment maintenance tasks. Another group (Group 21) was characterized as an administrative group. The most important tasks in the job description for this group were institutional-administrative and planning-preparation tasks. The third group (Group 19), was a teacher or instructional group.

Further review of the job descriptions for the three groups revealed that a set of tasks in the upper 80 percent of the groups' time were performed by more than one of the groups. For example, several tasks performed by the administrative group were also performed by the teacher group, and some of the tasks performed by the teacher group were also performed by the support personnel group. Finally, another set of tasks were found to be common to all three groups.

A list of the tasks common to all three groups was identified. The tasks which were unique to each of the three original groups were listed separately for each of the groups. The tasks which were common tasks for the teacher and administrative groups were a unique set of tasks which described the work of a fourth group which we tentatively labeled master teachers. Tasks common to the administrative and support groups, and the teacher and support

groups described the work of the fifth group which we tentatively labeled instructional aides.

Thus, each of the five groups was identified by a unique core of tasks which described the major and unique work of the group. In addition to this core of unique tasks for each of the groups, there was a set of tasks common to all groups which added to the description of the major activities performed by each group. Table 2 describes the five groups. Notice at the bottom of the columns labeled A through E, for each of the groups, the number of unique tasks performed by each group. Each of the columns provides an overview of how the tasks were distributed among the eight activity categories from the inventory. Notice also that the five unique task lists, plus the list of tasks common to all groups, accounted for the large majority of tasks in the inventory (about 80 percent of the 282 tasks in the inventory).

## SUMMARY AND CONCLUSIONS

One of the objectives of the project was "to develop an inventory of the most critical instructional-related tasks and functions required by an instructional system." The inventory developed and used for the project appears to meet this objective. The 282 tasks and eight activity categories appear to account for most of the tasks actually performed by instructional related personnel. In fact, no tasks were written-in or added to the list by the 307 respondents in the study sample, and fewer than 282 tasks usually accounted for 100 percent of the actual work time of most of the different groups in the sample. The task inventory should be reviewed and task statements should be revised and improved. However, the inventory is a valuable tool for obtaining estimates of the tasks actually performed by instructional personnel and the way in which their work time is actually distributed among those tasks.

The procedures for analysis of data from task inventories and the computer programs used for the project provide a large amount of different and quantitative information about the actual performance of subjects in an occupation. It is a comprehensive and objective system for occupational analysis.

The selection of significantly different job types within occupations, while still involving subjective analyses, is greatly facilitated by the clustering process used in the project. The identification of potentially different job types through the branch diagram, task-level job descriptions and other information provided by the clustering programs provides a useful and valuable data base for making these decisions.

TABLE 2

SUMMARY OF TASKS ACCOUNTED FOR BY FIVE JOB TYPES

| ACTIVITY CATEGORIES | TOTAL NO. OF TASKS IN CATEGORY | NO. OF DIFF. TASKS FOR EACH GROUP | | | | | NO. OF TASKS IN COMMON FOR ALL GROUPS | TOTAL TASKS IN UPPER 80% OF TIME SPENT FOR ALL GROUPS | DIFFERENCE NO. OF TASKS NOT ACCOUNTED FOR | PERCENT OF TOTAL TASKS ACCOUNTED FOR |
|---|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | | | | |
| A. BUSINESS AFFAIRS | 20 | 3 | 1 | 0 | 4 | 4 | 8 | 20 | 0 | 100% |
| B. CLERICAL & MAIN. | 27 | 3 | 0 | 3 | 8 | 6 | 5 | 25 | 2 | 93 |
| C. EVALUATION | 51 | 12 | 6 | 11 | 3 | 0 | 6 | 38 | 13 | 75 |
| D. INSTITUTIONAL AFFAIRS | 20 | 17 | 1 | 0 | 0 | 0 | 1 | 19 | 1 | 95 |
| E. INSTRUCTION | 32 | 0 | 5 | 23 | 0 | 0 | 1 | 29 | 3 | 91 |
| F. PLANNING & PREPARATION | 69 | 20 | 15 | 14 | 3 | 0 | 5 | 57 | 12 | 83 |
| G. PROFESSIONAL | 11 | 3 | 6 | 0 | 0 | 0 | 1 | 10 | 1 | 91 |
| H. STUDENT AFFAIRS | 52 | 4 | 8 | 8 | 0 | 0 | 6 | 26 | 26 | 50 |
| TOTALS (8) | 282 | 62 | 42 | 59 | 18 | 10 | 33 | 224 | 58 | 79% |

A = ADMIN. PERSONNEL
B = INSTR.PERS.-MAST.TEAC.
C = INSTR.PERS.-TEACHERS
D = INSTR.PERS.-INSTR.AIDES
E = CLER.& MAIN. SUPP.STAFF

The five different types of instructional-related jobs and personnel identified in the project represent only one set of jobs and one way of identifying personnel. A number of other approaches could have been taken and different groups identified. The particular groups identified in this project are especially important because they describe a relatively efficient organization of tasks and personnel. The tasks which account for most of the work time of each group are unique to that group. Thus, there is a minimum of overlap or redundancy among the groups in the work they perform, while at the same time, most of the critical instructional-related tasks normally required by a typical institution are accounted for among the groups. Effectively, what this means, is that a staffing pattern based upon a task inventory analysis could help to alleviate professional manpower shortages through more efficient use of available personnel and through the use of paraprofessional personnel in appropriate jobs.

The relative effectiveness for the institution and for the students of a staffing pattern like the one developed in the study can only be assessed after it has been installed and operated for a period of time. Probably an institution wishing to improve the efficiency and effectiveness of its staffing pattern would want to develop their own pattern based upon data from their staff, rather than install a pattern fully developed by others. We are continuing work to provide a set of procedures which would allow them to do just that.

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# MANAGEMENT BY OBJECTIVES AND PERSONNEL DEVELOPMENT IN OHIO

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At the outset I would recognize that personnel development has no beginning and no conclusion. Fundamental principles of personnel development may be lasting but practices will change with changing social, economic, cultural and educational changes within a state or nation. As long as vocational education represented only a small portion in the curriculum, and the vocational education curriculum was a limited effort based upon educational services in a limited number of occupations, improved practices of personnel development were not important. The needs for staff could easily be defined and readily met to the satisfaction of those involved in the vocational education programming. The growth of interest and investments in vocational education to the size of program projected for impact upon social and economic problems, however, requires planning for personnel development to provide the people to meet the challenges and great opportunities presented to vocational education. Without a planned program of personnel development, the opportunity presented to vocational education for increased services in a time of great need in our nation will be lost or blunted due to ineptness and inability of persons assigned leadership and teaching roles within the program. There is no greater burden than a great potential. Vocational education has that great potential.

The need for a plan and increased activity in the area of personnel development became obvious within our state as the needs for increased teaching staff and teacher educators was reported to our Division Staff by the individual services. As an example, three years ago the trade and industrial education service staff projected the need for 45 full-time teacher educators if they were to meet the needs for teaching personnel under their plan for teacher education. The obvious answer was that we needed to find a different way to achieve the goal. Criticisms from a statewide study of vocational education by Battelle Memorial Institute made us sensitive to the fact that we did not have the kind of objectives necessary for a system of program planning and budgeting

within vocational education, although that agency could not tell us how to develop such objectives.

## COORDINATION OF TEACHER AND PROFESSIONAL STAFF DEVELOPMENT

As these needs were made obvious to us, funding under the Education Professions Development Act provided us with an opportunity to reach for a planned effort in personnel development. Our staffing plan developed under the requirements of the Vocational Education Amendments of 1968, PL 90-576, projected a position for an Assistant Director of Teacher Education and Instructional Materials Development. Funding under the Education Professions Development Act enabled us to add this person to our staff and to initiate a program.

The first efforts of the man employed in this position, Dr. Darrell Parks, was to identify the role of the State Department in the development of the professional personnel, the duties and responsibilities of his position, and the need for and responsibilities of a coordinating council to assist him with his responsibilities.

## MANAGEMENT BY OBJECTIVES

Discussions with representatives of the Educational Professions Development staff indicated an interest in a total staff development program, based upon a concept of management by objectives. Our staff had been sensitized to this need by the criticisms of the Battelle Memorial Institute Staff in the statewide study conducted of our vocational education activities. A consultant had been employed to provide for our staff a two-day workshop on PPBS, but the process was still not clear to myself or the staff after the completion of the two-day effort, although the staff had a positive attitude in relationship to the need.

Funding under an EPDA project permitted us to plan for a long-range effort in the development of a program of Management by Objectives as the basis for both program and personnel development. Consideration was given to the services of several management consulting firms, but it was finally decided that the expertise to assist our staff existed in the finance department of our state government and two persons were made available to us by the finance department without charge for their services. These people were not available on a full-time basis, but on a consulting basis as needed by the developmental process within our staff. Looking back, I believe it is important that the people were not available to us on a continuous full-time basis, since the process involves understanding and acceptance on the part of members of

the staff and in some cases only time will help bring about this understanding.

The first step identified for us in an approach to management by objectives was the development of a set of concepts as a basis for planning. All statewide programs of vocational education are operating on the basis of some concepts, but often these concepts have not been verbalized to the point where they can be reviewed, criticized and adjusted as a basis for planning and decisions. These concepts were discussed in a management training session by the members of the state staff of vocational education, including supervisors, teacher-educators and consultants for vocational education. The concepts were reviewed at a later date with the local leadership of the vocational programs throughout the State of Ohio.

The next step was to develop goals and objectives as a basis for program and personnel development. The staff worked to develop generalized goal statements which were developed into quantified objectives for consideration by the staff by our Research Coordinating Unit. The quantified objectives were projected to dates of achievement which permitted the establishment of a rate of achievement and the determination of annual costs. The Research Coordinating Unit within our Division developed the first set of quantified objectives and then with the assistance of our consultants from the Department of Finance worked with the total staff in a management training session to modify these objectives for the state program. The quantified objectives were reviewed and approved by our State Advisory Council and later presented to the local directors of vocational education for their consideration.

The quantified objectives for 1975 are listed below, since these have served as the basis for projected funding, program development and personnel development.

## OBJECTIVES FOR THE YEAR 1975

1. To provide a preparatory job training vocational education program for 166,958, or 40 percent of the 417,395 students at the eleventh and twelfth grade level or 16 years of age and above, including:

   46,957, or 75 percent of the 62,609 disadvantaged school youth who comprise 15 percent of all youth at the eleventh and twelfth grade level or 16 years of age and above who have academic, socioeconomic, or other handicaps that prevent them from succeeding in a regular vocational education program, and

20,869, or 50 percent of the 41,739 handicapped school youth who comprise 10 percent of all youth at the eleventh and twelfth grade level or 16 years of age and above, who, because of their handicap, cannot succeed in a regular vocational education program.

2. To provide a dropout prone youth occupational work adjustment program for 79,778, or 100 percent of the 79,778 dropout prone students, which comprises 20 percent of all youth at the ninth and tenth grade level or below the age of 16 years.

3. To provide retraining and upgrading vocational education programs for 414,222, or 10 percent of the 4,142,229 adult workers.

4. To provide a vocational home economics consumer and homemaking education program for 90,103 or 25 percent of 360,412 girls at the ninth through twelfth grade level and 20,510 or 24 percent of the 85,457 adult women in a one year age span which will prepare them for the role of homemaker in their dual role of homemaker and wage earner.

5. To provide a career orientation program for 270,484, or 75 percent of the 360,645 students at the seventh and eighth grade level of 12 and 13 years of age to build a basis for a career exploration program realistic in light of all the circumstances surrounding them and the actual and potential labor market demands for gainful employment.

6. To provide a career exploration program for 299,170, or 75 percent of the 398,894 students at the ninth and tenth grade level or 14 and 15 years of age.

7. To provide by 1975 a work orientation program for 900,609, or 75 percent of the 1,200,812 students, at the K-6 grade level which will encourage constructive work attitudes in all youth.

8. To provide a post-secondary program for 27,411, or 3.2 percent of the 856,656 persons 18 to 22 years of age.

9. To provide a vocational home economics consumer and homemaking education and family life program for 7,893 or 50 percent of the 15,786 dropout prone girls at the seventh and eighth grade level which comprises 13.2 percent of the girls at the seventh and eighth grade level and 95,498, or approximately 50 percent of the 190,995 adult women in a three year age span living in the culturally and socially depressed areas.

10. To provide a vocational work study program for 50,087, or 30 percent of the 166,958 vocational students basically in the eleventh and twelfth grade vocational program, who are 15 through 21 years of age, and who are in need of earnings from employment to pursue a vocational education program.

11. To provide four residential vocational schools for 2,000 youth 16 to 21 years of age who can profit from this type of an instructional program.

Each of the 11 objectives has been quantified in terms of the cost to reach those objectives on the basis of the 1972-73 and 1974-75 bienniums in order to provide our State Board of Education and our State Legislature with information concerning projected costs.

Planning by objectives can be made meaningless by a number of other factors relating to program development within a state. The factor of adequate funding in accordance with the plan by objectives is always present as we deal with appropriations at both the state and federal level. It is very possible, therefore, for any fine plan to come to a grinding halt at any point on the basis of lack of funds. The availability of quantified objectives, however, and a cost based upon these objectives provides greater encouragement to state boards of education and to state legislatures to provide the funding necessary in order to achieve these goals.

## VOCATIONAL EDUCATION PLANNING DISTRICTS

Another factor which is essential to the achievement of quantified objectives is an organizational pattern within the state which brings together the student base and tax base essential to achieve the goals for youth and adults. Within the State of Ohio, we have worked diligently to bring about the organization of what we call joint vocational school districts. Such districts bring together the student base and tax base of a number of individual districts into a legal taxing entity without destroying those districts. The fact that we had 631 school districts in the State of Ohio made it imperative that we find a procedure to join the districts together for vocational education in order to achieve the goals of service to people.

The voluntary approach to the organization of joint vocational school districts progressed slowly and it became obvious that final patterns might leave a number of districts without a "home" and the voluntary approach to patterning left much to be desired as far as good organizational patterns are concerned.

