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ABSTRACT

These proceedings of a dissemination conference on occupational research in Texas contain the texts of five reports and the abstracts of twelve research projects dealing with various aspects of vocational education. In the keynote address, on free enterprise and vocational education, the role of vocational education in preserving free enterprise is discussed. Next, a report discusses research perspectives for the eighties: priorities and constraints imposed upon vocational research by public law and federal rules and regulations are overviewed. Presented in the third report are highlights of a 1980 Texas statewide conference at which representatives from the business community and industry spoke about the changes occurring in these areas and about the impact of these changes on the job market and on all levels of vocational education. In the fourth report, on grantsmanship, procedures for locating sources of funding and writing proposals are outlined. The need for vocational research and vocational programs that will be more responsive to the needs of business and industry are discussed in the final report. Abstracts of twelve vocational education research projects funded in Texas in 1979 and 1980 are provided. (MN)

The Department of Industrial Education
College of Education
Texas A&M University

Summary of Proceedings of the Dissemination Conference on Occupational Research

at

Texas A&M University
Rudder Conference Center
College Station

Sponsored in Cooperation with:

Department of Occupational
Education and Technology
Research Coordinating Unit
Texas Education Agency

Project No. 00230033
June, 1980.

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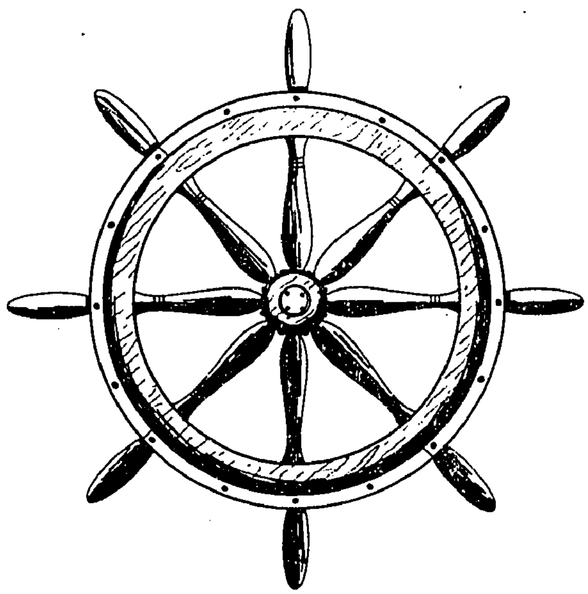
TABLE OF CONTENTS

FOREWORD

The S. S. RESEARCH took participants through the funded vocational research projects of 1979-80. Seaworthy sailors presented a valuable cache of vocational research results. Participants debarked with treasure chests of ideas for their vocational programs.

The Department of Industrial Education in the College of Education at Texas A&M University was pleased to host the sixth Dissemination Conference on Occupational Research.



S. S. RESEARCH OFFICERS

Admiral:	**Oscar Millican** **Director, Research Coordinating Unit** **Occupational Education and Technology** **Texas Education Agency**
Captain:	**Donald Clark** **Project Director** **Associate Dean for Research** **College of Education** **Texas A&M University**
Cruise Director:	**Sharon Colson** **Conference Coordinator** **Department of Industrial Education** **Texas A&M University**
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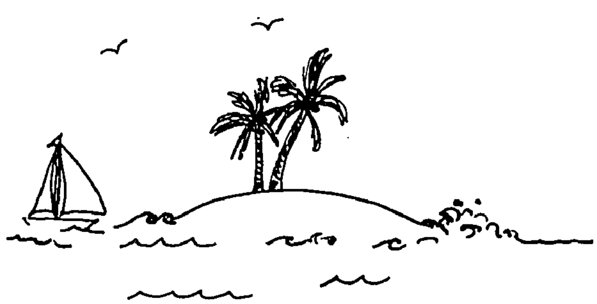

FEATURED FLEET LEADERS

Gene C. Uselton
Director, Center for
Education and Research
in Free Enterprise
Texas A&M University
College Station, TX 77843
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Former manager of a worldwide sales organization responsible for marketing Hughes earthboring tools and equipment, Dr. Uselton is currently Professor of Finance and Director of the Center for Education and Research in Free Enterprise. Dr. Uselton is active in a variety of professional societies, two of which are the American Finance Association and the American Economic Association. He has authored many articles and formal papers on economics and free enterprise and is a frequent speaker and lecturer. He is a pilot and avid flyer.

Alton D. Ice
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A former teacher and area supervisor of vocational agriculture and a former executive secretary of the Vocational Agriculture Teachers Association of Texas, Mr. Ice has served as executive director of the ACTVE since 1969. He is immediate Past-President of the 50,000 member American Vocational Association, thus being the first Texan in 29 years and only the second in the 54 year history of the AVA to serve in that capacity.

Gary Green
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Dr. Green has held a variety of occupations: carpenter, real estate broker, mortician, welder, radio broadcaster, salesman and wheat farmer. This rich occupational background has meshed with his current work interests and recent experiences. Dr. Green directs research, is involved in proposal writing, reviews and synthesizes research findings, and authors books in addition to his teaching responsibilities at Kansas State University.

7

S. S. Research

Tuesday, April 15, 1980

SAILING SCHEDULE

Tuesday, April 15, 1980
Rudder Conference Tower
"On Board Registration" 8 a.m. - 12 noon
Room 305A

8:30	**"All Hands on Deck"** Coffee
	FIRST GENERAL SESSION Room 301, Rudder Tower
9:00 - 9:10	**"Casting Off"** Welcome and Introductions Donald Clark, Associate Dean for Research, Texas A&M University
9:10 - 9:20	**"Tour of Duty"** Overview of the Conference Sharon Colson, Conference Coordinator Department of Industrial Education Texas A&M University
9:20 - 10:00	**"Full Speed Ahead"** Keynote Address: FREE ENTERPRISE AND VOCATIONAL EDUCATION, RENEWABLE NATIONAL RESOURCES Gene Uselton, Director Center for Education and Research in Free Enterprise
10:00 - 10:15	**"All Hands on Deck"** Coffee
10:15 - 10:45	**"Charting Our Course"** Research Perspectives for the 80's Oscar Millican, Director Research Coordinating Unit Texas Education Agency
10:45 - 11:45	**"Ports of Call"** Small Group Sessions Topics 1-4

9

"FULL SPEED AHEAD"

KEYNOTE ADDRESS

Free Enterprise and Vocational Education: Renewable National Resources

Gene Uselton
Center for Education and Research in Free Enterprise

Dr. Clark, Dr. Colson, Mr. Millican, Ladies and Gentlemen: As you know, the date is April 15, the deadline for filing your income tax report. April 15 is also the day on which Lincoln was assassinated by John Wilkes Booth. It's the day on which the Titanic struck an iceberg and sank in the North Atlantic Sea in 1912, taking the lives of more than 1500 persons. April 15 is the day designated by some as National Hostility Day. I would remind you, however, that April 15 is also the birthdate of Leonardo DaVinci, so let's begin with a Mona Lisa smile.

This speech has been designated your keynote speech. The "keynote" is the note that the song leader blows on a pitch pipe or strikes on a piano to establish the key in which the group is to sing. Not all of the singers will sing the same note, but the "keynote" is the note with which all of the other notes must harmonize. This conference deals with occupational research. You will discuss vocational education for special education students, curriculum development, instruction for apprentices, and so on. But the primary note with which all of the rest of these notes must harmonize is freedom.

The whole idea of occupational research would be significantly different (if not irrelevant) in a planned economy where individuals are not at liberty to choose the occupations that they will pursue.

My topic is "Free Enterprise and Vocational Education: Renewable National Resources." There is no doubt that America's most important resource is manpower (people). In an age of technology, that resource tends to become obsolete very quickly. But it can be renewed through education. That is your specialty, and I shall not insult you by trying to speak on the subject in which you are better qualified than I. But I am qualified to talk about another national resource that is badly in need of renewing. I am speaking of that endangered species: the American free enterprise system. Allow me to relate that topic to the topic of vocational education as we go along.

Vocational education and voluntary trading go hand in hand. The source of tremendous wealth in America is not the superior endowment of natural resources of the land in which we live. Other countries are equally well endowed (for example, South America, Mexico, the Middle East). No, the source of our wealth is the freedom that we have had for 200 years and more to trade with one another to our mutual benefit. So, at the risk of sounding like a professor of introductory economics, let me explain something about trading. The basis for trading is what economists call comparative advantage. Comparative advantage explains why Woodrow Wilson, the 28th President of the United States and a world champion stenographer, hired a secretary to take dictation and do his typing. Comparative advantage explains why we grow oranges in Florida and wheat in Nebraska. My friends at the Agricultural Experiment Station tell me that it would be entirely possible to grow not only wheat, but also oranges in Nebraska, but that the cost would be tremendous and the yields would be quite limited. Probably, we would need gigantic greenhouses and so on. But instead, we let Florida specialize in growing oranges and other products, and we allow Nebraska to specialize in growing wheat and products that grow well there. So, as a result of the specialization and trading, the people of Florida and Nebraska have more oranges and more wheat than they would have had if they had been forced by some regulation to be independent of one another and grow all of their own oranges and wheat independently. Comparative advantage explains why the United States sells computers and imports coffee.

Comparative advantage leads to voluntary trading, and voluntary trading promotes diversity among individuals and among groups. It promotes harmony and cooperation. Central planning, on the other hand, requires conformity. The planners make a plan and those who disagree with the plan must be coerced in some way to comply.

The basis for trading is comparative advantage. Now, what about the gains from trading? We've touched on that topic already, but let me explain in detail. There are two kinds of gains from trading: there are intangible gains, and there are tangible gains. Dealing with the intangible gains first, let me illustrate by suggesting that you and I are about the same size and wear the same sizes of clothes and shoes. Suppose I have ten shirts and one pair of shoes. You, on the other hand, have one shirt and five pairs of shoes. Now, if I trade you five shirts for two pairs of shoes, I will have five shirts and three pairs of shoes; you will have six shirts and three pairs of shoes. So, I call your attention to three points: (1) there has been no change in the number of shirts or shoes; (2) the wealth in shirts and shoes is still unevenly distributed; you have more shirts than I do; yet (3) through voluntary trading, we have both been made better off than we would have been had we not been able to trade. We have raised the level of satisfaction both of you and of me. This is an example of the intangible gains from trading.

It is important to make the distinction between tangible and intangible gains because the tangible gains are the ones that we measure when we allege that voluntary trading enhances the general welfare by increasing the quantity of goods and services available to everyone for consumption. Take the Florida-Nebraska example; if the government should pass a law prohibiting any trade among the states, and if the people of Nebraska wanted oranges, they would have to build hot houses or arrange in some other way to grow their oranges locally. Some of the land which would have been used for growing wheat (a use for which that land is most well suited) would have to be allocated to growing oranges. The total production of wheat in Nebraska would be diminished and the increase in the orange production of Nebraska would be quite limited. By having Florida and Nebraska, as an example, specialize in the products for which they have a comparative advantage, we have the result that the citizens of Florida and of Nebraska, taken as a whole, have available to them more oranges and more wheat than they would have available had we forbidden trade between those two states.

Suppose that we enroll two persons in vocational education classes. One person takes a course in auto mechanics; the other becomes a computer programmer. The auto mechanic can concentrate his efforts on rebuilding internal combustion engines, while the computer programmer concentrates on her specialty. Because of this specialization, we will have more smoothly running automobiles and more effective computer programs.

Imagine the complication that would result if we increased the number of specialities to include the wide range available in the real world. It is conceivable that the automobile mechanic could learn to do some computer programming and become reasonably proficient at both jobs. But it is not feasible for the automobile mechanic to become proficient at all possible jobs. So he gains and society gains by having him concentrate his time on doing what he does best, repairing automobiles, and trading the gains from his occupation with those who have specialized in other areas.

The tangible gains from trading are the increases in the total number of goods and services available to everyone because of the fact that we have specialized and done what we do best. The great wealth of this country is based upon voluntary trading, specialization, and the resulting gains.

We've talked about the basis for trading, comparative advantage, and the gains from trading. What about the distribution of those gains? What about the distribution of income or wealth in society? Ultimately, wealth or income is distributed in a society by one of two ways, either through voluntary trading or through some form of coercion or force. The voluntary system is essentially the system which has served the United States so well for the past 200 years or more. In the voluntary system, those persons who serve others most effectively are the ones who receive the highest income. Obviously, vocational education can help in this process. If we train individuals to do well what they do best, they will be in a much better position to serve their fellow man effectively, and in a voluntary system, the more effective they are in serving others, the higher their incomes.

Elvis Presley must have served others quite well, because the transactions were all voluntary, and he was indeed well paid. I am told that the BeeGees have phenomenally high incomes, and I conclude in a voluntary trading system that they must be serving others most effectively. (Perhaps we should conclude that college professors are not so effective in their attempts to serve others.)

Consider, alternatively, a planned system. Karl Marx and Frederich Engels suggested that we should take from each according to his ability and give to each according to his need. We should add a postscript to that dictum: If those with ability object, they must be coerced.

Consider the contrast between a system based on voluntary trading versus a system based on planning from the top down. The voluntary system thrives on diversity (comparative advantage is the basis for trade); the planned system demands conformity. A voluntary system rewards industry, frugality, and talent; a planned system rewards need, waste, and incompetence. A voluntary system is realistic concerning human nature; it admits the fact of greed and harnesses that greed and produces good deeds. A planned system is unrealistic concerning human nature; it demands self-sacrifice. It subjects the individual to the will of the group. The voluntary system provides incentives for individuals to produce goods and services that others want. The planned system provides incentives to cheat, to work to "beat the system," to avoid taxes, and so on. A voluntary system promotes social order and harmony; a planned system promotes social distrust and turmoil.

Given those dramatic contrasts between the two systems, one is tempted to ask, "How could the voluntary system, the free enterprise system, be in danger of extinction?" Let me illustrate my hypothesized answer by telling you about an editorial I read in the *Houston Chronicle* just this morning. William Raspberry reported on a recent interview with the Reverend Jesse Jackson. He asked Rev. Jackson why he was planning a protest in Washington on May 17. The Rev. Jackson replied that the rally was to protest high unemployment. Raspberry asked, "Do you plan to demand economic policies to bring about an economic recovery?" The answer was "Yes, we need to focus attention on the economic problems of the poor." Raspberry asked again, "Doesn't everyone already know what the problems are? Isn't the relevant question, 'How do we go about solving the problems?' " Reverend Jackson answered, "Our job is simply to focus attention on the problem as we have focused attention on other problems in the past. It is the responsibility of the decision makers to worry about how the problems should be solved." When pressed further by the reporter, Rev. Jackson finally replied, "The only solution for our condition is to move toward a planned economy, just as every respectable government in the world already has done."

Now, what about Rev. Jackson? He is an honest man, a man held in high esteem by many, and a man whom I respect. Why would he propose that this country, whose wealth was founded upon voluntary trading and specialization change the basic system to one which requires ultimately coercion of those who do not agree with the plan? Why would Rev. Jackson overlook the fact that the poor in America are far better off than the poor in any other place in the world where the economy is planned from the top down? Why would Rev. Jackson overlook the fact that at no other time in history have the people at the very bottom of the income ladder been better off than the people in the relatively free western economies of today?

I read that in Russia approximately one percent of the arable land is set aside for private gardening and farming. In 1978, fully one third of the vegetables, milk, potatoes, and so forth produced in the Soviet Union were produced on that one percent of the arable land. This is an astounding statistic.

Some critics of that statistic claim that it is not correct, that much of the produce sold on the market as produce grown on the one percent of free land was actually grown on the cooperative farms, but that the persons selling the produce have in fact stolen it from the government. Personally, I doubt that this explanation accounts for all of the one-third of the produce that is supposed to have been grown on the private land, but it does indicate an important point. A planned economic system that restricts the right of individuals to trade freely provides strong incentives for many to cheat and to try to beat the system.

I recall reading several years ago in the *Wall Street Journal* a story about a Russian man who grew potatoes in a small patch near his apartment. He would gather a sack of potatoes and catch a jet airplane to the city of Kiev. He would sell his potatoes on the black market and realize enough income therefrom to buy his round-trip ticket to Kiev (on the government-subsidized airplane) and have a few vodkas with his friends before he returned. As I recall, the story ended with this gentleman's being caught and severely delt with. But the point is clear. Given the constraints under which they live, individuals still will try to maximize their own personal satisfaction.