In 1969 the state legislature passed a bill which required all school districts to offer an adequate program of vocational education by 1974. This legislative act specified that standards were to be established by the State Board and that no district with less than 1500 in the upper four grades could plan alone. It indicated that districts could meet the organizational goal by either the establishment of a joint vocational school district, consolidation of school districts, contractual relationships between districts in order to achieve the minimum number of students, or they could stand alone if they had 1500 or more in the upper four grades.

This piece of legislation was indeed a milestone in the development of vocational education in the state--perhaps a milestone in the education legislation for the nation. The legislation required that all districts submit a plan to the State Board by April 1 following the passage of the legislation and that by July 1 the State Board of Education was required to adopt a statewide plan in which no district was left out. The action of the State Legislature could have been made meaningless if the State Board had not adopted standards which had meaning and substance. The Division of Vocational Education within our State Department of Education developed the first set of standards for review at public regional meetings to which all school administrators and representatives of the lay public were invited. In addition to the regional meetings, statewide committees of administrators and our State Advisory Council reviewed the proposed standards.

A final hearing by the State Board of Education involved several hours of testimony and a final adoption of a set of standards which indicated:

(1) By 1974 all students in the State of Ohio should have no fewer than 12 vocational programs available to them.

(2) By 1974 facilities, equipment and instructional staff should be provided to serve no less than 40 percent of the youth 16 years of age and older.

A massive effort by the school administrators and vocational educators in the State of Ohio enabled all schools to meet the goal of submitting a plan by April 1 of 1970, and the State Board of Education to meet its goal of adoption of a statewide plan by July of 1970. The 631 school districts were organized into 104 vocational planning districts, with 531 of the districts included in 58 joint vocational school districts. A plan for an ideal organization indicated the need for only 56 vocational planning districts. The law and activities of the local districts enabled us to reduce the number from 631 to 104, instead of the ideal 56. Most of the districts in their planning efforts went far beyond

the minimum 1500 established in the law, but some districts took advantage of the bare minimum as established in the law and state standards.

## DEVELOPMENT OF MANAGEMENT PLAN FOR STATE STAFF

Information is provided concerning this organizational effort, since the organization for vocational education within a state has as much to do with personnel planning as the goals and objectives established for vocational education within a state. Given the goals and objectives identified above and the organizational pattern described for vocational education, the state staff in the Division of Vocational Education embarked on a program of improving management procedures of the Division. The functions identified for the state staff for the Division of Vocational Education are as follows: (1) expansion of vocational education, (2) improvement of vocational education, (3) extension of vocational education, (4) maintenance of minimum standards as required by state and federal laws and regulations.

It was determined that members of the state staff would no longer provide the "shadow across the door" supervision that had been characteristic of vocational education and so welcome by the local schools during a period of time when there were no personnel or few personnel in the local system with leadership experience and training in the area of vocational education. It was decided that the organization of the state into vocational planning districts made possible the training and the employment of leadership personnel for direct services to vocational education programs through these planning districts.

Recognizing that people are served through vocational education by preparation for employment in occupations, a strong occupational emphasis was retained in terms of state staff organization with the majority of personnel employed under service organizations of agriculture, business, distribution, home economics, trade and industrial, manpower and veterans training. Recognizing also the responsibilities for services to special needs groups and assistance in the area of research, construction, administrative organization, etc., a smaller number of staff units, concerned with planning and development, were projected to work with committees across the occupational areas.

Planning for management by objectives brought about the need for improved data if each of the assistant directors in charge of an operating service or a planning and development area were to be able to make decisions based on something other than intuition and prejudice. The Research Coordinating Unit assisted with the identification of data needs, consolidation of report information and

the development of a data processing system for both statistical and fiscal information.

Seminar involvement of state staff members in presentations and discussions concerning management methods has made them sensitive to management process, if not fully skilled in all of the techniques. The emphasis upon planning in terms of a total state effort has resulted in the necessity to refine the overall plan into projected plans by occupational areas within vocational planning districts. This planning process is now underway within each of the operating divisions.

The plan to move the immediate supervision and leadership of programs of vocational education to local leadership brought to our attention the need for an evaluation procedure which would not only meet the requirements of the vocational education amendments of 1968, but which would also enable the state staff to use their limited time and personnel in a periodic evaluation of local programs for the purpose of program improvement, extension, expansion and maintenance of minimum standards. For this purpose, the Research Coordinating Unit within our Division developed a plan for "Program Review for Improvement, Development and Expansion" of Vocational Education, creating the acronym, "PRIDE."

The development of the PRIDE program itself and the function of the state staff in a team relationship with local school administrators and community personnel in a program review necessitated intensive in-service training to develop the necessary skills and the proper attitudes towards program review. The PRIDE programs above and the reorientation of state staff services caused significant concerns among the Vocational Division staff personnel as their role and function in relationship to local programs of vocational education were changed. This proved to be a traumatic experience and the adjustment period is not yet complete. It is gratifying to note, however, that some of the staff members who objected most vigorously to the initial efforts in "PRIDE," after one year of experience now see its relationship to long-range management by objective program improvement goals of the Division.

## STATE STAFF AND TEACHER EDUCATION DEVELOPMENT

The growth of vocational education programs has brought about some growth in state staff, but as described above, the major staff development will be in terms of local leadership. Local leadership personnel has always been viewed in Ohio as a basic source for the recruitment of personnel for the state staff in terms of supervision and teacher education. The small numbers added each year in terms of the state staff, due to turnover and expansion, has not permitted the organization of an intensive or

long-range preservice program for state staff and teacher education personnel. The training of state supervisory and teacher education personnel, therefore, has been a function of in-service training by the unit employing the person, rather than a formal training program.

Experiences to date indicate the EPDA Fellowship program at selected universities will prove to be a source of state staff personnel, supplementing the procedure of selecting outstanding local leadership when state salary schedules will permit you to do so. To date we have employed two persons from the EPDA Fellowship program into the operation of our Division, one in supervision and one in teacher education. The critical factor in the success of the EPDA Fellowship program in providing personnel for state departments of education will be dependent upon the selection of the persons recruited for that program on the basis of their suitability for state staff positions. Their suitability can be enhanced by the continued involvement of the State Divisions of Vocational Education in the recommendation of such persons for the fellowships.

Trends in staffing for teacher education point to the establishment of a person in major universities giving leadership to all areas of teacher education for vocational education, in addition to the maintenance of the uniqueness of the preparation of persons for each of the occupational areas. Initial efforts by the Assistant Director for Teacher and Professional Personnel Development have been directed towards the review of teacher education programs to determine commonalities among the preparation programs for the various service areas as a basis for the integration of some of these areas into a common effort.

Experiences with the career development program in terms of career motivation in Grades K through six, career orientation in Grades seven and eight and career exploration in Grades nine and 10 do not permit or encourage the establishment of preparatory programs at the university level for the preparation of teachers to assume these responsibilities. To date our efforts in the preparation of teachers to assume these responsibilities have been based upon in-service programs with the assistance of university personnel in the development and operation of such in-service programs. Only finalization of program efforts in the area of career development and the initiation of sufficient programs to justify long-range planning for teacher preparation will encourage the development of preparatory programs for the inclusion of instruction in all teacher preparation programs on methods and procedures for career development activities.

LOCAL LEADERSHIP DEVELOPMENT

Until the development of large vocational programs, involving multi-service offerings, local leadership in vocational programs was often limited to trade and industrial education or the incidental assignment of all vocational education responsibilities to the person with that background. Persons became local directors of vocational education by reason of experiences in one field of vocational education and the leadership capabilities necessary for appointment to a position as local director by the appointing authority.

The planning efforts for joint vocational school districts in our state and the requirements for the organization of the state into vocational planning districts encouraged us to develop a program for the preparation of directors with a knowledge in all areas of vocational education for all age levels and all ability levels. The identification of the projected need on the basis of encouragement by the Assistant Directors for local directors of vocational schools and a desire to encourage local vocational planning districts to employ directors, led to the development of a one-year training program for local directors at Kent State University under the direction of Dr. Charles Nichols. This program was based upon an intensive on-campus experience of six to seven weeks in length, with the prospective directors in attendance at the seminar five days per week, six hours per day. At the conclusion of the on-campus period, the prospective directors were placed on internships for nine months with our Division of Vocational Education paying 75 percent of the salary of the director-interns. Centers were selected where the director-interns could gain experience and knowledge worthy of the investment of their time and the federal and local dollars.

No local school was required to retain the persons in employment at the completion of the intern period, but a very significant placement record was achieved in the State of Ohio for the graduates of the program. In a four-year period 77 persons have completed the leadership development program for local directors. As of this date 95 percent of the graduates of the program have remained in Ohio, and 82 percent are currently serving in leadership positions in vocational education in our state. Part B funds under the Vocational Education Amendments of 1968 were used to fund the costs of the instructional staff, maintenance of the prospective directors while attending the on-campus program and 75 percent of the salary costs during their intern period. The annual cost of the program for the training of 20 directors was $151,450.

During the 1971 school year it became obvious that we had served our immediate needs for trained directors and that continuation of the director training program would result in the

graduation of persons who could not readily obtain employment in a leadership position in vocational education. At the same time, local directors who had assumed their responsibilities following the program were identifying to us the need for the development of supervisors trained in the individual vocational services in order to give improved leadership and to provide detailed planning services to the evolving programs in the State of Ohio. Much of this need for trained supervisors in the individual services came about as the vocational planning districts, by bringing together the tax base and student base of a number of districts, could afford to employ a larger number of persons for local leadership in vocational education. We have, therefore, established a one-year training program enrolling persons preparing for supervisory positions in the areas of agriculture, business, distribution, homemaking, trade and industrial, occupational work experience, occupational work adjustment and manpower training programs.

A total of 54 persons were enrolled in the supervisory training program in July of this year, all of whom were qualified to become supervisors in their individual service areas upon completion of the one-year program. The one-year program for the training of supervisors for each of the vocational education services was patterned after the directors' training program, in that it provided for a preservice program on campus and an internship period. The responsibility for providing intensive training in the skills and knowledges related to teacher curriculum facilities development in their service area was assigned to the supervisory staff of the individual services. Coordination of the program and common learning relating to leadership and the overall vocational program was presented by Mr. Russell Gardner, a member of the staff at Kent State University, working under the direction of Dr. Charles Nichols. Again, funds from Part B of the Vocational Education Amendments of 1968 were used to maintain the persons while they were in attendance at the university and will be used to pay 75 percent of their salaries while they are serving on an intern basis during this coming year in local vocational programs. All interns have been placed in training slots for this first year of operation. The supervisor-intern program for this year is projected to cost $474,122.

Experiences in the organization of projects in the major city areas in relationship to the set-aside funds under Part B and 102B for disadvantaged and handicapped youth and adults point up the need for special training of leadership personnel in this area. A review of projects during the first several years of operation indicate that many worthwhile projects are submitted, but there is no evidence of planning to reach toward solutions to the social and economic problems within these cities. It seems feasible that an effort is needed to identify the problems, establish quantified objectives, identify resources, plan programs, establish costs and

to make selection of those projects which will make the greatest contribution to social and economic goals.

A full-time staff member for planning and coordination was approved in each of five of the major cities in Ohio from the use of 102B funds in order to encourage planning as described above. One year's experience with such full-time planning personnel has indicated that they need additional training to develop such plans. The first workshop or seminar to assist people to develop such skills has been established for October 20 and 21 and involves consultants who should be able to assist them to develop the necessary skills. We know the need for planning is there but we do not have the skills or techniques as yet to develop the necessary competencies.

TEACHER EDUCATION DEVELOPMENT

The quantified objectives established for the Division of Vocational Education indicate the overall quantity of teachers required to meet the objectives. The planning in process in each of the vocational education services to relate these overall objectives to the individual service and to each of the planning districts will identify the number of teachers needed annually to meet the growth needs in vocational education. Experience factors will identify the turnover rates. The planning by the individual services will be not only in terms of total quantities needed, such as so many teachers for trade and industrial education, but the projected number of teachers by an occupational code number. This process will lead to improved planning in terms of number of teachers to be prepared through preservice and in-service programs.

We were fortunate in Ohio that at the time of our planning efforts in teacher education the state has revised certification standards. The Vocational Division was given the opportunity to review the needs for vocational teachers, the probable source for teachers, and to recommend revisions in certification standards with regards to teachers, supervisors and local directors of vocational education. The rapid growth and change in vocational education encouraged us to make it possible in each of the service areas for persons to enter employment as teachers by reason of work experience, as well as by reason of a combination of work experience and college education. Research in Ohio has indicated that persons with a broad background in the occupational area in which they will teach, who are provided with a short preservice and intensive in-service program on a visitation basis from a teacher education center at a university, compare favorably with persons who are prepared through a collegiate program with fewer years of experience required.

The revision of certification standards also reflects the changing nature of agriculture and home economics as teacher preparation is encouraged in areas other than production agriculture and homemaking.

The Education Professions Development Act has provided us with significant assistance in the improvement of methodology of teacher education for vocational education. Earlier I referred to the fact that trade and industrial education had projected the need for so many teacher educators based upon the method of in-service training for teachers in practice at that time. Through the assistance of EPDA funds, a new pattern of teacher education was developed for persons entering employment directly from the occupations. The program provided for a four-week intensive pre-service training program prior to the opening of classes, a two-week intensive follow-up program at the end of the first year, and a visitation program by a teacher educator to the individual teacher or the group of new teachers in one school on an every-other-week basis during the first two years. The program has now gone beyond the EPDA experimental period and has been adopted as a policy for teacher education for our state.

EPDA funds have also assisted us to revise our procedures for the preparation of teachers in business and office education in two ways: An experimental program has been developed to take graduates from the technician training programs in business and office education and lead them to a baccalaureate degree in two years at a university center.

Another innovative effort assisted with EPDA funds has enabled us to establish laboratories in universities in order to teach the prospective teachers the "program" approach rather than the "subject" approach. This program involves the prospective teachers in a three-hour laboratory period with an integrated business office curriculum. This prepares the teacher to organize for a vocational business program which includes two periods of classroom instruction and three hours of laboratory experience as compared with the subject-centered approach of teaching typing, shorthand and office practice as separate subject areas. Teachers experiencing this program as a part of their college preparation come to the field with a different attitude, ready to participate in a vocational program.

Our agriculture service has revised the teacher education program in agriculture to include specialties in the new offerings in vocational agriculture, such as agribusiness, horticulture, floriculture, resource conservation, forestry, etc. Assistance of the specialty areas of the agricultural college was enlisted in achieving this goal.

The Home Economics service has established new programs for the preparation of job training teachers through intensive and in-depth preparation in specialty areas such as foods, child care and other areas on much the same basis as identified above for vocational agriculture.

The teacher preparation program in each of the vocational services now encompasses a plan for both preservice and in-service programs. Short term in-service programs are offered to teachers of long standing through a planned series of summer workshops made available to teachers on a volunteer attendance basis with these workshops based upon the needs of teachers for in-service upgrading instruction.

## CONCLUSION

I firmly believe that the major responsibilities of a State Division of Vocational Education are the establishment of a program of management by objectives and a plan for personnel development. It has become obvious to me that once you have embarked upon a system including these two responsibilities you are involved in a continuous learning process and that each learning experience opens the door to an additional refinement or improvement in your planning and efforts. I can still see many weaknesses in our program planning by objectives and personnel development practices, but these are weaknesses that I would not have thought of, or even recognized, several years ago.

Only one thing is sure in vocational education, and that is change. I recognize that not all change is within the control of the State Director of Vocational Education, the state staff, local staff or even educational leadership as a whole. Change can be brought about by changes in state budgets, federal budgets, local voting attitudes and practices and parental and student attitudes. Such possibilities for change, however, do not absolve us of our responsibilities to plan boldly, to plan wisely, to invest carefully and to sell hard the services which we believe are important to the solution of social and economic problems facing our nation.

# INTERNSHIP AND ITS ROLE IN PERSONNEL DEVELOPMENT

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In the context of personnel development an internship must be viewed primarily as an educational process designed to bring about changes in the learner. This process, like other learning experiences, is intended to produce specified behavior in the learner different than those before the learning experience began. In this sense an internship does not differ from what should occur in a classroom or as the result of other learning experiences.

The value of interships have generally been assumed to be positive. In fact, with the institution of the EPDA doctoral program for the development of vocational education personnel, internships became a requirement. Observations suggest that in the case of some universities, the internship is the foremost experience of a three year program. In other cases, less is expected of the internship but more importance is attached to course work and the writing of a dissertation. Although internships have been used for a long time in education, it is timely to reexamine their functions as they apply to the preparation of vocational education personnel. The purpose of this presentation is to answer three questions which are pertinent to this reexamination.

1. What is an internship?
2. What is the importance of internships in personnel development?
3. What is the state vocational education agency's role in internships?

## WHAT IS AN INTERNSHIP?

### DESCRIPTION

An internship is a means of relating educational experience to the practicalities of employment and usually occurs in the

place where actual employment occurs. The problems faced by an intern are selective with regard to the professional field and level of practice, but their frequency and order of occurence follow the random pattern typical of the standard setting for practice.

Newell (1964) suggested three components of a bonafide internship. It must: 1) be a phase of professional education which comes after or near completion of a formal program of professional preparation; 2) involve a considerable block of time (at least one semester on a full-time basis or the equivalent); 3) involve the intern in real and continuous responsibility in the field under the competent supervision of a practitioner and a sponsoring university or college. An internship has been defined as "an experience in 'reality' in which the knowledges, the skills, and the judgment of the intern are put into play in solving the problems which characterize professional practice" (Rex, 1968, p. 19).

Internships may be used to prepare vocational education personnel for positions with diverse functions located in educational units at several levels of operation. An internship, often with modifications from the previously used definition, has frequently been used as a culminating experience in the induction of new teachers. To a lesser degree, internships have been used in preparing administrators, curriculum specialists, researchers, and teacher educators. Internships can logically be used as a stage in the preparation of all vocational education personnel from paraprofessionals to the highest level state administrator. It is reasonable to assume that the more diverse and complex the responsibilities of the position for which the intern is preparing, the longer and more varied the internship experiences should be.

## PURPOSES

The first named purpose of an internship by respondents in a survey conducted by Eschbacher (1965) was "to provide a practical relationship between education . . . theory and practice." It was concluded that internships in any field usually have as a goal the integration of formal theoretical training with actual practice in realistic situations. Furthermore, they offer under supervision and guidance an initiation into decision-making authority roles and corresponding responsibilities through the handling of actual job problems.

In medicine the internship provides a period of "learning the ropes" or adjustment to the role of the doctor. This involves two stages. In the first stage, the intern begins with an initial perspective. This is characterized by a set of opinions about responsibility as an intern. These opinions are strongly influenced

by others. At the second stage, and operating perspective is achieved. Here the standard of performance is more often established by the intern himself in that he is familiar enough with the situation to know what is expected. The intern is more or less free to determine his own level and direction of effort. He is beginning to define his responsibility and the perception of professional functions which he will carry into practice is developing.

The intern assesses his own capabilities in the job and considers the role he would like to achieve in the profession. He makes some decisions about his area of specialization and commitment to the profession. Relative to his role, he learns what the practitioner does and becomes aware of his impact on those with whom he comes in contact. He learns the time and place aspects of professional practice and the expectation the practitioner holds for himself. The intern also learns his rights and obligations in the profession, what authority is over him, his degree of autonomy, and the limits of professional practice.

Internships serve worthy functions in addition to educating the intern. Among these are the accomplishment of a specific job or "try out" of an intern as a prospective employee. As important as these and other functions are, primary attention should be given to insure that the intern has a profitable, educational experience in which he accomplishes learning objectives which increase the probability that he will be able to contribute to achieving long-range objectives in vocational education.

## WHAT IS THE IMPORTANCE OF INTERNSHIPS IN PERSONNEL DEVELOPMENT?

An internship is important in vocational education personnel development, first, because it has the potential of providing educational experiences which cannot be provided in a university instructional setting. How well this potential is realized is highly dependent on the nature of the internship itself. This is not unlike the situation in which a given period of work experience is accepted in satisfaction of trade competency requirements. A given period of time served in a work setting does not guarantee that certain experiences are completed much less that their correct performance is learned. If an internship is to achieve its potential, the experiences to be included must be deliberately selected.

The education of the student will be enhanced if a linkage between the university program of studies and the internship is provided. An employment objective should be the reference for the student as he plans his course work. This may be an existing position or one including functions not presently being performed in existing jobs. The on-campus studies of the student should

provide the needed principles to perform on the job. The internship should provide a place where the student can see how these principles operate in practice. To be successful, an internship must be appropriate for the particular student and consistent with his background of preparation. The individual who will supervise the intern during his internship should take part in the selection of the intern and guide his choice by providing him with detailed information about the job.

Internships can make important contributions to the development of leadership in vocational education. State departments of education, colleges, and universities share some responsibilities in this area. Where unmet educational needs are recognized, internships may be used to encourage program development. For example, if a need for administrators of vocational programs for mentally retarded and physically handicapped students exists, an appropriately prepared student may take his internship in a sheltered workshop. It should be recognized, though, that a student and a university are reluctant to "crawl out on a limb" without some assurance that internship and eventual employment in the area of specialization can be provided.

In discussing the importance of internships, the eventual question is "Is it worth the investment?" It is recognized that internships are expensive in terms of the planning and supervision required. The institution or agency providing the location for the internship invests in the supervision and instruction of the intern. There are often problems in coordinating the efforts of the university and those of the cooperating institutions and agencies. However, the presence of an intern will add a degree of vitality to an institution and students participating in internships report that these experiences are helpful in learning the operational aspects of a position. But, all in all, the true worth of internships is nebulous. For this reason, an institution providing internship experiences for students must decide the resource commitment it is willing to make and then manage the internship as best it can within that commitment.

## WHAT IS THE STATE VOCATIONAL EDUCATION AGENCY'S ROLE IN INTERNSHIPS?

The state vocational education division may be directly involved in internships. One important outcome of this involvement is the feedback transmitted to the colleges and universities concerning the leadership roles for which education needs to be provided. Because of the state department's involvement at local, state, and federal levels, it can provide information not readily available to universities. This information is of prime importance in planning instructional programs for students who will later be engaged in internships.

State department divisions of vocational education should be used as locations for internships. Because of the wide variety of functions performed there, these locations are highly desirable for preparing vocational administrators. One individual should be designated as supervisor for each intern and be responsible for assigning and supervising the activities of the student each day. Because the supervisor serves as a model for the intern, he should be selected because he has professional characteristics that should be engendered in others.

The state vocational education division can encourage other organizations to accept interns. Internships may be located within other divisions of the state department such as the divisions of higher education, evaluation, guidance, or finance. Local schools, area vocational intermediate school districts, research coordinating units, regional offices of education, city school administrative offices, correctional institutions, the state employment service, and private corporations can all provide meaningful internships for students. State department vocational education personnel can help to create internships appropriate to the needs of the students by communicating this idea to others. In some cases, financial incentives will help to create and support internships.

Individuals in the state division of vocational education can help interns learn the application of principles to professional practice. The connection between what is learned in the classroom and what occurs on the job is often missed unless it is made explicit to the learner. Principles learned on the campus should provide a framework for the study of practical problems and provide a system for untangling the complexities of what happens in practice. A practitioner who can place events in the context of some framework will be better able to use the knowledge he has and deal more effectively with new problems.

## CONCLUSION

Internships are an instructional method for developing leadership personnel by providing realistic on-the-job experiences which cannot be obtained in formal on-campus instruction. Students are placed in job situations where they have the opportunity to put theories and principles into educational practice. Through the cooperative efforts of the colleges and universities and the state department division of vocational education the ultimate potential of internships for preparing leadership personnel for vocational education can be more nearly realized.

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PART II

# STATE PLANNING FOR COMPREHENSIVE PERSONNEL DEVELOPMENT

# SIMULATION TRAINING MATERIALS FOR VOCATIONAL EDUCATION LEADERSHIP DEVELOPMENT

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The Center, for the past three years has been engaged in the development of simulation training materials for Vocational Education Leadership Development. This report will review the simulation work of The Center and present to you our concept of "Simulation--An Instructional Strategy for Leadership Development of Vocational and Technical Education Personnel."

The report will review three packages of materials which have been produced by The Center and are now available for use in states and regions as leadership training tools and materials. First, however, we should place "simulation" into the context which we use it at The Center and on which our materials are based.

We use an eclectic-definition of simulation at The Center, that being, "simulation is an operating representation of the central features of real circumstances." More important than the definition itself is our aim for simulations which is that of "providing the learner with a relatively safe, simplified, and germane learning environment." I would like to emphasize that a simulation, in our definition, is the creation of a learning environment in which the interaction of the simulation director, the student and his peers can bring about a more meaningful and outcome oriented learning experience.

To better understand our approach to simulation, I would like to explain some of the concepts behind the definition of simulation training materials. Quite often, the real world about which a student must learn, whether an adult in in-service work or a beginning student, is not a feasible learning environment. If it was practical to put each student into real world situations, it would probably be the best learning device we could provide, however, sometimes the real world is too unsafe, as in the case in pilot and combat training where simulations have long been used, too remote, as in the case of the need for our middle class

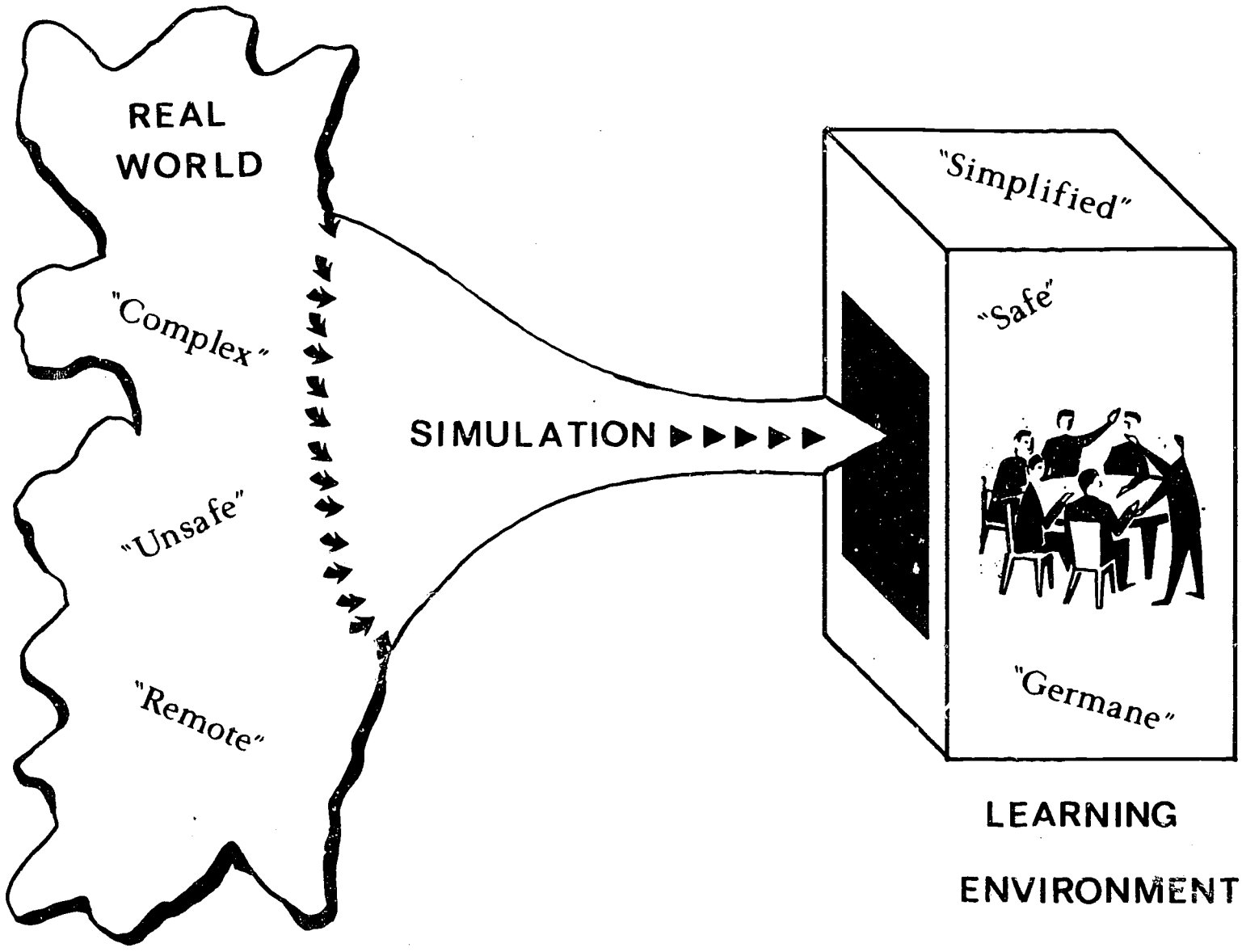


Figure 1. Educational Simulation Defined

citizenry to learn the problems and troubles of the ghetto child, or too complex as in the case of many of our leadership responsibilities such as vocational program planning. When these and other symptoms of the real world exist, simulations can take from the real world, draw it down into a focal point that emphasizes the major considerations, and the central features, and present an operating representation of the actual environment. This then, provides a more relevant, more easily understood and a safer learning environment. Interjection into this environment of the simulation group, provides, I believe, an excellent opportunity for instructional outcomes to be achieved.