Let me see if I can explain the problem as I see it. I'll dramatize my explanation by giving a series of exclamations. First, we are rich! (We have become rich through voluntary trading and specialization.) Second, but what about the poor?! (Guilt is a luxury good.) Third, let's organize and do good things! Fourth, but what about the free riders?! (The fair share argument.) Fifth, there ought to be a law!

Failing to understand that voluntary trading is the source of our great wealth, we seek compusory solutions that tend to restrict free trading and diminish the gains therefrom.

We begin with the aspirations of an Albert Schweitzer. We employ the methods of a Machiavelli. And, we produce the results of a Robespierre. We begin with noble objectives. We employ inappropriate means, and we achieve disastrous results.

For example, we observe that the poor are poor because they do not have high incomes. They do not have high incomes because their wages are low. And so we pass a law, the minimum wage law. We want to help the poor. The result is that the marginal workers, those with the lowest wages and the lowest productive levels, many of them lose their jobs. So, instead of having low wages, they have *no* wages. One can observe the result of this kind of government policy by driving down any main street in America and noting the number of self-service gasoline stations. It is no longer profitable for a service station owner to employ young, inexperienced, poorly trained people to pump gas, clean windshields, check oil, air up tires. Just recently I read that a research group has discovered that over the past three years, the incidence of automobile engine failure due to oil starvation or lack of an adequate amount of coolant has increased dramatically. The research in question blamed the increase upon the growth in self-service gasoline stations. So, in this instance, the minimum wage law may not only have cost some marginal workers their jobs, but also have increased the cost of operating motor vehicles, too.

We could produce a long litany of legislation, regulation, and so on, intended to do good things, but ultimately causing disastrous results. As Milton Friedman has said, "The problem is not evil people doing bad things; the problem is good people with good intentions attempting to do good using other persons' resources, and of course, no one spends the resources of others as carefully as he spends his own."

Even ex-HEW Secretary Joseph Califano recognized the problem. He was quoted in the *Wall Street Journal* as having related the three greatest lies: (1) The check is in the mail; (2) I love you and I'll marry you; (3) I am from the government, and I'm here to help you.

Joan Beck, in an editorial published by the *Chicago Tribune*, pointed out that the medical profession has a Latin word for almost everything. She illustrated her allegation by citing the word "iatrogenic" as an adjective used to modify the word "disease." "Iatrogenic" means caused by a physician; iatro, physician; genic, caused. In the 19th Century, Ignacio Semelweis observed that medical doctors were going from one hospital bed to another delivering babies without washing their hands between patients. He alleged that they were transmitting childbed fever by this unsanitary practice. The word for that disease transmission process is "iatrogenic." Another more modern iatrogenic disease is the blindness caused by excessive administration of oxygen to a newborn baby.

Joan Beck, observing that we economists are a bit slow, suggested that we should also invent Latin words to describe serious problems. She contributed the word "cratogenic" — crato, meaning ruler, and genic, the cause of, combined to form cratogenic. a word meaning caused by government. Now, there are many cratogenic diseases rampant in our current economy. I mention only a few: inflation, excessive taxation, unnecessary legislation, and counter-productive regulation. Inflation is a cratogenic disease, a disease caused by governments. Inflation is the result of the production of money at a rate faster than the growth rate of real output. The money production in turn occurs as a result of the government's spending more money than it takes in in tax revenue. Even the government, you see, must pay its bills, and if the government does not have enough money to pay its bills, it simply borrows. It can borrow from individuals and corporations and other countries, or it can borrow from the Federal Reserve Bank, a sort of pseudo-government agency. If it borrows from individuals and corporations, it merely transfers demand from the private sector to the public sector and, therefore, does not cause inflation. If it borrows from the central bank, it creates new money so that more dollars are available to buy the same amount of goods and services, and prices rise as a result. Inflation is a cratogenic disease.

Excessive taxation is a cratogenic disease. Taxes are levied by governments. Almost everyone agrees that governments are necessary and that they must be supported by taxes. The issue is not "to tax or not to tax." The issue is a matter of degree. How much should we tax? Arthur Laffer points out that raising the tax rate above some critical level may actually reduce the amount of revenue received as a result of the fact that some producers are discouraged from working, some who would be paying taxes spend additional dollars to avoid taxes legally, and many who would be participating in the economy in the usual way will go underground and participate in an illegal way so that their income cannot be taxed.

Patrick Henry said, "Taxation without representation is tyranny," and I have to wonder what Patrick would think of taxation with representation in 1980 in America. Excessive taxation is a cratogenic disease.

Another such disease is unnecessary legislation. I cite the most recent instance with which I am familiar, Public Law 96-190, signed into law on February 12, 1980. This law is the Dispute Resolution Act, and as a result of the act, we have established the Dispute Resource Center. Its budget is only $10 million for the first year, so the cost is not so great. But do you believe that the federal government, off there in Washington, should be involved in resolving disputes between individuals in Texas or in California or in Washington? The resolution of disputes is important, but that process is a process which can best be carried out on a local level.

The list of unnecessary legislation could be quite long. Wage and price controls have never worked but always seem to be popular solutions among those who would plan the economy, rather than allow individuals to trade voluntarily.

We mentioned the minimum wage law. The minimum wage law and the successive increasing of the minimum wage level has caused serious problems among the very persons whom the minimum wage law was intended to help.

The David-Bacon Act is an act which has done more damage than good. It is an act which requires, on any construction project involving federal funds, that the contractors must pay the prevailing wage in the area. But who decides what is the prevailing local wage? As you might have guessed, this is a federal law and the prevailing wage to be paid in College Station, Texas, is determined not in College Station, not in Houston, not in Austin, but in Washington, D.C., by the Secretary of Labor.

Rent controls in New York were instituted during the Second World War to protect the residents from excessive rental prices during the crisis. They were a temporary measure, and obviously temporary measures sooner or later are abandoned. Not so rent controls. They are still in effect and are still doing serious damage to the real estate business in New York City.

Another cratogenic disease is counterproductive regulation. Here, for example, I cite the FTC's Private Vocational School Rule, which prescribes rules for the conduct of vocational programs in private or proprietary schools. This particular rule was struck down last December by a U.S. Court of Appeals, but it is not a dead issue. The FTC is pursuing the matter further. What should concern persons in your position is the fact that government tends to expand its authority whenever and wherever possible. It may begin by prescribing rules for private schools only, but eventually, I predict that it will be prescribing rules for public schools as well.

The Occupational Safety and Health Administration provides a host of examples of counterproductive regulation. In the textile industry, for example, the establishment of cotton dust standards for the textile industry has reduced the competitiveness of the American textile industry so that Yugoslavian textile mills (and Taiwanese and Japanese) can import cotton from the United States, produce the textile goods and ship them back to the United States and sell them more cheaply than domestic producers can sell their products. The frustrating thing about the cotton dust standards is that reducing the ambient content of cotton dust in the air is not the optimal way to protect the workers in the mills against byssanosis. The optimal way according to a report produced by the Council on Wage and Price Stability is to furnish each worker with a $200 respirator. These respirators are expensive, but furnishing each worker with one of them would be far, far less expensive than reducing the cotton dust in the ambiant air by something over 99%. OSHA'S reason for demanding the cotton dust standards, incidentally, is that "the workers would not wear the respirators."

A similar story involving OSHA and the steel industry can be told. Instead of allowing the companies to furnish hearing protectors for workers working in areas where the noise level is above 95 decibels, OSHA requires that the noise level be reduced. Again, their reason for requiring this noise standard is "the workers will not wear earplugs."

Murray Weidenbaum has pointed out that the Food and Drug Administration has increased the cost of introducing new drugs into the market and thereby has restricted the free access of Americans to many useful drugs that are available to Europeans and Canadians at the moment. Professor Weidenbaum points out that if you are a pharmaceutical supplier and you want to introduce a new drug, you can figure, on average, that it will require seven years from the time you make application until you receive the final answer. During that seven years you will spend approximately $50 million. One particular pharmaceutical company, attempting to introduce a skeletal muscle relaxant drug was required to produce 254 volumes of testimony for the FDA before receiving authorization to introduce the drug. This drug, Professor Weidenbaum noted, was in common use in Europe and Canada for a number of years before it was proposed for use in the United States. There was no record of any undesirable side effects.

As the Honorable George W. Strake, Jr., Texas Secretary of State, speaking at the Second Annual Free Enterprise Seminar sponsored by the Austin Distributive Education and local area Kiwanis Clubs said, "We need more economy in government, but we don't need more government in the economy."

Thomas Jefferson said, "We hold these truths to be self-evident, that all men are created equal." Jefferson was referring to equality of opportunity, not equality of outcome. Those who want to do good using other people's resources are pursuing equality of outcome. They are demanding that there be no winners and no losers. It would be like dividing up the prize money in a tennis tournament equally among all participants.

Milton Friedman said, "Any society that puts equality ahead of freedom will end up with neither equality nor freedom. A society that puts freedom first will, as a happy byproduct, end up both with greater freedom and greater equality." Freedom includes the right to fail, as well as the right to succeed. Free individuals must take the consequences of their actions. But, freedom also leads to charity. When individuals have been free to produce, to trade, to accumulate private property, they have proven to be generous indeed.

What can be done to preserve this American system of free enterprise? Well, Americans are great for organizing and protesting. We blocked the construction of a major hydroelectric facility because of the danger of extinction of the snail darter. We multiplied the cost of constructing the Alaskan Pipeline by a factor of 10 in order not to inconvenience the caribou. May I suggest that we now organize and protest the killing of the goose that laid the golden egg — free enterprise. At Texas A&M we have organized the Center for Education and Research in Free Enterprise. We are working with public school teachers in an effort to educate the coming generation concerning the benefits of the free enterprise system. We are commissioning and publishing excellent research papers and distributing them widely in an effort to influence the policy makers of today.

Hugh O'Brian, famous for his portrayal of Wyatt Earp on television, has established the Hugh O'Brian Youth Foundation and has organized an effort to educate high school sophomores concerning the benefits of the free enterprise system. Milton Friedman has worked long and hard in his efforts to promote the ideas of free enterprise throughout the world. Some of his efforts have been seen recently on T.V. in the series, "Free to Choose."

In addition to organized efforts, we can pursue personal actions which will help with the preservation of the system. We can vote for representatives who will help to preserve the system. We can write to our congressmen, write to newspapers, and write to friends about the free enterprise system. We can advocate free enterprise in a number of ways. We can speak to friends, business acquaintances, colleagues, and civic groups. When Dr. William Meninger of the Mayo Clinic was asked how to achieve mental health, he replied, "Find a mission in life and take it seriously." May I suggest the mission of spreading the understanding of the American free enterprise system around the world and advocating a maximum of voluntary exchange and a minimum of government interference. Milton Friedman has proved that if you pursue this mission with intelligence and good will, even your opponents will admire and respect you.

★ ★ ★ ★

The wind and the waves are always on the side of the ablest navigators.

Edward Gibbon

"CHARTING OUR COURSE"

Research Perspectives for the 80's

Oscar Millican
Texas Education Agency

If you attended our Research Conference last year, you may recall our program planners selected a western theme for the conference, and I was assigned the role of "Trail Boss." In my opening comments at that conference, I expressed my regret that I was not suitably attired for the "Trail Boss" role because I was not wearing a ten-gallon hat. This year, when I discovered our imaginative planners had selected a nautical theme and had assigned me the role of "Admiral," I resolved to become properly attired for the role. I contacted every costume shop in Austin in search of an admiral's hat appropriate to this occasion. I specified that I did not want an ordinary 20th century admiral's hat; I wanted a magnificent hat like Admirals wore when they stood at the helms of their wooden ships and shouted such things as, "Damn the torpedoes — full speed ahead!" But I was unsuccessful — there were no "magnificent admiral's hats" in Austin, Texas. I am pleased to report, however, that Austin's leading newspaper, the *Austin American-Statesman*, has enabled me to bring to this meeting an admiral's hat of appropriate magnificence (fashioned from the Sunday comic section of that great periodical). If you envy my admiral's hat, and want one of your own, I'm sure a hat of equal magnificence can be constructed from the pages of the *Bryan Daily Eagle*.

In addition to promoting me from "Trail Boss" to "Admiral," our program planners have also assigned me the topic, "Research Perspectives for the 80's." I approach this topic with some reluctance because of the implications I perceive in the assignment. There is an implication the terms "research" and "perspectives" have commonly accepted meanings; there is an implication that "research perspectives" for the 80's will differ from "research perspectives" for the 70's (or earlier decades); and there is an implication that I have some special knowledge of these "research perspectives" that I can convey to you during the next few minutes. My reluctance is based on my suspicion that these implications cannot be confirmed, but my reluctance will not deter me from some cautious potification and prognostication.

First, the term "research" is used to describe such a wide variety of activities that it has no single meaning. The term is used by educators to describe activities ranging from counting the number of students in a classroom to the development of complex theoretical systems pertaining to all aspects of human behavior. Second, the term "perspective" also has several meanings. It can mean "a distant view;" it can mean "the relationship of the parts of a whole, regarded from a particular standpoint, or point in time;" and, it can mean "a proper evaluation with proportional importance given to the component parts." From our collective point of view, our reference to "research" usually means federally funded vocational research, and our "perspective" must be influenced by such realities as the continued availability of federal funds for vocational research, and the priorities and constraints imposed upon us by public law and the federal rules and regulations.

Federal funds for vocational research are currently available under Public Law 94-482 (the Education Amendments of 1976) and the priorities for research are set forth in Subpart 3 of that Act and in the federal rules and regulations published in the Federal Register. Subpart 3 of Public Law 94-482 and the federal rules and regulations pertain not only to research, but to other vocational program improvement and supportive activities including exemplary and innovative programs, curriculum development, personnel development, guidance and conseling, and activities to overcome sex bias and sex stereotyping in vocational education. This morning, however, I will make only passing reference to other program improvement activities, since these activities will be discussed during the round table meeting tomorrow afternoon.

I stated earlier that I approached the topic of research perspectives with some reluctance, and I am even more reluctant to quote directly from the federal rules and regulations, but these rules and regulations provide the basis for our "perspective." Whenever I refer to "rules and regulations," I am referring to those rules and regulations published in the Federal Register on October 3, 1977. The purpose of vocational program improvement is set forth in Section 104.702 of the rules and regulations as follows:

> "The purpose of program improvement is to improve vocational education by the support of research programs, exemplary and innovative programs, and curriculum development programs."

The research coordinating unit is specifically provided for in Section 104.703:

> "In order to expend funds for program improvement, the State shall establish a research coordinating unit to coordinate the research, exemplary and innovative programs, and curriculum development activities in the State."

The RCU may enter into contracts for program improvement activities, and a significant contract requirement is set forth in Section 104.704:

> "No contract shall be made pursuant to Sections 104.705 (Research), and 104.708 (Curriculum De-

velopment) unless the applicant can demonstrate a reasonable probability that the contract will result in improved teaching techniques or curriculum materials that will be used in a substantial number of classrooms or other learning situations within five years after the termination date of such contracts."

The use of federal funds for research is set forth in considerable detail in Section 104.705, as follows:

"(a) Applied research and development in vocational education;

(b) Experimental, developmental, and pilot programs and projects designed to test the effectiveness of research findings, including programs and projects to overcome problems of sex bias and sex stereotyping;

(c) Improved curriculum materials for presently funded programs in vocational education and new curriculum materials for new and emerging job fields, including a review and revision of any curricula developed under this section to insure that such curricula do not reflect stereotypes based on sex, race, or national origin;

(d) Projects in the development of new careers and occupations, such as:

(1) Research and experimental projects designed to identify new careers in such fields as mental and physical health, crime prevention and correction, welfare, education, municipal services, child care, and recreation, requiring less training than professional positions, and to delineate within such career roles with the potential for advancement from one level to another;

(2) Training and development projects designed to demonstrate improved methods of securing the involvement, cooperation, and commitment of both the public and private sectors toward the end of achieving greater coordination and more effective implementation of programs for the employment of persons in the field described in subparagraph (1) including programs to prepare professionals (including administrators) to work effectively with aides; and

(3) Projects to evaluate the operation of programs for the training, development, and utilization of public service aides particularly their effectiveness in providing satisfactory work experiences and in meeting public needs; and

(e) Dissemination of the results of research."