I would like to emphasize one other factor which I feel, at least, in light of the work The Center has been doing, is extremely advantageous regarding simulation training materials. A simulation allows you to compress time--a period of time which normally would have to be experienced over a month or two months, or perhaps even a year, can be compressed into a matter of hours and

days, allowing a person to see the complete cycle of activities and react to situations presented within the complete cycle. A prime example of this and a focus of our simulation materials is the area of educational program planning. To effectively teach educational planning, one must provide for the students, a complete cycle of experiences that ordinarily occur over an extended period of time. Simulations can provide this.

The Center simulations are made available to you in the form of "packages" of instructional materials. A "package" of materials contains:

1. The scenario--a brief synopsis of the setting for the learning environment.

2. A data bank--the demographic and socioeconomic data needed by the participants to complete the simulation exercises.

3. The simulation exercises--four to six exercises or time periods utilizing in-basket exercises, interaction sessions and role playing.

4. Working papers--communication forms and problem solving guides for recording the students reactions to the simulated situations.

5. An instructor's guide for use of the simulation materials.

These materials in a simulation "package" can create a learning environment. They do not constitute programmed learning materials nor do they contain the instructional content. This must be provided by the instructional team. The simulation establishes the environment in which learning can take place.

At this time, three packages of simulation materials have been produced. They are, in the order in which they have been developed:

1. *Supervision and Decision-Making Skills in Vocational Education: A Training Program Utilizing Simulation Techniques*[1]

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[1]Dick C. Rice and Richard F. Meckley, *Supervision and Decision-Making Skills in Vocational Education: A Training Program Utilizing Simulation Techniques* (The Center for Vocational and Technical Education, January, 1970).

2. *Simulation Training In Planning Vocational Education Programs and Facilities*[2]

3. *An Interaction Simulation: Coordinated Local-State Vocational Education Planning*[3]

Additional packages of simulation materials are currently being contracted by The Center to outside institutions for development.

"Supervision and Decision-Making Skills in Vocational Education" is built around four decision-making exercises. The "package" features Francis Ramey, an assistant state supervisor in the Division of Vocational Education, Lafayette State Department of Education and his work both with his superiors and peers in the State Division of Vocational Education and in his supervision and planning work with local educational agencies. The package consists of four exercises--the first featuring decision-making in relationship to local supervision where Ramey is called upon to make decisions while visiting a local vocational education program. Exercise two again features decision-making but this time between Ramey and his immediate supervisor. The decision-making problem relates back to the earlier local supervision decision made by Ramey. Number three is an individual decision-making problem primarily focusing upon personnel matters and Ramey's individual relationship to people with whom he relates. The fourth exercise is a team decision-making problem where a group of assistant supervisors in the state department are called upon to develop some preliminary work in basic policy setting. Objectives which can be obtained through the use of this simulation package include:

1. to delineate the tasks and attendant problems of supervision,

2. to differentiate and show relationships between maintenance and innovative supervision,

3. to show the relevance and importance of communication in human relationships and decision-making to effective supervision and leadership,

4. to actually practice and relate the above concepts to the solution of supervisory problems through the simulated experience.

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[2]Richard F. Meckley, *et al.*, *Simulation Training In Planning Vocational Education Programs and Facilities* (The Center for Vocational and Technical Education, April, 1970).

[3]Darrell Ward and Jim Koeninger, *An Interaction Simulation: Coordinated Local-State Vocational Education Planning* (The Center for Vocational and Technical Education, July, 1971).

Our second simulation package, *Simulation Training in Planning Vocational Education Programs and Facilities*, features the planning of vocational facilities and programs. Again, Francis plays the central role but this time as an assistant supervisor in charge of facility planning. The exercises in this simulation include: program planning where the participant is required to do preliminary vocational program planning on the basis of demographic data provided; the evaluation of a proposal for a Vocational Education program proposed by the local education agency; the involvement of Francis Ramey with local educational personnel in the selection of the school site; and the involvement of Ramey, his supervisor, a university consultant, an architect and the local superintendents in role playing some preliminary adjustments of the proposed facility.

The objectives sought through this exercise are:

1. to delineate some of the tasks and problems one might encounter in planning for a new vocational program and facility,

2. to illustrate the relevance and importance of communication in human relations and decision-making to effective leadership,

3. to develop understanding of the problems and programs of facility planning for vocational and technical education;

4. to develop improved skills in program and facility planning of vocational-technical education leaders,

5. to practice and relate the above concepts to the solution of leadership problems through involvement in simulated experiences.

The third package of Center simulation materials, *An Interaction Simulation: Coordinated Local-State Vocational Education Planning*, is different from the first two in its format and operating mannerism and to my knowledge, is somewhat different than any other organization's simulation materials. I think it has tremendous potential for even a more relevant learning environment and we are extremely interested in seeing further results from the use of this type of simulation. For lack of a better name for it, we have called it an interaction simulation. It continues to feature the in-basket and decision-making problems of the type found in the first two packages, however, it puts it in the situation where state and local vocational education personnel must work together in an interactive type of decision-making process. The simulation problems featured in this package include determining local and state responsibility in program planning, organizational tools and methodologies for planning, community

vocational education needs assessment, and identifying of the socioeconomic influences on vocational education within a community. Behavioral outcomes which can be obtained through the use of this simulation environment include:

1. to describe local and state responsibility for vocational-technical education program development, organization, implementation, and evaluation;

2. to devise PERT networks, conduct Delphi surveys, and use other planning tools for the purposes of program development and organization;

3. to develop articulation patterns for secondary and post-secondary institution's vocational education offerings;

4. to devise community surveys that will depict local conditions that can later be useful in program planning; and

5. to identify socioeconomic influences that have either a positive or negative effect on the development of vocational-technical education programs.

Each of the three packages, which I have discussed, were developed at The Center through the use of actual case materials from the files of local and state educational agencies. In the development process, each package has gone through the development stage, a pilot test with an appropriate audience, revision, a field test, again with an appropriate audience, and final revision and publication. An extensive validation against the objectives of the third package has been conducted. In addition, the first two packages have been used with a great deal of success in several state and regional workshops.

One of the essential aspects of using the simulation materials is a qualified individual to direct the simulation workshop. To assure that there are adequately prepared people to use these materials, we have conducted in the past and will be conducting "training for use" workshops. During this winter, letters will be going to state divisions of vocational education, university teacher education departments, and regional offices inviting applicants to participate in two simulation training workshops; one to be held in the East and one in the West. Enrollment in these workshops will be limited to approximately 25 people and we will, for the most part, seek to elect one person per state where there is a qualified applicant. These individuals will then be prepared to conduct simulation workshops in the states or regions. We will further provide support and backup materials for future simulation workshops.

# CONFUSION ON THE BRIDGE
OR
# TO ACHIEVE SIGNIFICANT IMPROVEMENTS IN SCHOOLING, STATE GOVERNMENT MUST TAKE THE LEAD IN SYSTEMATIC PLANNING AND EVALUATION

*Dale Parnell* — Superintendent and Executive Officer of the Board, Oregon Board of Education

During World War II, U.S. Navy vessels in a certain war sector were getting in each other's way. Fighting ships were escaping enemy fire only to sink through self-inflicted damage. The displeased admiral wired from the flagship his command: "There will be no more collisions. Repeat: There will be no more collisions. Wipe out the confusion on the bridge!" Well, collisions did decrease and confusion lessened, but not because of the admiral's order. The improved seamanship was a result of exercising better judgment, alert foresight, and clear planning on the bridge.

Do we have any confusion on the bridge in education? I think we do. Clear leadership and effective planning are best noted by their absence. One need not study long to note a distinct lack of congruence between what we say in our educational goals and what we do in the daily schooling enterprise. How about that widely accepted goal that schooling shall help students develop the competencies needed for economic efficiency and to successfully fulfill the role of a wage earner? Do our schooling efforts match this goal? Well, where do we go from here? How can we bring harmony between goals and action?

Probing questions are being asked about public education, and thunderous criticisms are being leveled at our schools and colleges. On the other hand, the American public is being deluged with fuzzy thinking on what the schools should and should not be doing. Rhetoric may sell books and magazines, but it makes few actual changes in the classrooms. Furthermore, few critics are advocating workable solutions that really will push the great American universal education experiment up the road a few more miles. But where does responsibility for change finally reside? Who is responsible for state level planning for educational change? Who should be the prime change-agent in education?

STATE GOVERNMENT IS RESPONSIBLE

Final authority for detailed curriculum change in most states does rest with local districts, but most districts are too restricted in terms of available funds, manpower, and administrative jurisdiction to develop and execute the kind of long-range planning that will systematize change.

The quality of education in any state is, in the last analysis, in the hands of state government--the Governor, the Legislature, the Chief State School Officer, and the State Board of Education--because it is at this level that funds are allocated, policies established, and statewide planning and evaluation conducted. For example, in Oregon we have found there are at least eight major efforts that must be made at the state level if we are to bring about any lasting and systematic change in our schools and colleges:

1. Establish and reorder state-level instructional as well as management priorities.

2. Develop a clear program of measurable goals and proposed accomplishments--objectives that have wide acceptance. (However, it is useless to wait for a complete consensus!) It is difficult to gain commitment to a fogbank. Even a boy scout in the woods must know where he has been and approximately where he is going. Otherwise, he is lost.

3. Systematically analyze and redesign state regulations and guidelines. Ordinarily the state sets minimum standards. Why not set general objectives as well, and ask local districts to develop plans for adapting these objectives for local use? Then provide for state-level independent audit of program progress measured against the objectives.

4. Teacher and administrative training programs must be revitalized and redirected.

5. Develop and select valid yardsticks for measuring achievement of goals. Develop simple but useful measures of outcomes and relate cost to outcome.

6. Revise obsolete statutory and State Board policy requirements that impede necessary changes. Review obsolete high school graduation requirements.

7. Revise state-level financial support programs so that local districts are aided with dollars in making changes and "zeroing in" on targets.

8. Develop a technology of instruction with attention to qualitative instructional planning.

STATE-LEVEL PRIORITIES

The Oregon Board of Education adopted a set of priority objectives--a list of instruction-related and management-related goals toward which the Board thought state-level efforts should be directed. These priorities, of course, are not the only important areas in education; many other educational programs are ongoing and essential. But the Board, as a policy decision, wanted to establish first things first.

Instruction-related priorities are:

Primary Education Development
Improve Education for the Disadvantaged
Adding the Fourth "R"--Responsibility
Career Education Development
Extending Educational Opportunity

Management-related priorities are:

Improve Finance Structures
Close the Communication Gap
Improve Teacher Education and Certification
Educational Program Audits
Improve Management of Schools and Community Colleges
Develop Community College Master Plan

After adopting this first set of priority objectives, the Board set out to determine what Oregonians thought about them. Board members and the Superintendent traveled around the state for a series of 14 "town hall meetings" to listen firsthand to citizens participating in free and open discussions on educational issues. They listened, and what they heard came through loud and clear: Oregonians want their children to become responsible citizens. Of course, they want students to be able to read, write, and compute to the best of their ability. That's a priority objective of the Board, too. But secondly, they want students to learn skills that will prepare them for a career and enable them to enter the job market, or go on to further vocational education, or to the community colleges or four-year universities. And that's another top priority of the Oregon Board.

Also, in effect as a sort of double-check, a scientific public opinion poll was conducted throughout the state, asking citizens what they think about the teaching-learning process. Specifically, they were asked about learner needs. What should students be accomplishing in the public schools?

Again, leading the list of concerns of these citizens was character education, and a close second was concern for more vocational education. Public concern revolving around the character trait of responsibility came out well ahead of every other concern identified in the poll. Citizens are urging the public schools to provide greater leadership in helping young people to be better citizens. Oregonians want citizens who are responsible--responsible for themselves, responsible for their families, responsible for their community, responsible for their state and nation. This concern has become a top state-level priority in Oregon. A systems design is now being developed to attack this problem.

Now, it is easy to talk about moral and ethical principles and to preach about them, but it is difficult to incorporate character education into daily teaching and into the school curriculum. We have experienced difficulty in developing a position paper outlining alternative methods for approaching the problem.

Although individual teachers, in many cases, have been working on this for years, schools have been leaving this matter of character education largely to chance in the sense of an organized program or systems design.

The Constitution and the courts prohibit public schools from teaching moral and ethical principles in the context of any sectarian religious dogma. The courts have been telling schools definitely what they cannot do. But there are aspects of character education the schools can do, and in Oregon we are endeavoring to develop a state-level approach to character education based upon the "can do" aspects of this concern.

The second state-level priority is concern for vocational or career education. Countless studies, research projects, and committee investigations have pointed out to the nation that the American high school has been missing the mark. In a country dedicated to the concept of universal education, a majority of secondary schools still ignore the fact that they are not meeting the real-life needs of at least half the students. Secondary school curriculum programs in this country are generally structured as though everyone were preparing to attend a four-year college, and this has two serious results:

1. The career choices of many high school students are still left to chance, and they leave school not only unprepared to enter specialized career training, but also lacking the skills, knowledge, and attitudes necessary to begin earning a living.