In setting forth our statewide requirements and priorities for research in the Texas State Plan for Vocational Education and in our annual Guidelines for the Preparation and Submission of Proposals, we have incorporated the provisions of the rules and regulations with very little modification, and to the extent possible, we have avoided the imposition of additional rules and regulations within the State. Our priorities for research do not differ significantly from National priorities. The present legislation and the present rules and regulations will remain in effect for about two more years, so our "perspectives" are unlikely to change during that time.

In 1982, new legislation and new federal rules and regulations may give us new "perspectives," but until that time, our principle concern will be the continued federal funding of the research authorized under the present legislation. If President Carter's current budget cutting recommendations are followed by the Congress, there will be less federal money available for vocational education and vocational research during FY '81. (About 22% less, I understand). In any event, whatever the level of federal funding may be, we plan to issue our guidelines for the preparation and submission of proposals (for projects beginning July 1, 1980) on about May 1, 1980, with a deadline of about June 2, 1980, for the submission of such proposals. Additional details will be provided at the round table discussion tomorrow afternoon.

Over the long term, (if I may gaze into my crystal ball for a moment) I believe our perspectives for vocational research may be influenced by factors over which we have little control, such as the continuing energy crisis, continuing inflation, declining enrollments, taxpayer resistance to governmental expenditures, increasing demands for accountability, and other political and socioeconomic factors. Whatever our future "perspectives" may be, I look forward to working with you in our collective efforts to contribute to the improvement of vocational education.

* * * *

A ship in harbor is safe, but that is not what ships are built for.

John A. Shedd

PORTS OF CALL

10:45-11:45	Small Group Sessions (Topics 1-4)
Topic # 1 Room 402	**Development of a Competency Based Curriculum of Related Instruction for Maintenance Apprentices in the Chemical Industry.** Jim Higgins College of the Mainland
Topic # 2 Room 302	**Pilot Testing a Curriculum in Energy Conservation to Train Secondary and Post-Secondary Vocational Students.** Charles Orsak Navarro College
Topic # 3 Room 607	**Identification and Utilization of Employer Requirements for Entry-Level Health Occupations** Jim Zukowski Diane Johnson East Texas State University
Topic # 4 Room 308	**Vocational Education Programming for Special Education Students in Texas — 1980** George Fair The University of Texas at Dallas
Topic # 5 Room 301	**Texas Industrial Arts: Search for Effectiveness** Gus Baker Texas A&M University
Topic # 6 Room 305 B	**Developing Curriculum for Interpreter Training Programs in Vocational Education** Cynthia Bilderback Roy Texas State Technical Institute
Topic # 7 Room 607	**Mainstreaming the Handicapped Student in Vocational Home Economics** Gloria Durr Stephen F. Austin State University
Topic # 8 Room 308	**A Comprehensive Model for the Development of Training Coordinators** Sharon Baggett University of Texas Health Science Center Dallas, Texas
Topic # 9 Room 302	**Identification and Analysis of New Occupations in Vocational Office Education** Ken Hogue Texas Engineering Experiment Station
Topic #10 Room 402	**An Assessment of Occupational Orientation Investigation Activities and Course Content at the Local Level to Determine Its Effectiveness** Kathryn Hollenback North Texas State University

11:45- 1:00	**"Visit the Galley"** Lunch
1:00- 2:00	**"Ports of Call"** Small Group Sessions Topics 6-10
2:00- 3:15	**"Ports of Call"** Small Group Sessions Topics 1-4, repeated in same rooms
3:15- 3:30	**"All Hands on Deck"** Coffee
3:30- 4:30	**"Ports of Call"** Small Group Sessions Topic 5 and Topics 6-10 repeated in same rooms

SECOND GENERAL SESSION

Room 301, Rudder Tower

4:30- 5:00	**"Now Hear This! Now Hear This!"** Report on "Business and Industry Speaks, Education Listens" Conference Alton Ice, Executive Director Advisory Council for Technical/ Vocational Education
7:00 p.m.	**"Dinner with the Captain"** Room 201, Memorial Student Center Featured Speaker: John Hoyle, Professor Department of Educational Administration Texas A&M University with: John Eagleson and Loyd Taylor

Dr. John Hoyle
713-845-2716

Dr. Hoyle is a Professor of Educational Administration at Texas A&M University. He also coordinates the department's research, planning and evaluation effort. Dr. Hoyle has served as a public school teacher, coach and administrator and has held teaching and administrative posts in several American universities and in Europe.

Note: He, John Eagleson and Loyd Taylor were classmates of Bob Caster at Texas A&M University. They delighted the audience with a toast/roast of the new Associate Commissioner for Occupational Education and Technology at the Texas Education Agency.

"NOW HEAR THIS! NOW HEAR THIS!"

Report on "Business and Industry Speaks, Education Listens Conference"

Alton Ice
Advisory Council on Technical/Vocational Education

I am very pleased to have been asked to share in your Statewide Dissemination Conference in 1980 by Sharon Colson and conference planners. She asked that I provide information to you about the Statewide Conference sponsored by the Advisory Council. It was held in Austin, February 12-13, 1980, entitled "Business and Industry Speaks to Education." Those who attended the conference will find some of this at least quite repetitious.

The Council launched in 1978 beginning in September a series of 20 regional conferences entitled "The People Speak," and during the summer of 1979 conducted several Teacher's Speak hearings primarily in connection with the state inservice meetings of teachers. The Council has the responsibility of conducting annual public forum activities to provide an opportunity for citizens to make input regarding vocational education. These began in 1970 with a Governor's Conference. Subsequent conferences were held in 1973 with a Statewide Conference in 1975 and a Governor's Conference in 1977. The remaining public forum activities have been regional or local in nature. Some 20,000 citizens have been involved in these public forum activities.

As the name would indicate, the 1980 Conference provided an opportunity for business and industry to speak to education about changes that are occurring in their business or industry — the impact that these are having or expected to have upon the job market within the state of Texas and the implications that these have for vocational education at all levels.

The format for the conference was not substantially different from that of previous conferences. The opening general session got underway at 1:15 p.m. on Tuesday adjourning to 12 seminar sessions from 3:00-5:00 p.m. — starting with a banquet session with the conference concluding about 2:00 p.m.

There were approximately 600 people participating in the conference of which approximately 500 formally registered. We classified participants into categories of educators/non-educators with the latter group constituting approximately 150, and nearly half of those were participating on the program either as general session presenters, seminar chairs or vice-chairs, or panel members. A goodly number of the participants were members of local advisory committees. Probably the largest single group were vocational administrators at the secondary and postsecondary levels, and certainly they are the ones in a position to do a great deal about what business and industry said.

Council members and staff received numerous commendations many saying that it's the best conference the Council has sponsored. With those kinds of remarks we didn't bother to examine the criteria or basis of these statements but simply accepted them at face value. The Council generally was quite well pleased with the conference feeling that some excellent dialogue transpired between groups that must maintain a very open and close working relationship. Naturally, we're talking about those in education who prepare people and those who do the hiring. All of us know that as much as we enjoy a conference, the real impact of it depends upon what happens when we get back home. And this is certainly true of the Statewide Conference. We hope that it made a difference with the 600 people who participated in various capacities in the conference, and that we will be able to develop materials from the conference that will reach a much larger group. This is presenting somewhat of a dilemma for the Council from two or three perspectives. First, the staff of the Council has been reduced from eight to five within the last year, which means that we now have two professional people including "yours truly" and three support staff members. The support people have done their task by transcribing, not only the general sessions but the 12 seminars as well, resulting in some 600 pages of transcription. A second dilemma arises in how do you capture the significance of all that was said and put it into a format that is attractive and useful to those who need to know what business and industry said to education? And a third dilemma is how do you, once you have made an effort at capturing the information, disseminate this information to those who most need to know? And since this is a dissemination conference, I thought perhaps you could shed some light on at least some of the dilemma that we are faced with. So we get down to who said what and what difference does it make. Our Commissioner of Education, Alton Bowen, launched the conference by sharing with conferees his own personal support of vocational education and a call for "back to the basics" in education. And in a brief review of the transcriptions of seminars, many of the business and industry leaders who chaired these seminars were quick to applaud this position. Mr. Jack Miller, president of Sanger-Harris Company in Dallas, gave substantial support through both what he said an by example to the partnership between education and the community. Mr. Miller, who has been in the field of education but for the last 15 or so years has been in business, has manifested his confidence and faith in education by serving as chairman of the citywide committee in Dallas to harness the resources of the community in support of vocational education and the magnet school concept brought on by court order and desegregation. Following Mr. Miller was Mrs. Maurice Frasier who also has spent considerable time in education but is now a personnel and training specialist with Motorola in Austin. She emphasized the importance of attitude on the part of students and workers in opening up the world of opportunity to themselves and making useful employees to the employer. She did a superb job of documenting and reinforcing the very important points dealing with attitude and also the responsibilities and roles of the business and industry as local advisory committee members. Mrs. Frasier is active in local advisory committees in Austin and a neighboring school district. Mayor Thomas Westfall of El Paso was the first of three speakers during the conference that dealt with the overall image of vocational education, the role of work. Mayor Westfall was a candidate for Mayor when the Council was in El Paso in the fall of 1978 in a regional hearing and made an excellent presentation to the regional hearing, and we were fortunate in getting him to come to Austin to share these thoughts with the Statewide Conference. The concepts of work have had considerable challenges in the last 20 years or perhaps we should lengthen that to 40 years — it would be even more dramatic, especially as it relates to the impact of technology and in some respects the impact that the increased standard of living and social issues have had upon concepts of work. If you would allow me a couple of personal examples. On one occasion when the Council was touring the Texas Department of Corrections, the Ferguson Unit, one of the members commented that the interest on the part of inmates for the education programs was very commendable and inquired of the warden as to what they attributed this to. The warden replied that the Department of Corrections maintains considerable agricultural operations, and their agricultural operations had not benefited from the impact of technology as other areas had. And I noted several members of the Council as well as myself identifying with this and probably looking back to the motivation that we experienced a few years ago in moving from what we might refer to as real work into what people of that day would raise some question as to whether or not it was work. And if you haven't picked cotton for several weeks from sunup to sundown, then I'm not sure you really know what work is. Several years ago I spent considerable time in the hospital and was being admonished by my doctor and my wife concerning getting back to work in a very gradual manner, and my sixteen-year-old son listened a minute and then responded, "You really don't have to worry about Dad. He doesn't work, he just sits at a desk and talks on the telephone." So how is work really viewed by the youth of today?

As we moved to the banquet session, we were delighted to have a vocational student do a superb job of summarizing the student philosophy in a short five minutes. We were particularly pleased that this student is a son of parents who are both vocational educators, Mr. and Mrs. Nolan Alders of Nacogdoches. Following David we had the Associate Commissioner for Vocational Education from Washington and an Assistant Deputy Secretary for Employment and Training from the Department of Labor in Washington. Both of these, Dr. Dan Dunham and Dr. Charles Knapp, did an excellent job of sharing with conference participants some national priorities and the efforts at the national level to link education and employment and training programs of the federal government.

Moving to the Wednesday morning session, we were very fortunate in securing Dr. Beatrice Reubens, who is a renowned labor economist and a colleague of Dr. Eli Ginsberg in the Center for Human Resources at Columbia University in New York City. Dr. Ginsberg is chairman of the National Employment and Training Council and has been for a number of years. Dr. Reubens has done extensive studies of education training and employment systems of the United States and many international countries. She gave the conference a perspective of the various approaches focusing primarily upon European approaches pointing out that the various countries differ in many aspects, but certainly have numerous commonalities. For example, most have youth employment problems. None seem to have come up with a magic solution, but she did remark that it seems that America worries less about its youth employment problem than some European countries. In some countries we find the apprenticeship approach very dominant in the employment and training policy as compared to the United States. This is particularly true in Germany. We find France approaching the training and employment problem with a major emphasis on the responsibility of employers. And I might say that I feel very inadequate to even attempt a summary of the major points that Dr. Reubens made, but I would say that if you are particularly interested in this aspect that we have a recording of her remarks which are about 40 minutes long and would be pleased to try to get this duplicated if you would like a copy. We do have the remarks transcribed and could make you a copy of these if you need them pending the publication of proceedings of the conference. Following Dr. Reubens was Mr. Chuck Nielson who is Director of Personnel and Training for the Lubbock plant of Texas Instruments. And Chuck gave us a real jolt when he stated that during the last year his firm in all of its statewide operations had employed 1,000 electronic technicians but had to recruit 770 of these outside the state of Texas. Another area that Mr. Nielson dealt with was the extreme efforts that their firm uses in making certain that every possible efficiency and utilization is made of materials and capital and other elements that go into business, and then he laid it on us by saying that he doubted that their firm and others utilized more than approximately 20 percent of the mental capacity of its employees. Mr. Nielson has been very interested in the image of vocational education and jobs for which vocational education trains. The next speaker was Mr. Mike Shapiro who is President of Belo Broadcasting Firm and included in this firm is WFAA in Dallas. Mr. Shapiro and others have been very supportive of the efforts of the Council, the Texas Education Agency, and TVTA to develop a public information program, and this part of the conference was used to allow Mr. Shapiro to challenge the conference participants and also to secure commitments of assistance and support for the mammoth task of improving our image and consequently our effectiveness. The first effort on a community basis to kinda test the water with regard to support of employers, educators, and citizens is being conducted in the Corpus Christi area this week, and we hope this will be a weather vane. We seem to have excellent interest, yet there is always the ever present constraint of resources. And as you deliberate, perhaps you can assist us in this, and we would be pleased to have your input not only as to source of resources but also how this mammoth task can be accomplished. In the luncheon session we were very pleased to hear from our new Associate Commissioner, Mr. Robert Caster, who briefed the conference on the efforts of Texas Education Agency and particularly his department to strengthen our industry services program in the state. We have had an industrial startup program for a number of years and have made other efforts, yet we have many opportunities to enhance the cooperation, coordination, and effectiveness in really responding to the needs of industry for skilled workers and technicians. And this program is being pursued with a great deal of vigor by Mr. Caster and his staff, and we trust that every aspect will receive the support that we feel is needed in the best interest of our state. The remainder of the luncheon session had a bit of a problem because we had planned to have recommendations from the 12 seminars summarized by Mrs. Diane Sullivan of Rockwell International of Richardson, but the task overwhelmed us because of the time frame and we were not able to provide the support that we had anticipated we'd be able to provide her, but she did a superb job of taking what we had and letting people know in essence what had been recommended by the seminar participants. We had some response from decision makers. Mr. Joe Kelly Butler, Chairman of the State Board of Education, and Mr. Charles Whiteside, President of Texas Association of School Boards, but they were handicapped in that these recommendations were not made available to them in sufficient time to develop to the extent possible the responses they would like to have made. One incident that occurred in this session demonstrated the lack of communication on the part of education of our delivery system, its constraints, and consequent problems. Mr. Butler announced that there were some 300 vocational units that were not implemented during 1979-80 out of the 10,000; and consequently it would be difficult to ask for more funding for vocational education from the Legislature in view of this. But all of us know that the availability and lack of utilization of vocational units does not tell the whole story, and this was certainly not understood by some of the business leaders there and even educators. It behooves all of us to look into why these units were not used and whether or not this should be used as a Barometer to indicate that we have reached a point of saturation of vocational education in the state.

Progress has been made in reaching students at the secondary and postsecondary level. If we remove consumer and useful home economics program enrollments from the vocational enrollments, we found that in 1968-69 we were reaching about 14 percent of our high school enrollments, whereas in 1978-79 this had increased to 23.5 percent. As most of you are aware, Texas delivers vocational education through comprehensive high schools and post-secondary institutions; consequently, we have a great deal of duplication of programs that are most popular because decisions are made at the local level as to what offerings are to be made. For example, we have over 400 of the independent school districts in the state that offer only vocational agriculture and home economics. This has decreased from over 600 ten years ago. These figures relate to a total of 950 school districts that offer vocational education. The provisions that we have made by designating existing institutions as area schools — also provisions for contracting between secondary districts and campuses and postsecondary institutions and even proprietary institutions — has produced relatively insignificant movement of students from their home campus. Consequently, the comprehensiveness of vocational offerings has suffered substantially in Texas. Even in trade and industrial education, 70 percent of the units are in the most popular three or four programs such as cosmetology, auto mechanics, building trades, etc. Policy makers made the decision some ten years ago, perhaps through default, but nevertheless a decision that our delivery system would be comprehensive institutional settings. And there's a great deal that can be said for this approach, yet we do not have the specialized facilities that address the comprehensiveness issue in our delivery system. My contention through the years has been that we should not take the meat axe to programs, but that we should offer students viable information about employment opportunities and alternatives so far as their preparation is concerned.