2. Too many students are unable to profit greatly by what is offered in the traditional high school program. It fails to accommodate individual differences in rate of

> learning, and it is not offered in a context that has meaning for students. As a result, they are "goalless" and often leave high school without developing those competencies so vitally needed to begin functioning successfully as citizens, neighbors, homemakers, parents, and wage earners.

The point is that relating formal, planned instruction to the real-life roles of students will help to bring about a marriage between "academic" and "vocational" programs, and will help students to find a new significance to learning, motivating them as so-called academic courses could never do. Based upon this rationale, the improvement and expansion of career education in all secondary schools has become one of Oregon's top priorities.

Every student who leaves high school, regardless of graduation, must be prepared to earn a living or to enter more specialized vocational training. Few, if any, high schools are equipped to provide every student with training in the specific occupation of his choice. The 25,000 specific jobs (only about 5,000 of these require a bachelor's degree for entry) listed in the *Dictionary of Occupational Titles* can be reduced to 15 to 18 families or clusters of occupations. These clusters have similar skill and knowledge requirements for the purposes of secondary school instruction and goal setting. Therefore, a priority in any state should be curriculum revision at the secondary level to assure every student:

1. Entry-level training for any one of a number of occupations within the "cluster" of his choice, or

2. Post-high school opportunities for specific career training that encompass most occupations. Community colleges and private vocational schools must be considered essential components of any educational system.

3. Considerable on-the-job training opportunities.

Once these needs have been identified, it becomes obvious that the mission of the secondary school is preparatory--for all students. It should not be structured as though it were the final step in the educational careers of any segment of students, but only one essential step. Obviously, then, no student who graduates from high school can be totally trained with full-fledged credentials for any of his "careers."

## STATE-LEVEL PLANNING IS ESSENTIAL

In order for the career education concept to succeed, it will be necessary to obtain a definite commitment from high

schools to move from the present college preparatory and/or terminal tracking system to career cluster curricula. What we are really calling for is a change in thinking so that preparation for a career becomes accepted as one of the clear and primary management objectives of the secondary school.

High school curricula will need to be rebuilt around the career cluster or family of occupations concept so that students may select a career cluster at the beginning of their high school experience and then tie a majority of their high school experiences into this generalized goal with individualized schedules. This will not involve so much a change in facilities or curriculum as a change in guidance and counseling patterns and a change in the way a secondary school curriculum is outlined.

The new high school scheduling and student forecast sheet will likely include the following career cluster options:

Accounting
Agriculture
Clerical
Construction
Domestic & Custodial
Electrical
Food Service
Graphic Arts
Health
Marketing
Managerial
Mechanical & Repair
Metals
Secretarial
Social Services
Textiles
Transportation
Wood Products

For example, in Oregon we have attempted to do this by committing a sizable amount of state-level staff time and budget to the preparation and publication of career cluster curriculum guides covering each of these cluster areas.

Finally, it is at the state level that arrangements can be made to bring about community college and high school cooperation in planning an articulated program. The program would give community colleges the primary responsibility for specific training in those thousands of occupations that do not require a bachelor's degree; it would assign responsibility for general (or broad clusters) occupational preparation to the high schools.

State-level leadership is needed to remove roadblocks and to initiate efforts to bring about cooperation of high schools and community colleges in planning joint use of facilities. Ideal arrangements would permit career education planning on a regional basis, coordinated by some type of intermediate educational agency. The community college could serve as this kind of coordinator, as well as provide post-high school opportunities to a host of citizens previously denied these opportunities.

Several high schools might be linked so that their programs supplement rather than duplicate each other, or it might be possible for a community college to reach far outside the school structure to pool resources with local universities, state colleges, industrial laboratories, business, labor, industry, and public and private service agencies. With such an arrangement, academic training and career training should reinforce each other and provide a vastly more relevant program than a single high school could provide by itself.

In other words, career training opportunities should not start or stop at school district boundary lines. It should be possible, with proper coordination, for students to attend one high school part of the day and another high school or community college part of the day, participating in a regional program that makes almost any kind of career training possible.

Career education is not a panacea for all the ills of today's secondary schools. I do not even suggest that all young people are now going to gain all the knowledge and skills we have heretofore been unable to give them in our so-called academic programs. I am suggesting that state agencies can bring about major innovations in the management objectives of the schools to make educational experiences more relevant to the needs of youth. It is fundamental to design schooling programs in such a way that every student sees something there that makes sense to him, and state government must lead the way with systematic planning.

The Oregon Board of Education has adopted, as formal State Board policy, position papers on career education and on reading. The papers spell out in Planning-Programming-Budgeting terms the proposed accomplishments to achieve the career education and reading priorities. Additional statements are being developed on a variety of other priority matters.

## EDUCATIONAL ENGINEERING

It is no secret that the cost of schooling has grown at more than twice the rate of the Gross National Product over the past 20 years. The annual unit cost in public schools has increased some 500 percent from 1940 to 1970.

We find a steady hardening of the taxpayers' attitudes. Their willingness (and perhaps ability) to provide funds for increases in educational expenditures becomes less and less. For example, in Oregon over the past three years the percentage of the dollar value of bond measures which failed to pass has increased from 15 percent to 66 percent. Over the same three-year period some 391 school and community college districts have held 1,628 elections to secure adequate taxes to balance their budgets. Under

normal circumstances, it would have taken no more than 1,200 such elections.

Education, in the 1970's, is still basically a cottage industry, a network of small-sized enterprises with its own guild structure for employees, little specialization of labor, and minimal technical progress. It turns out a product--students--to fill the complex societal needs of a technological nation. The vast majority of students are processed by schools with a "get it if you can" and "white collar" philosophy. By a reject process called the "normal curve" the schools permit some students to progress to higher grades to carry on the culture in the universities and professions.

Commager said in 1950: "We need to get our standards straight and clear. Many of the old purposes and criteria have disappeared, and the people have not defined new ones to take their place . . . . In a day of specialization, schools are called on more and more to prepare, not for generalities but for particular tasks and competencies."

How can we design the kind of education that will assure full participation for all in this complex technological society? How can we prepare citizens to respond creatively to rapid change while maintaining personal identity? How can we do this when the cost of education soars higher year by year, without significantly improving productivity?

The past 30 years have seen great emphasis on quantity. It has been all educational managers could do to secure enough teachers, enough buildings, enough buses. With the enrollment bulge on the flat side, it is safe to say the next 10 or 20 years will be spent on dealing with quality in education. Increasing cost is only one of the results of a cottage industry and outmoded management in education. At least as important, if not more so, is the impact on the quality of education. Do we pay more and receive less? Are we producing better and more competent citizens? Are we significantly cutting into the pool of poor and nonreaders? Are we helping our students develop all the competencies they need to be successful wage earners? Is the crime rate going down or up? Are there fewer broken homes and more responsible parents? Are our students developing healthy minds inside of healthy bodies?

If the public educational system is to increase its productivity in an evolutionary style and simultaneously satisfy the political, social, personal, and economic forces placed on it, some new tools and new approaches must be designed and implemented. At least five changes are called for:

1. Managerial techniques and training programs which insure results, yet encourage local and individual creativity.

2. A group mechanism, politically sensitive and managerially competent, which acts as a catalyst and ombudsman for the public and professional interests, and which can assist school and college systems to adopt proven and credible innovations in the most effective manner.

3. An educational program audit mechanism which insures quality control and creates demand performances.

4. A pattern of funding which is targeted to priorities, and planned and timed to facilitate control over the process.

5. Policy actions to facilitate the creation and implementation of the above.

Fred Manasse has said:

> Educational engineering is a new discipline, a marriage of convenience between education and management engineering. Its strength lies in the fact that it avoids the oversimplification of 'getting more businessmen into education.' As every experienced schoolman knows, to merely bring a businessman and an educator together often results in a frustrated businessman ('These people will never make a decision.') and a frustrated educator ('This guy thinks a school is a shopping center.') The successful application of industrial management principles must be recognized as major cross-cultural problems and a difficult task in interdisciplinary coordination.
>
> And yet this combination is so obvious. Every industrial administrator knows that unless he uses effective management services such as methods engineers, tool designers, budget specialists, personnel managers, quality controllers, and the like, his organization must incur excessive costs, waste in utilization of skills and facilities, and suffer from unstable and poor quality. In fact, it is highly questionable that such a firm could survive under competitive conditions.

Our nation has undergone some dramatic population shifts, other than the population explosion, over the past 50 years. Farmers accounted for 65 percent of the labor force in 1920 and today they represent less than five percent of the work force (and incidentally their production record is so phenomenal that this five percent produces painful surpluses). From 1920 to 1960 the farmer turned to become an urbanized blue-collar worker. [illegible] in the decade of the 60's the white-collar workers began to

outnumber the blue-collar workers. With this remarkable demographic change came the knowledge and communication industry explosion. Today the knowledge industry is the largest and fastest growing of all industries. Not only has the knowledge industry dislocated our occupational listings, it has confused our management.

Administrators have found themselves confronted with the task of managing large groups of technical and professional workers and complex institutions. New measures of effectiveness must be developed and new determinates of productivity invented. Whereas the ineffectiveness of blue-collar workers consisted mainly of their effort, time, and raw material, in the case of the professional and technical workers it is being discovered that the most common measures of ineffectiveness fall into four major categories:

1. Waste of Training and Talent
   (Professionals engaged in clerical tasks much of the time)

2. Duplication of Effort
   (Not invented here)

   Example: U.S. history is taught at the same time, much in the same way, in thousands of high school classes.

3. Projects of Small Return
   (How much educational research is of little use?)
   (How much is implemented?)

4. Gold Plating
   (Is the medium or thick report more important than a workable solution?)

INSTITUTE FOR EDUCATIONAL MANAGEMENT

As a result of all the forces urging change upon public education, we are establishing, at the state level in Oregon, an Institute for Educational Management. This Institute represents the major research and development arm of the Oregon Board of Education. The notion of educational management as embodied in the Institut is built upon seven cornerstones:

1. Systems Analysis

2. Systems Design

3. Management by Objectives

4. Quality Control

5. Target Funding

6. Instructional Technology

7. Training and Information Programs

The Institute is divided into three major sections:

1. Information, Training, and Staffing Patterns

2. Systems Analysis and Design
   (Planning-Budgeting-Accountability)

3. Quality Assurance
   (Instructional Technology)

CONCLUSION

As you can see, we are making an all out effort to reduce the confusion on the state-level educational bridge. It is my observation that there are two major types of educational leaders--the firefighters and the planners. We have deliberately chosen to try to exhibit our leadership through planning.

"CONFUSION ON THE BRIDGE"

CRITIQUE

*Kenny C. Guinn* — Superintendent
Clark County School District
Las Vegas, Nevada

It is a distinct pleasure for me to participate as a reactor during your state directors 1971 Seminar on Vocational and Technical Education. It is seldom that a superintendent of schools has an opportunity to stand before such a friendly looking group. Therefore, I want to take advantage of the available time and hit some important highlights relating to Vocational and Technical Education, from my standpoint.

First of all, I must in all sincerity agree with Dr. Parnell's philosophy, we have "Confusion On The Bridge." I feel we are living in an era of educational crisis. We have failed, and are presently failing, to respond properly to this educational crisis and I am afraid we are leading ourselves to disaster. However, I have faith that we, as educators, can and will face our responsibility to understand the crisis and develop an educational program which will enable us to solve our problems.

What is this educational crisis? In my opinion, there is a simple answer to such a complex question. We are simply not educating our young people for the tasks that face them in the real world of work (making a living, supporting a family, surviving in the day-to-day world of work). There is a simple solution to this crisis, and I feel personally committed to implementing the program solution in our Clark County School District. It is imperative that all of us in education stop making excuses for our failure to move forward aggressively in selling Vocational/Technical training to our nation, states, communities, educational staffs, parents and students.

Yes, we have excellent personnel and programs in the Vocational/Technical areas. But, what we don't have is the public relations (we need more staff) programs to sell our personnel and programs.

I suggest to you that we can sell Vocational/Technical training by simply doing the following:

I. Coordinate existing vocational programs with all district-wide educational programs. One good way to do this is to place the responsibility for Vocational/Technical education and regular educational programs under the same jurisdiction. Do not allow nor encourage Vocational/Technical education to become an island unto itself.

II. Actively and aggressively publicize your program offerings and especially the advantages (varied and numerous). This public campaign must be directed to parents as well as students and professional staff. A few suggestions that have been known to help bring about acceptance for Vocational Technical courses are:

A. Short-shot type advertisement via local radio, television stations and newspapers.

B. In-district closed circuit television channels, if available within your system.

C. Local educational television stations will usually support short films relating to training for the world of work.

D. Should you already have a Vocational/Technical school, make sure it tops the list for Kindergarten-12th grade educational field trips.

E. Look for every positive opportunity to sell Vocational/Technical education in your state or community.

I am sorry that our time is so short for discussing such an important topic. Let me just say this: It is time for all of us to make a united effort within our nation, our states, our communities, and our schools to deal effectively with the dramatic educational changes required to better prepare all youngsters to whom we have committed ourselves to serve. I believe we have our threshold issue with which to start (Vocational/Technical education); we should all have a personal interest and we will all certainly share in the consequences of our actions.

PART IV

# A DELIVERY SYSTEM FOR PERSONNEL DEVELOPMENT

# EXEMPLARY PROGRAMS -- HIGHWAY SAFETY OCCUPATIONS

*Ronald D. Daugherty* — Research and Development Specialist
The Center for Vocational and Technical Education
The Ohio State University

This presentation is a summary of a project recently completed by The Center for Vocational and Technical Education. The project was entitled "Expansion of Vocational-Technical School Programs To Accommodate Highway Safety Manpower Requirements."

This is America. Her People. And Her Land. These are America's major transportation systems. The highway system serves as the major mode of transportation, and these are some of the vehicles traveling America's highway system. Put these all together and they spell progress. Progress in terms of our economy. Progress in terms of living standards for our people. Progress in terms of sociological mix of our people. This combination of people, vehicles and highways spells problems for our country. Problems in which over 50,000 of our fellow Americans are being killed on our streets and highways each year. That is more than a 1000 persons killed a week, plus 10,000 people are being injured daily in street and highway accidents. Over 13 billion dollars are lost to our economy from property damage and decline in production.