The major part of my remarks should have been directed at the input that we received in the 12 seminars held during the Statewide Conference. I have mentioned that the transcriptions have been completed for the entire conference; however, we have not been able to analyze the input and get the real impacts from each of these 12 seminars. One of the objectives of the conference was to develop from the conference input from employers concerning the direction of their industry during the 80's and the impact that this would have upon training and employment. A brief review of the input from the seminars indicates that we have received some excellent input from employers. We must admit that we do not have a clear signal as to how we can pull this information together and present it to a broad cross section of educators, employers, students, and parents that will be most helpful to them. And it is at this point that we would certainly solicit your guidance in this endeavor.

There are still three general areas of competency that all employers expect from entry level workers. These include competencies in basic educational skills, employability skills, and specific skills, and what we hope to display in the proceedings of this conference is how each of the 12 occupational areas view these basic skill areas. Of course we know that basic educational skills may be more critical in certain industries, but none would in any way diminish the importance of these. You will find a great deal of variance with regard to requirements for entry level employees by industries depending upon the exposure the employee would have to the public. For example, in the area of marketing and distribution, the employee is the image of that firm or employer, so I don't think there's any question about the importance of the personal grooming, mannerisms, ability of the individual to meet and work with people, and many other characterisitics in this area. We have some employers that give very little priority to specific skills. If they can get individuals with strong, basic educational skills and employability skills, then they will develop them on the job. Of course, the question that occurs here is, how do we assure an employer that the employee has these skills, and about the only way I know is to have students in vocational programs where they have an opportunity to develop and enhance these skills from previous personal, home and educational experiences. In this area one firm gets ahead of the other primarily because they can do what needs to be done better. This simply means that their employees have a commitment to service and pleasing the customer.

We've had employers that point to heavy turnover rates, and often admit that part of the problem is the payscale. Some indicate that their industry, or at least certain elements of it, is simply a training ground for other jobs. Many times these other jobs are within the industry; however, sometimes they are not. But in the finance or banking industry they experience an approximately 40 percent annual turnover rate.

Several employers admitted the responsibility that they have for developing an esprit de corps, commitments, and other attraction within their industry for employees. Many employers emphasize the diversity within their industry. For example, in the area of food marketing the big challenge to this industry in the 80's is to improve the productivity of the workers. Much of this will be done through mechanization and computerization, and they will need employees who understand these kinds of operations. The size of the food stores will no doubt continue to grow and will become even more so one-stop shopping centers. The cost of labor is a major consideration. A supermarket now employs from 75 to 100 people and usually at least half of these are parttime. Even though the entry level workers in the food industry may be fairly moderately paid, yet managers of departments within the food store and the store manager often draw salaries in the $25,000 to $35,000 per year range.

One employer in the general merchandise area underlined the importance of strong training programs for high school students and the responsibility of the employer to provide as much exposure and develop as many competencies in the total business as possible as an encouragement to the individual to pursue a career in the industry; so their initial impression of the industry in the world or work is critically important. Employers were admonished not to exploit coop students and cited an example of one specialty store that brought in a very bright student and after a short time made the student an assistant manager and gave them a 5¢ an hour increase. It took the student three or four months to realize that he was being exploited and therefore became turned off to the whole retailing industry. Another employer in a specialty store recognized the ability of the student and gave this individual broad experiences within the business. As a result, the individual became turned on to the retailing business, received a scholarship to post-secondary education, and the employer will continue to employ the individual on a parttime basis while he pursues further education. It was pointed out that a kid can get a job without a coordinator, so the role of the school is a matter of quality of the training station and the experiences of the individual in order that they might have a positive attitude of work in the industry in which they're employed.

My apologies for not being able to provide you an insight into more of the seminar proceedings, but I think the discussion thus far will indicate that we have a great deal of valuable information, and we hope to get it in a useful form and get it widely disseminated. It's a privilege to have had the opportunity to share with you in this Dissemination Conference. Thank you.

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There are three kinds of people in all organizations:

There are the Rowboat, the Sailboat, and the Steamboat People.

The Rowboat People always need to be pushed or shoved along. The Sailboat People move along when a favorable wind is blowing. But the Steamboat People move along continuously through calm or storm. They are masters of themselves and their surroundings!

Author Unknown

S.S. Research

Wednesday, April 16, 1980

SAILING SCHEDULE

Wednesday, April 16

8:30	**"All Hands on Deck"** Coffee
	THIRD GENERAL SESSION Room 301, Rudder Tower
9:00- 9:15	**"Call to Duty"** Greetings Daniel Householder, Head Department of Industrial Education Texas A&M University
9:15-10:15	**"Batten Down the Hatches"** Grantsmanship: The Art of Proposal Writing Gary Green, Associate Professor Kansas State University
10:15-10:30	**"All Hands on Deck"** Coffee
10:30-11:00 Topic #11 Room 301	**"Ship Ahoy!"** An Analysis of Problems as Perceived by Male Students in Vocational Homemaking Education Programs Camille Bell, Texas Tech University
11:00-11:45	**"The Vocational Ship of State"** New Leadership/New Direction, Chart Your Course Robert Caster, Associate Commissioner Department of Occupational Education and Technology Texas Education Agency
11:45- 1:00	**"Visit the Galley"** Lunch
1:00- 3:00	**"Admiral's Round Table Discussion"** Open Forum • Research Related Dialogue • Other RCU Funded Activities • Statewide Project on Vocational Education Evaluation
3:00	**"Bon Voyage!"**

"BATTEN DOWN THE HATCHES"

Grantsmanship: The Art of Proposal Writing

Gary Green
Kansas State University

Presently, there are millions of dollars available for grants in state and federal agencies. The question is, "How do we obtain these funds?" The bottom line is, "Is there hope for you?" "Is there something that you can do?" and I think that the answer you will find is definitely "YES".

Basically, there are two types of proposals. There is the (1) solicited proposal and the (2) unsolicited proposal. The solicited proposal is usually one relating to RFP's. The RFP is usually a guideline relating general problem areas and placing the responsibility of finding a solution on the proposal writer. The unsolicited proposal is a procedure where the proposal writer comes up with both the idea and the solution. Chances for success are better in the first category, solicited proposals. However, I would not discourage you from seeking funds by the latter means.

When working with proposals there are basically four things to keep in mind. First of all, you must identify money. Second, identify the problem. The third thing you have to do is find a method to solve that problem; a solution. The fourth step is to develop a proposal. Let me take a moment to relate to you some of the things I've utilized in the past ten years to obtain grants. The big question is, "How does one come up with the unique ideas that are going to turn someone on?" There is no easy answer to that — it relates to a great deal of creativity by the proposal writer. Here are some steps that I have been using that have been successful.

1. I do a great deal of reading. There are times that I may read something that is totally unrelated to what I would like to do in education. It may be related to economics or something in the Labor Department, or something in energy that will spark an idea. It could come from a newspaper, or possibly a journal article. What I'm saying is be conscious of problems you might identify. It may happen while reading during travel, or sitting at home reading a newspaper in the evening, but be constantly conscious of education related problems.

2. Brainstorming — I, at times, dream and allow myself to be unrealistic in an attempt to identify a good idea. Work with others and allow the mind to wander to a limited extent.

3. Sharing with others — I think this is very important. I have never had any fear of sharing proposal ideas with colleagues and others. I have never had any fear that people will steal and utilize an idea. For example, last year I had an idea that related to work attitudes. On the way to coffee, from Holton Hall to the KSU Union (about 100 yards) I asked a colleague for advice. "What is your recommendation on this proposal?" His recommendation helped me get the project funded. It was a good idea, one I've utilized and one that helped me get that particular type of project funded. I operate on the philosophy (and I would recommend to you, to operate by the same philosophy) that more heads are better than one at any time. Take any of the input that you can. Share your ideas as you develop ideas.