It was to these problems that the U.S. Congress addressed two Safety Acts in 1966: The Highway Safety Act and The Motor Vehicle Safety Act. The 1966 Highway Safety Act provides in part; "Each state shall have a highway safety program approved by the Secretary (of The Department of Transportation) designed to reduce traffic accidents and deaths, injuries and property damage resulting therefrom. Such programs shall be in accordance with uniform standards promulgated by the Secretary . . ." By November, 1968, there were 16 such standards listed. One obvious problem surfacing during implementation of these standards was the apparent lack of trained manpower.

Three recent national surveys by The Department of Transportation identified a number of highway safety occupations or functions in which there now exists a manpower shortage, or where a shortage will likely occur within the near future. The surveys

provided evidence that a majority of these occupations or functions are skilled or at a technical level requiring specialized education that does not normally result in a baccalaureate degree. A project was undertaken with two main objectives: one, to determine what is being done to train highway safety personnel in the public vocational and technical education system, and second, to determine the potential this segment of the nation's education system has for preparing the necessary trained manpower for highway safety.

The project was conducted by The Center for Vocational and Technical Education, The Ohio State University, for The National Highway Traffic Safety Administration and The Department of Transportation. The views or opinions expressed in the program do not necessarily represent those of The National Highway Traffic Safety Administration. The project objectives were accomplished by a thorough search of the related research literature, curriculum, reference material literature, a survey of all states to identify existing programs, a survey of all identified programs to secure curriculum materials and an in-depth study and recommendations from 60 selected vocational and technical educators.

Several significant conclusions were drawn from the findings of the project. The generalized job titles identifying highway occupations represented total jobs or certain job functions within a total job. Also the job titles used to identify highway safety occupations were absent within the standard references for occupational classifications. Under the 1968 Amendments to The Vocational Education Act of 1963, vocational-technical education is charged with developing competent manpower for all occupations considered of a nonprofessional level. Currently some specific highway safety occupations do not have identified vocational-technical education preparation programs. Some of these should be developed on a priority basis. For example, the Emergency Medical Technician is an essential link in the medical team. The life of those injured in accidents may depend on the expediency with which they are removed from the wreck, delivered to the hospital and the care received enroute.

Motor Vehicle Inspectors are needed to diagnose hazardous conditions of motor vehicles resulting from normal use, abuse, defective construction, improper maintenance, or poor quality of original part or repair parts. The Alcohol Breath Examiner Specialist is vital in identifying intoxicated drivers who, because of impaired driving abilities, kill more than 25,000 people each year and injure 800,000 more. The Highway Safety Engineering Technician is the engineer's specialist in the safety features of designing, construction and maintaining the streets and highways. The Traffic Engineering Technician assists in the technical aspects of traffic flow, traffic control devices and methods. He is responsible for communicating to the driver, the safest way to proceed on the roadway.

Engineering Technicians are responsible for the driving environment in which you operate your vehicle. The transporting of millions of our youth to and from schools each day is the responsibility of thousands of school bus drivers. These people are responsible for the safety of their passengers and the control of other traffic on the roadways for safe operation of the school vehicle. The Accident Site Investigator is responsible for collecting all the data on accidents. He obtains evidence of factors causing highway accidents, and tries to correct driver deficiencies, vehicle deficiencies and faulty roadways. He is a specialist that will supplement the policeman's role in collecting information for legal reasons.

Driver Education has become a very important addition to the curriculum of the public and commercial schools. The teacher aide for the public driver education programs and the instructors for the commercial driving schools can be prepared through the vocational and technical education program. Only recently have we recognized the need for Pedestrian Safety Specialists on local municipal government payrolls or for large shopping centers. The pedestrian can be as detrimental to the safe operatior of a vehicle as the vehicle can be to safe pedestrian movement. A well trained Driver License Examiner is essential to screen out those unprepared or incompetent individuals from those individuals who should be granted the privilege to operate a vehicle on the public roads. The Debris Hazard Control Specialist is fast becoming an essential link in the highway safety picture. Not only must he remove the normal debris from accidents and other sources, he must know how to cope with such extremely dangerous debris as radioactive, caustic or inflammable materials.

The Traffic Records Analyst is a specialty job emerging through the fast accumulating data necessary for efficient and effective operation or our streets and highways. The Traffic Patrolman is another specialty that is emerging from the tasks of the policeman as we have known him in the past. This highway safety occupation has many dimensions and relates to a large number of the established highway safety standards. It was also concluded that most post-secondary occupational preparation institutions presently offer a basic program or curriculum whereby one or more of these highway safety occupations just identified could be trained for as an optional specialty.

Specialty programs are now offered on a limited basis, at post-secondary institutions for training emergency-medical technicians, highway safety engineering technicians and traffic patrolmen. The project identified and documented in the Vocational-Technical ERIC system over 100 different sets of curriculum materials for training in highway safety occupations. One of the major recommendations made to the U.S. Department of Transportation was: highway safety representatives should be on

state and national vocational and technical education advisory committees. These committees should have data indicating manpower needs, forecasts, and present training capacities for highway safety occupations. A team of state and local highway safety authorities and vocational-technical educators should be drawn together in those states with the greatest highway safety manpower needs to develop a statewide plan for highway safety manpower development. The vocational and technical education authorities at the local and state levels should work with highway safety authorities to determine the priority of highway safety manpower needs in relation to other local and state manpower needs.

Additions or revisions in the *Dictionary of Occupational Titles* and the U.S. Office of Education Occupational Codes list should be made to identify the occupations within the highway safety area. This should aid in standardizing the occupational classifications within the highway safety work force, and the acquisition of data necessary for training and manpower department. The NHTSA should continue to develop task analysis for each highway safety occupational category and to provide these analyses to agencies or institutions for the purpose of developing an instructional analysis and implementing an educational training program. Additional NHTSA manpower development funds should be made available to gather manpower data and to perform job and task analysis. This information would serve to facilitate the appropriate expenditures of other manpower development funds within highway safety occupational preparation. Highway safety specialists and authorities should assist local vocational and technical education administrators to identify the priority needs in highway safety occupations, to identify the occupational classifications, and to specify the local job openings available for trained people in these occupations. Additional literature and informational programs identifying career opportunities in the skilled and technical highway safety occupations should be developed and made available to potential students, school counselors and parents.

Career opportunities in highway safety occupations should be written into the occupational exploration and orientation curricula being developed by many school systems for the kindergarten through tenth grade levels of education. The public education system for vocational and technical education should be called upon to provide manpower development for those highway safety occupations with the greatest priority needs and for which this level of training is most applicable. The programs may range from the two-year associate degree level to a certificate program to a short course for upgrading or retraining. The educational program must be designed specifically to prepare individuals for identified job openings or needs. Vocational and technical education funds should be provided to expand, extend and/or develop highway safety occupational programs where identifiable local and state priorities so indicate.

Several of the highway safety occupational programs would be appropriate expenditures of "new and emerging occupations" funds from the 1968 Vocational Education Amendments. Competent highway safety operations people with an interest in and qualifications for teaching in training institutes should be identified as possible instructors for future occupational preparation programs in highway safety. Newly developed NHTSA instructional materials should be planned and workshops held to expedite updating and development of occupational preparation programs. A task analysis study should be made for each of the highway safety occupations to determine the commonality of tasks among the various occupations. If sufficient commonality does exist, core curricula should be developed for efficiency and effectiveness in training programs.

All future course guides, instructor's manuals and other curriculum materials for highway safety occupational programs should be documented in the Vocational and Technical Education Resource Information Center (ERIC). This documentation will enable educators to have access to the materials through the ERIC dissemination system and through the *Abstracts of Instructional Materials* published by The Center for Vocational and Technical Education, The Ohio State University. More detailed findings, conclusions and recommendations can be found in the final report entitled *Expansion of Vocational-Technical School Programs to Accommodate Highway Safety Manpower Requirements* as submitted to the National Highway Traffic Safety Administration. A corresponding publication by Daugherty, Brooks and Hyder is available through The Center for Vocational and Technical Education, The Ohio State University. This reference was written as a guide in developing occupational preparation programs for highway safety.

This country's transportation system is the most sophisticated ever known to man. Within this sophistication, safety has loomed as one of the major drawbacks. It is clear to highway safety specialists and educators that our public education system and more specifically, our vocational and technical education programs have a significant contribution to make in providing the much needed trained manpower to overcome some of those problems in safety. The trained manpower will implement safety standards and make safe our nation's streets and highways for you and your family.

## SUMMARY

We present this to you as State Directors for the following reasons:

1. We want you to be aware of this group of emerging occupations and to point out the additional safety occupations that seem to be appearing rapidly.

2. We want you to see this group of occupations as an approach to relieve one of our societies greatest ills, killing and maiming on our streets and highways.

3. We want you to become acquainted with the most complete resource manual in highway safety occupational training materials and programs that is available for vocational educators today. The guide entitled *Highway Safety Occupational Program Development Guide*, should be useful to a number of people on your state staffs as well as local post-secondary program administrators and instructors. It was to be sent to you through the U.S. Office of Education and the U.S. Department of Transportation.

4. We thought this program could serve to alert you, if you don't already know, that within each of our states the Governor has designated a highway safety representative to direct highway safety activities for the state. He too has received a copy of this guide and just may begin asking questions about what your programs can do to train people for highway safety.

5. We want to alert you to the fact that Highway Safety moneys, section 402 of the Highway Safety Act, are available to the states for manpower development. However, these funds are very limited and will probably continue to be so for the foreseeable future. Therefore, the vocational-technical funds are suggested as a major source of revenue.

6. We want to influence you to consider giving occupational training in these safety occupations as a much higher priority for your state plan than has been the case in the past.

7. We want you to know that The Center will be involved in accident site Technician Teacher Training during the next nine months.

# THE DELIVERY SYSTEM FOR PERSONNEL DEVELOPMENT

*Milton Schwebel* — Dean
Graduate School of Education
Rutgers University

Quantity rarely poses a problem, especially in our highly efficient society so expert in mass production. Quality is always a different matter. In this highly dynamic world it requires that we keep pace with the swift changes, so many of which relate to personnel development. It raises an even more difficult challenge--that we anticipate the future; to borrow from Anne Lindbergh, that we see "the wave of the future" in the present. The seeds of the future are here in the present, in what we (and the field of education) are in the process of "becoming," though our consciousness of it may be very faint. Leaders in education ought to spend a portion of their time searching for that wave and riding its crest.

This paper represents one attempt to examine some future-in-the-present attributes that have bearing on quality in a system for personnel development. Even if some of our colleagues do not like what they see, they should be reminded that they will not help themselves by playing the ostrich. Social and educational changes are as inexorable as physical ones, like the rotation of the earth, and it helps no one to rail at them or to resist them in some other futile ways.

About 12 years ago I had the opportunity to visit the homes of two great Russians of an earlier period in history, Pavlov and Tolstoy. As you know, the brilliant work of these two was in two very diverse fields--Pavlov, the Nobel laureate in physiology, for his studies on conditioning; Tolstoy, one of the towering novelists, author of *War and Peace* and *Anna Karenina*. Yet, they had at least one very marked quality in common: both of them needed physical activity in their personal lives and both regarded such activity as essential to man's inner needs. These two intellectually gifted men worked the soil and considered as indispensable the work that brought sweat to their brows as well as the work of the mind.

The separation between mental and motor activity in our country and in a considerable part of the world is a matter that must be of concern to us here today. We all know which of these

two has the status, and we know that the field of vocational-technical education has some of the blemishes of belonging to the social class that sweats. How unrefined! How unacademic!

Any discussion about a system for personnel development in vocational-technical education must keep that prominently in the foreground. It is not one of those things that can be swept under the rug. In my own school where members of the vocational-technical department play a very prominent part in the work of the school, there are obvious indications that the department holds a status position like that which is probably general in the country. We have three floors and a lower level in our nine-year-old building.

For what might have been perfectly legitimate engineering reasons, the Vocational-Technical Education Department was placed in what is euphemistically called the Lower Level (occasionally the word basement or cellar slips out). Whether or not the department should be there (along with our Reading Center), the important thing to consider is the reactions of people to that placement. I have not polled the members of the department, nor the other faculty in the school, but I think it probable that the department and the field would be placed on our pecking order just as they have been placed lowest in the building. And I would not be surprised to find some members of the department themselves placing themselves in a low position. This is likely despite the scholarly productivity of my colleagues in vocational-technical education and their significant role in the school.

Years ago social psychologists Sherif and Cantril (1) pointed out that people low on the totem pole--unpopular minority groups--take on the values of the larger group. I don't want to belabor this point, but only to emphasize that one of the realities we are dealing with is the professional "self-concept" of those in vocational-technical education. A negative concept sometimes leads to one of two unhealthy reactions. One is to decide to become utterly respectable, academically, becoming overly "theoretical" and overly "scientific," overly traditional and overly conservative. The other reaction is to become anti-intellectual, like "if that's what they think of me, to hell with them and everything they stand for." With either of these two reactions, everybody loses.

With Pavlov and Tolstoy, mind and body, mental and motor, are inseparable. They are part of a single way of life and that means that the study of the arts and sciences and of vocational-technical education are really inseparable. I don't mean by this some artificial attempt to bridge two separate worlds--let us say by citing all of the occupations that appear in one of Charles Dickens' novels. I mean that the complete human, male or female, young or old, needs to be involved in making his bread and just as much in finding beauty and inspiration in life.

There is beauty in the land, in the soil. However, one who must give every waking hour to working, ends up like the man with the hoe in Edmund Markham's poem, a dull, uninspired, pitiful creature who has not been given the opportunity to fulfill himself as a human being. On the other hand, there is the person, very different from Tolstoy, the person who writes about the beauty of nature and yet has nothing but a superficial encounter with it. This is the dilettante who does not participate in life and who is just as pitiful a person.

How will we together, we in education in the state and federal offices, we in education in the universities and colleges, and we in education in the schools, how will we change our own values so that we will be able to change a whole generation of people?

We are very fortunate these years because the youth of America are making us conscious of sham and hypocrisy. They tell us in song and dress and action that they are opposed to the social stratifications that have been marked by the cut of our hair, the cut of our clothes, and the language we use. They work on metal and with pottery, they make candles and work with textiles, they work the land, they grow their own produce. They are not ashamed of sweat and of the healthy smells of the human body. And if they offend sometimes by their need to dramatize their point of view, or by the extremists that every group attracts, let us not lose sight of what they are communicating, especially because it comes so close to what I have heard many a vocational-technical specialist say over the years.

They have said something like the following:

> Everyone should respect manual work. Let's not turn out snobs who look down on sweat, on blue collars and overalls, who don't have the patience to do a good piece of work. Just because students plan to go to college is no reason they should be denied the pleasure and satisfactions of the craftsman.

I think they were right when they said that. I think they are right now. Hence, my satisfaction in the growing interest especially among the young in the area of craftsmanship at the point at which vocational and artistic activity converge. Travel through much of the country, see the open-air art exhibits, the potters, young people growing organic foods, or working at looms, or making cheese.

It is too easy to be turned off by long hair and dirty jeans and so, too easy, to miss seeing through this facade to the substance in our young--a substance that represents a move in a direction we have hoped for--an end to the snobbery about using

our hands and "getting dirty." Real dirt is, after all, not the soil, or motor grease, or metal filings, but some of the mean and brutal things people do to each other.

We in education have hoped for attitudes of this kind. Now is the time to capitalize on them. To do so means we older people must now "put up or shut up": we ought to offer courses that are relevant, in the best meaning of the word, courses that relate to the new ways of life of young people, college-bound or not.

There are other things in our favor today, other things that work to help bring about positive change. This is the decade of the university without walls. In some settings the old prescribed programs are coming down like the walls of Jericho. This means that if we are cognizant of the changes and ready to make the most of them, students will see that the separation between liberal studies and career studies is a phony one. Some of them through this new freedom will have a chance to discover that being intelligent and articulate are good qualities for one who wishes to enjoy the pleasures of teaching in vocational-technical areas, just as much as in the sciences and the humanities. The intellectual separation of disciplines--physical and mental sciences, social sciences, humanities, the arts, and vocational-technical fields--ought to come to an end. The vocational-technical areas do, in fact, involve all of these. Although in the late 30's (when, as a regular substitute, I taught English in the trade department of a high school) it might not have been so apparent, it is clear now that the social sciences, the humanities and the fine arts do have clear lines of relationship to the vocational-technical fields. Surely, our teachers ought to have and ought to value what the artist values: patience, creativity, freedom to think freely, and the aspiration to high standards.

As to the social sciences, the days are past that the teacher who taught future wage earners was completely naive about one of the central features of life for the wage earner of our country, namely, labor-management relations. American teachers, whether in an association or a union, are learning these things that are part of the throbbing life, in factory, in mine, on ship, in department store and office. The social sciences have come home to roost; now they are personal and relevant to the teacher and as a consequence, they have a greater chance than before of being an integral part of the experience of our students. Vocational-technical students are as worthy as any others. They deserve to know the effect of, let us say, a wage-price freeze on them, and the effect of a tax on imports.

They have a right to learn other things too: e.g., from the humanities--from history and literature, that there were periods in our history when other groups strove for equal opportunity and equality in education. There was a time when the Irish, to cite

one such group, were branded as criminals (endangering our wives and sisters), as illiterates, as paupers supported by the community. They should know how the WASP workers of Philadelphia, Boston, New York and Washington in the 1820's and 1830's fought for free elementary education for their children. And they should come to know that literature, the theater, poetry and the graphic arts portray and help understand the life of people like them. The arts have always been part of the struggle to make life better and they should have the chance to know that. There is the Jack London of *The Call of the Wild*, but also of *Martin Eden*; there is the John Steinbeck of *The Little Red Pony*, but also of *The Grapes of Wrath*.

Our young people are making music a more personal experience--guitar, folk, rock, group-sing, and group-dance. This is the making of the future--a future in which our many nonworking hours will be filled with something more than TV watching--with making music and dance and art objects, writing poetry, making movies. Vocational-technical teachers who respect their students, want them to share in these great riches.

Mathematics and the physical and natural sciences have long had a place in vocational-technical education. Yet one point needs to be said, again and again. These subjects possess a few major principles or laws. These principles help us understand the world and the universe. These, and not a lot of minutae, are important in developing the intelligence of young people.

Laws that are understood become tools in the human mind for comprehension. Unlike the countless details students are required to learn and regurgitate on an exam, these are not quickly forgotten. They have an inherent value, becoming part of the mind. When a child memorizes 2 + 2 = 4, he will forget it or confuse it, but when he achieves number concept (i.e., knows the meaning of 2 + 2 is 4), he never loses it. When a child is told that the hands of a clock in a certain position mean a particular time, he might or not recall it, but he will not by virtue of that recall understand the concept of time. There is no substitute for comprehension of basic principles.

This comes close to the very core of the future. Pioneering in education, as we have said, really means anticipating the future. When Frank Parsons introduced the concept of vocational guidance in Boston in the early 1900's, he was a pioneer. Progress in vocational-technical education today, and in virtually every other branch of education, means using the content of the field to do one of the most valuable things we can for children: further their intellectual development. If there is one great principle we have learned this century, it comes especially from the work of Jean Piaget and it tells us that we humans develop our intelligence during the course of our involvement with the physical and

social environment. This is so for the infant, the child and the adolescent. Intelligence grows through those experiences in which the child has encounters with the environment. As the infant grips the little plastic block, squeezes it, sucks on it, throws it, he is in his infant way, developing his eye-hand coordination, and learning about objects in the world, their feel, taste, smell, look, and he is learning some control over the world in this very primitive way. So too does the child as he learns to tie his shoelaces and how to play a social game like hop-scotch or marbles or tag. The adolescent engaging in a discussion, now manipulating symbols rather than objects, is also doing those things that can further intelligence.

We the teachers arrange the experiences of children (at least during their school hours), and what we arrange and how we arrange them seems to have considerable bearing on how much their schooling stimulates development.

There is no reason whatsoever why vocational-technical experiences should not be devoted to that end, as much as any other subject. This is the way in fact to achieve an integrated way of life in which the mental and the manual are not separate: that is, children and adults applying their intelligence to understand, to master and control the environment, the physical and social environments; to be specific, understanding and controlling the motor of an auto; the behavior of a computer; the operation of a city. My "shop" experience in a K-8 school many years ago has left warm memories and a footstool still in use. In retrospect now, something was missing. We were told what we could make and how we could produce it. The missing ingredient came to light years later when one of my sons, a doctoral student in psychology in an "ivy" university, working in a youth center in a city, had the happy fortune of befriending a rare vocations teacher from whom he learned the following principle. The most important thing to learn is not how a motor works, or an electric current, or a radio--important as that knowledge is. The most important is that none of these is mysterious, and all can be mastered by the human mind. What counts most, he learned, is to apply intelligence.

By setting primary emphasis on intellectual growth as the goal, vocational-technical will get in the mainstream of education in the latter part of this century. It will join the other fields which inevitably must move in that direction during a period in our history when we will begin to realize universal higher education, and when our country will not be able to afford a school system that accepts the notion that a portion of the population must remain dumbbells and must have dumbbell programs.

How do we move into that period?

By changing our behavior, which means changing our programs and ways of teaching so that they concentrate on freeing the child to work at solving problems--problems that are real. This means encouraging boys and girls to work on problems that interest them, and it means giving them freedom to think and figure things out for themselves instead of filling their heads with textbook material that is, we know, quickly forgotten. Life in the real world is problem-ridden. The human mind, given the opportunity, is the best instrument for solving problems--at home (where we all have problems) and in the shop and office and school. Do we help develop that great instrument or do we stultify it?

Yes, but if that's what we're going to do, how are we going to get our teachers to think and behave that way?

That is the key question. With all that besets us now, how can we handle that too? With the growth of unemployment, with the continued decline of agricultural employment, and the continued migration to the cities, especially of blacks but also Chicanos and Indians as well as poor whites, with the pressing problems of integration and bussing, with cuts in budgets, with strikes in the schools--with all these things how will we help the teachers change?

We will do it because they are the greatest resource. We will do it because circumstances will push us in that direction. And we will do it, I think, because teachers themselves will be doing it through their own organizations.

The changes in the world, especially in our country, point to greater personal involvement in the change process. There is hardly a category of persons in our country that has not organized or demonstrated or petitioned about something or other the past 10 years. That is now part of our way of life. Teachers are ready, are on the verge and need only some encouragement and support to do what great teachers have always done--to use their own intelligence and creativity--freed from slavery to a textbook and a rigid syllabus. Individualized instruction does not require a tutorial arrangement; it can be achieved when the teacher is free--feels free--to involve and excite the students so that they take an active part in their own development. By taking an active part in their schooling, children facilitate their own education and the development of their intelligence.

How do we help teachers accomplish that?

First and foremost we do it by being teachers, supervisors, etc. who are themselves like that, who get their own students--that is teachers and staff--to be active and involved in their college and university classes or in their own in-service and staff development. The possibilities are legion, for that's what

the open university is all about. The British have set the pace and now New York State has introduced a college in its state system designed for young and old, for housewives and the employed who want to learn and who take lessons via television, correspondence courses and readings, and use one of the learning centers for conferences, discussions and tutorials. New York State will have a center within commuting range of every student. The University Without Walls (2), the forerunner here in our country even of the New York State venture, has broken with the prescriptions of the past and has said in effect, "Choose your own road and we'll help you go down it." Now there is a graduate school guided by the same philosophy. Public television offers us one important mass vehicle, not for the old-fashioned lecturer, but for demonstration of the liberated teacher at work and for the examination of new, unexplored or controversial issues in education.

Besides new structures there are some new time models beyond the usual semester system. Among them are the brief workshops or institutes, summer or winter, and the weekend courses or conferences. The advantages are great in a course that meets, e.g., at a motel or conference center, four weekends a term. People feel part of a group, work together intensely, and deal with the issues at hand with fewer distractions and less fatigue.

Recognizing teachers as the great resource in the school, we ought to give major attention to the quality of in-service education. That cannot be done unless teachers themselves play a major share in deciding what it is they need. Since the very nature of the active method of teaching children means children-involvement, it behooves us to have teacher-involvement in planning and carrying out in-service education. We participated with four school systems and a teacher organization in helping the teachers (with support of the administrators) in planning their own in-service work. In one school, for example, about 20 teachers decided they wanted to see how others taught and to learn from each other. They observed each other and discussed what they saw. The important character of the whole project was that teachers were addressing their own needs instead of having them imposed by university or state requirements.

We have had experience with undergraduate preservice education in which students played a major part in deciding on the lectures and demonstrations they wanted and on the school field experiences they needed. They were active in their own courses as they must be in their own teaching--active in the use of their intelligence (3).

In all fields of education, graduate and undergraduate, field experience and internship are important. Yet there is always the dilemma of arranging for it so that the student does not become frozen to contemporary practices when these, we all know, are not

serving our purposes. Our safeguard may be found in both an insistence on addressing the problems unrelentingly, all of us together, and by insisting that the theoretical work in education be related to these problems. For example, we had better insist that there be an end to filling the minds of teachers with one of the greatest and worst myths of the 20th century: the I.Q., in particular, the myth that the majority of people are destined to be denied a life of the mind. The I.Q. myth has cost many vocational-technical students over the years respect for their own intelligence and their ability to cope with abstract matters.

Tests of any kind are useful only as they help the teacher identify the learning needs of children and help in planning the educational experiences to build on strengths and to correct the deficiencies. They should not be used to classify and label.

Schooling that is not part of life isn't worth a moment's effort. Schooling that is apart from life is destructive; better none at all than that, for otherwise we are really baby or adolescent-sitters or plainclothes policemen and women. Just because vocational-technical education claims to be career education does not make it *ipso facto* part of life. Real life today is marked by great changes in family life, sexual role, sex permissiveness, changes in the arts, speed of transportation, international relations (e.g., ping pong in Peiping), changes in the role of authority (e.g., Attica), in the involvement of people in policy-making and free expression (e.g., students, oppressed groups, teachers), several occupational changes in life; communal living as a form of the extended family (e.g., co-ops, older folks), centralization and bureaucracy. Vocational-technical education must keep pace with that, be part of it, absorb it. Then it is life, and students respond to real life, not a faint imitation of it. Then as vocational-technical comes to be construed as applied social and physical sciences and related to the arts, it will converge with these other fields. The other subjects need to move closer to contemporary life, but no less vocational-technical.

An auto mechanic must know how his life and future are affected by Germany and Japan, by Ralph Nader, and import taxes, by planned obsolescence, by war and peace; also he needs to live in a world in which most of his hours will be leisure; and in which, with sex role changes, John Wayne will not be the model of masculinity.

Vocational education must bear as much responsibility as any other field to help kids live in this world of now and then.

Who is responsible? We are. We in the state departments and the federal offices and in the universities and we, the teachers in the schools. But mostly we in the state and the university have the power to support programs and to shape them. We together

must set our goals. We in the university have the responsibility to establish programs in accordance with joint goals and should be held accountable for our output, including the quality thereof, of paraprofessionals, professors, administrators, and counselors. And you should hold us responsible.

How do we get superintendents, principals and boards of education to be interested in and value vocational education as more than a dumping ground and more than allegedly dealing with unemployment (it doesn't reduce unemployment). This is another form of the question, how do you get faculties, boards, etc. to value and respect schools of education. I can answer that and I believe this answer applies to the first question. We must not be defensive; we ought to be self-critical and to earn professional respect. We have much to correct: shoddy courses, repetition, platitudes, too little hard scholarship, theories unrelated to life, and too little intelligence. University presidents (and superintendents I believe) must see that we are in the mainstream of life: that education is not equivalent to training in skills (appropriate to industry) but to the development of intelligence for life now; that by the kind of faculty and staff we select and the freedom they have to be active, creative agents, and by the goals we set, we can help young people apply their intelligence to contemporary life situations, career or otherwise.

Since World War II, but especially in very recent years, we have witnessed increased centralization of authority over education, both on a national and state level, at the same time as the university has taken on new responsibilities (e.g., open admission). These major changes have brought with them still incomplete redefinitions of our roles, creating as a consequence misunderstandings and strains. Absolutely essential now are close, cooperative working relationships in clearly defined ways on concrete programs to achieve clearly defined goals.

We in New Jersey have had the recent experience of planning and initiating a program for the education of educational planners. We have created a tripartite coordinating council (the State Department of Education, school district representatives, and two units of Rutgers), but this came about only after the difficult, often heart-rending process of overcoming distrust, establishing clear division of labor and of responsibility. Difficult, yes, but possible and rewarding.

One of the better ways to take a giant step forward is by getting an influx of high quality personnel. By high quality I mean especially potential teachers, counselors and administrators whose educational advantages have given them high level functioning intelligence. Recent graduates of arts or science programs, now available because of the job market, could be attracted into internships in the field. The avenue into teaching in the future

might well be through such a background, perhaps including pre-ed (comparable to pre-med, but with all professional work coming at the masters level). Now would be the time to infuse this type of college graduate into vocational-technical education.

We in the universities are aware of industry's tremendous training operation, equivalent, according to Eli Ginzberg (4), to the public expenditure for education--but we must recognize the difference between that with its strong emphasis on skills, and our objectives for intellectual, career, social, personal, and character development.

We in the state departments and universities working together ought to employ all the possible instruments--media, computers, technical laboratories, learning centers, libraries, and field experiences. We can use all kinds of educational experiences and time arrangements. We ought to do the painstaking work of building continuing education--starting first of all with continuing and close supervision during the critical first three years as a continuation of the two before that, and continuing unbroken at least until retirement, for all people including ourselves--because deans and professors and state department people grow stale and outdated unless they work at it. To prevent our staleness, to prevent our addressing problems of the 70's with perceptions of the 50's and 60's, we must have the active participation of teachers and preservice students. With that we can be more assured that we will be dedicated to helping teachers and children free their own great resources, to become independent thinkers, not frightened, to become assertive but respecting of self and others and active in their own development.

All in all, the delivery system in vocational-technical education--as in other fields--will have much less of a problem of numbers than it will of quality. And the quality problem will not be in the form of degrees and credits. It will be in the form of changing our programs and the educational encounters we give preservice and in-service people, in changing them so that they will be at home in the swiftly changing times of the 1970's, 80's and 90's. One of my colleagues said, "Today you have to run just to stand still." Will we be able to run fast enough? If so, vocational-technical personnel will be men and women suited to their times, and in the mainstream of education.

## REFERENCES


1. Sherif, Muzafer, and Cantril, Hadley. *Psychology of Ego-Involvement*. New York: Wiley, 1947.

2. Baskin, Samuel. Sundry reports and papers on the University Without Walls, Union of Experimenting Colleges and Universities. Yellow Springs, Ohio.

3. Wheeler, James; Chambliss, J. J.; Scrupski, Adam; and Shimahara, Nobuo. "An Experiment in Teacher Education." *School and Society*. April, 1971. pp. 220-223.

4. Ginzberg, Eli. *Career Guidance: Who Needs it, Who Provides it, Who can Improve it*. New York: McGraw-Hill Book Co., 1971.

PART V

# APPENDIX

SEMINAR PROGRAM

urth Annual

tional Leadership Development Seminar

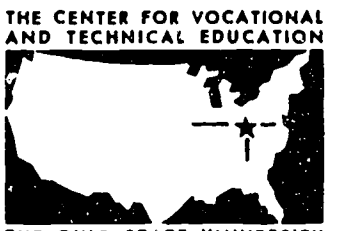
State Directors of Vocational Education

# Comprehensive Personnel Development For Vocational-Technical Education

September 14-17, 1971

Flamingo Hotel

Las Vegas, Nevada

## SEMINAR PURPOSE

To provide a mechanism for the in-service leadership development of state directors of vocational education and members of their staffs.

## SEMINAR PROBLEM

An adequate and continuing supply of manpower is not available for the maintenance, improvement, and extension of existing programs or the development of new programs in vocational-technical education.

## SEMINAR OBJECTIVES

1. To provide a forum for presentations and discussions concerning personnel development leading to better conceptualization of the problem, identification of the needs in personnel development, and determination of responsibilities and functions of SDVE staffs regarding this problem.

2. To explore and study existing and innovative tools, processes, and systems useful in personnel development.

3. To conceptualize a model state plan for personnel development which will be useful in developing a state's personnel development plan and programs.

4. To provide an opportunity for professional development to state directors of vocational education and key members of their staffs.

### STATE DIRECTORS PLANNING COMMITTEE

*R. D. Anderson*
*John W. Bunten*
*Leonard E. Kunzman*
*Edwin L. Rumpf*
*George L. Sandvig*
*Byrl R. Shoemaker*
*Robert E. Taylor*

### CENTER STAFF

*Darrell L. Ward*, Project Director
*Edward N. Kazarian*, Research Associate
*Nancy J. Lares*, Secretary

## TUESDAY — SEPTEMBER 14, 1971

10:00 a.m. - 1:00 p.m. REGISTRATION — Foyer of Comstock Room

CHAIRMAN - *R. Courtney Riley*, State Director
Nevada

1:30 p.m. OPENING REMARKS
WELCOME

*Burnell Larson*, Superintendent of Public Instruction
Nevada

INTRODUCTION TO THE SEMINAR

*Robert E. Taylor*, Director
The Center

GREETINGS

*John W. Bunten*, President
NASDVE

A RATIONALE FOR COMPREHENSIVE PERSONNEL DEVELOPMENT IN A STATE

*Carl Schaefer*, Professor of Vocational-Technical Education
Rutgers University

3:15 p.m. Break - Coffee served in Oasis Room

3:30 p.m. REACTOR PANEL

*Charles J. Law, Jr.*, State Director
North Carolina
*Wesley P. Smith*, State Director
California
*Glen H. Strain*, Ass't. Commissioner Vocational Education
Nebraska

DISCUSSION SESSION

4:30 p.m. ADJOURNMENT

REMINDER OF THE DAY: The Broadhead-Garret Company, Cleveland, Ohio, will sponsor a hospitality hour in the Oasis Room beginning at 5:00 p.m. Mr. Tom Rogers, Educational Consultant, will be your host.

## WEDNESDAY MORNING — SEPTEMBER 15, 1971

Comstock Room

CHAIRMAN - *George W. Mulling*, State Director
Georgia

8:30 a.m. OPENING REMARKS

AN INDUSTRIAL CORPORATION'S APPROACH TO PERSONNEL DEVELOPMENT

*Robert G. Pecka*, Training Development Manager
Western Electric Co.

DISCUSSION SESSION

R & D REPORT - PERFORMANCE BASED TEACHER EDUCATION

*Calvin J. Cotrell*, Research and Development Specialist
The Center

10:00 a.m. Break - Coffee will be served in the Oasis Room

10:15 a.m. SYMPOSIUM: ROLES AND RELATIONSHIPS FOR PERSONNEL DEVELOPMENT OF STATE DIVISIONS OF VOCATIONAL EDUCATION, UNIVERSITIES, AND LOCAL EDUCATION AGENCIES

*George Brain*, Dean - College of Education
Washington State University
*John R. Guemple*, State Director
Texas
*George N. Smith*, Superintendent of Schools
Mesa, Arizona

DISCUSSION SESSION

11:15 a.m. R & D REPORT - A PERFORMANCE BASE FOR STAFF DIFFERENTIATION

*Frank C. Pratzner*, Chairman Instructional Systems Design Program
The Center

11:45 a.m. Lunch (Individually arranged)

## WEDNESDAY AFTERNOON — SEPTEMBER 15, 1971

Comstock Room

CHAIRMAN - *Carl F. Lamar*, Assist. Superintendent for Vocational Education, Kentucky

1:15 p.m. OPENING REMARKS

MANAGEMENT BY OBJECTIVES AND PERSONNEL DEVELOPMENT IN OHIO

*Byrl R. Shoemaker*, State Director, Ohio

DISCUSSION SESSION

INTERNSHIP AND ITS ROLE IN PERSONNEL DEVELOPMENT

*David Bjorkquist*, Chairman of Industrial Education, University of Minnesota

DISCUSSION SESSION

2:30 p.m. Break - Coffee will be served in the Oasis Room

2:45 p.m. PERSONNEL DEVELOPMENT FOR CAREER EDUCATION

*Robert M. Worthington*, Associate Commissioner for Adult, Vocational-Technical Education - U.S. Office of Education, Washington, D.C.

*Edwin L. Kurpf*, Director - Division Vocational-Technical Education - DVTE - U.S. Office of Education, Washington, D.C.

4:00 p.m. ADJOURNMENT

## THURSDAY MORNING — SEPTEMBER 16, 1971

Comstock Room

CHAIRMAN - *Leonard E. Kunzman*, State Director
Oregon

8:30 a.m. OPENING REMARKS

R & D REPORT - SIMULATION TRAINING MATERIALS FOR VOCATIONAL EDUCATION LEADERSHIP DEVELOPMENT

*Darrell L. Ward*, Coordinator for Product Utilization and Training
The Center
*Carrol E. Burchinal*, State Director
North Dakota

CONFUSION ON THE BRIDGE

*Dale Parnell*, Superintendent and Executive Officer of the State Board of Education
Oregon

REACTOR PANEL

*Joseph F. Murphy*, Associate Commissioner for Vocational Education
Connecticut
*Kenny C. Guinn*, Superintendent of Clark County School District
Las Vegas, Nevada

DISCUSSION SESSION

10:15 a.m. Break - Coffee will be served in the Oasis Room

10:30 a.m. STATUS OF STATE PLANNING FOR PERSONNEL DEVELOPMENT

*Lloyd Briggs*, Chief - Vocational Education Personnel Branch, Bureau of Educational Professional Development, U.S. Office of Education
Washington, D.C.

11:00 a.m. Bus leaves for Clark County Vocational-Technical Education Center

11:30 a.m. Buffet Lunch -

WELCOME — Voc-Tech Center

*Kenny C. Guinn*, Superintendent of Clark County School District
Las Vegas, Nevada

## THURSDAY AFTERNOON — SEPTEMBER 16, 1971

12:15 p.m. REPORT FROM THE AMERICAN VOCATIONAL ASSOCIATION

*Lowell A. Burkett*, Executive Director -
American Vocational Association
Washington, D.C.

1:00 p.m. CENTER TOUR

2:00 p.m. RETURN TRIP TO FLAMINGO

Comstock Room

CHAIRMAN - *Carl Schaefer*, Professor,
Vocational-Technical Education
Rutgers University

2:30 p.m. OPENING REMARKS

INTRODUCTION TO SMALL GROUP WORKSHOPS

*Carl Schaefer*, Professor, Vocational-Technical Education
Rutgers University

3:30 p.m. SMALL GROUP WORKSHOPS (4)

(To discuss a comprehensive plan for Personnel Development including components, steps, roles, relationships, and implementation suggestions.)

Group I: Gold Room #1

Chairman - *John W. Struck*, State Director
Pennsylvania

Group II: Mean Room #2

Chairman - *Ernest G. Kramer*, State Director
Washington

Group III: Comstock Room

Chairman - *Cecil H. Johnson, Jr.*, State Director
South Carolina

Group IV: Board Room

Chairman - *Neal D. Andrew*, State Director
New Hampshire

4:30 p.m. ADJOURNMENT

FRIDAY MORNING SEPTEMBER 17, 1971

Comstock Room

CHAIRMAN - *M. G. Linson*, Executive Director
State Board for Vocational Education
Colorado

8:30 a.m. R & D REPORT - EXEMPLARY PROGRAMS - HIGHWAY SAFETY OCCUPATIONS

*Ronald D. Daugherty*, Research and Development Specialist
The Center

REPORT OF WORKSHOP SESSIONS

*Task Force Chairmen*

DISCUSSION SESSION

THE DELIVERY SYSTEM FOR PERSONNEL DEVELOPMENT

*Milton Schwebel*, Dean - Graduate School of Education
Rutgers University

DISCUSSION SESSION

10:45 a.m. Break - Coffee will be served in the Oasis Room

11:00 a.m. R & D REPORT - COMPREHENSIVE CAREER EDUCATION MODEL

*Aaron J. Miller*, Coordinator of Field Services and Special Projects
The Center

11:30 a.m. SEMINAR EVALUATION

11:45 a.m. CLOSING REMARKS

*Robert E. Taylor*, Director
The Center

12:00 ADJOURNMENT

1971 State Directors Seminar
The Center for Vocational
and Technical Education

# SUB-GROUPS FOR THURSDAY P.M. WORKSHOPS

Group I - Chairman - *John W. Struck* - Pennsylvania

*Representatives from states of:

| | | |
|---|---|---|
| California | Massachusetts | New York |
| Florida | Michigan | North Carolina |
| Illinois | Virginia | Ohio |
| Indiana | New Jersey | Pennsylvania |
| | | Texas |

Group II - Chairman - *Ernest G. Kramer* - Washington

*Representatives from states of:

| | | |
|---|---|---|
| Alabama | Kentucky | Puerto Rico |
| Connecticut | Louisiana | Tennessee |
| Georgia | Maryland | Missouri |
| Iowa | Minnesota | Washington |
| | | Wisconsin |

Group III - Chairman - *Francis T. Tuttle* - Oklahoma

*Representatives from states of:

| | | |
|---|---|---|
| Arizona | Maine | Oklahoma |
| Arkansas | Mississippi | Oregon |
| Colorado | Nebraska | South Carolina |
| Kansas | New Mexico | Utah |
| | | West Virginia |

Group IV - Chairman - *Neal E. Andrew* - New Hampshire

*Representatives from states of:

| | | |
|---|---|---|
| Alaska | Idaho | North Dakota |
| Delaware | Montana | Rhode Island |
| District of Columbia | Nevada | South Dakota |
| Hawaii | New Hampshire | Vermont |
| | | Wyoming |

*Note! States having more than one representative attending may wish to divide their delegation among the various sub-groups.

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