4. Analyze and review the funding source. The people who are in charge of the funds often have ideas of their own, especially people outside the Department of Education. For example, the Department of Agriculture, the Department of Energy, the Department of Labor, have some very unique people who are interested in education. If you have an opportunity, sit down with the funding personnel and explore ideas. Listen to what they have to say. I think there are two advantages to this technique. Number one, there is a possibility of sparking an idea which you had not thought about. Number two, state and federal personnel often have pet projects or things they would like to see completed and often are willing to dovetail onto one of your ideas.

5. Investigate previous awards. Most agencies will compile an abstract of funded projects at the end of the year. This information is usually free of charge and readily available. I don't know how it is in the Texas State Education Agency, but certainly at the federal level this information is available. I would advise you to obtain a list of projects and examine and analyze the titles in order to see the emphasis of funding. Once again, you can build on some things that already exist. This information is free of charge, and I recommend that you use it as a source.

6. Review old proposals. When I travel to Washington, D.C., which is usually twice a year, I usually set aside at least half of a day to visit federal offices and review past years' proposals. Due to the Open Information Act, this information is available to you. Spend some time reviewing the proposals that have been written, and you will be amazed at some of the things or some of the projects that have been funded. Advantages to you are: (1) to see the type of proposals that are being funded (2) to analyze the trend and (3) possibly, to come up with an idea from the proposal area that you can utilize on your own.

7. Common sense evaluation of your environment. We are working in a particular educational environment and there are problems all around us. The problem is that often times we do not stop and examine what is happening around us — things that

possibly need to be solved. I think that, at times, we need to slow the pace and look around our immediate area and observe what is happening. Now I must put a "page" or two in here for the University types.

Get out of the "ivory tower" (and I see this so often at KSU), where professors stay in their office and write proposals and say how it is and how it should be, and they've never been out there on the firing line. For those of you from the University, I say to you, "Go out and visit the communities and schools and see for yourself, firsthand, some of the things that are happening." I think that is very important.

There is nothing more important in proposal preparation than coming up with a unique idea. There's no magic solution. There is nothing that I can say to you this morning that is going to create that idea. You are going to have to proceed through some of the steps I recommended. Brainstorm some of the things that possibly can be done. "Career Guidance Center"... Now that doesn't sound very unique, but you add a ten clock hour mini session, one that puts very intense pressure on the kids to think about: "who they are," "where they're going" and "what they're going to do." Then you add job observing, shadowing and an element of transitional skills training, and you have created something unique.

The second step in funding is coming up with the solution. The unique idea is the first step, but then, "how do you solve the problem?" I think you've got to be very realistic, yet allow yourself to dream a little bit. But once again, always return to reality. That's very important. The second thing, and I want to emphasize this as I've emphasized it earlier — "share your plan, your solution," with others. Once I spark an idea there are times when I'll pull graduate students and faculty together (5 or 6 people) or bring the State Department of Education people in and say, "Look, here's a problem, here's a unique idea to solve that problem, can it be done? You'll be amazed at the additional input that comes in and the cooperation and the support that you will have. I think it is very, very important to bring other people into the solution process. Then, I come back to number three, which is really the dream. Be innovative, but, you have to be realistic in terms of money being spent and what you are doing. Often times, I read proposals which are totally out in left field, they are not practical, and could never be realistically completed. You have to be realistic in what you are promoting.

I probably should have brought this part in at the very beginning, but prior to getting into sources and proposal development, I think there are some supplementary activities that you should be aware of. I would do you an injustice if I didn't make this comment, although I am hesitant to make it! (1) The proposal writing game, (the grantsmanship game) is sometimes a case of "not what you know, but who you know." That's a fact. The governmental personnel in Austin and Washington, D.C. have considerable control and there are certain guidelines that they have to follow. At times they have discretionary money, and money returned from projects. Therefore, it is important to work on building a personal relationship with funding agency personnel. There are situations where funds can be granted without qualifying for guidelines. I am trying to be open with you and share some of the facts, one of which is that personal relationships are very important. Attempt to build a personal relationship with those people who are in charge.

(2) Take advantage of the telephone. Call the funding agency at times to inquire about the guidelines and funds. Make yourself known to the agency. I think it's important that you keep your name in front of the funding source. Don't overdo it, but there are opportunities for you to make contact and there are times when you should make contact. My recommendation for communicating with a funding agency is to be sure you're prepared and know what you're talking about. In most cases, you are dealing with experts in the field, people who travel all over the country looking at activities, and people who read the literature. They can expose a weakness quickly. I'm not saying that funding agency heads always have total charge of the funds, but they do at times have discretion. I think it's important that you make a positive impression and know your subject. Anytime I talk with a federal agency head on the telephone, I have a list of notes in front of me where I can immediately react to things I need to know. Always be prepared. It is important to make a good impression.

(3) Collect pertinent data. All of us have an area of interest. As you read journal articles, newspaper articles and so forth, become a rip out and file artist. Place these articles in files where they will be at your fingertips when preparing a proposal.

(4) Designate a boss. I've seen several situations where two or more individuals agree to prepare and submit a proposal. They did not come to any particular agreement as to who would manage the project, and the end result was misunderstanding and bad feelings. I believe it's important, when working with others, to come to a meeting of the minds as to who is going to make the day-to-day decisions and how the money will be spent. If you enter into a large project there is a good possibility of communication breaking down and problems resulting. As a result of what I've observed in the past, I think it is essential that you designate someone to be the boss and make day-to-day decisions.

(5) Build support with your colleagues and administrative team, regardless of how small or large your proposal is. I think it's important to involve colleagues and administrators. I've worked under the philosophy that as I have success, others are going to have success with me and that has paid many benefits in many different areas. I would encourage you, if you're putting a proposal together, to bring someone in, as a consultant on the staff, or do some favor if you

can, for the members of the administrative team on the faculty. Start building the support early. It is important and can have long term payoffs.

(6) Make sure you read the proposal guidelines carefully. One of the major problems I see in proposal preparation is that individuals do not read the guidelines. The Commerce Business Daily and the Federal Register and other guidelines will usually describe in steps, what must be done. It is very important that you read the guidelines closely and do exactly what the guidelines say. The reasons (especially at the federal level) is that the scoring sheets are usually aligned with the guidelines. It's not unusual for an RFP to be mailed only three or four weeks prior to the deadline. But there are some ways to avoid this. The Commerce Business Daily and the Federal Register usually have advanced announcements relating what is coming down the pipeline. Sometimes it's as far in advance as six months ahead of time. If you'll watch those early announcements (in most cases the guidelines will be exactly as the previous announcement) then you will have additional time to prepare the proposal.

(7) Be aware of the legal ramifications. When you sign your name to a grant or contract, there are legal responsibilities that involve you. You should be aware of what is stipulated in the contracts, how the funds are to be handled, and what you are guaranteeing to accomplish.

I sincerely believe that you should not get into the grantsmanship game unless there is something in it for you, personally. I practice this philosophy. If there is not a possibility for you to get a better evaluation, if it is not possible for you to travel across the country, if there is not salary money or an opportunity to make a contribution to mankind, then I would suggest that you not pursue outside funds. There is a tremendous amount of work to projects and there should be a reward for the successful grantsman.

Locating the sources of funds is the first concrete step in becoming a grantsperson. Funding sources in most cases will not seek you out. The grantsperson must LOOK FOR THE FUNDS. The following list includes some basic sources of information that one can use in locating funds:

Guide to Office Education Administered Programs. Each year, the U.S. Office of Education publishes a guide describing the authorizing legislation, appropriation, and type and purpose of existing financial assistance. This publication can be obtained by writing: OE Guide, FY 80, U.S. Office of Education, Washington, D.C. 20202, or Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. The cost of the guide is 70 cents.

The Federal Register. The Federal Register is a daily publication that frequently includes notices of government grant programs including some in education. This is a very informative document which you should consult regularly. The Federal Register contains a great deal of information about many programs and requires time to monitor it regularly. It can be most helpful, though, in getting early leads on potential new programs.

The Federal Register can be located in most college libraries, college grant offices, or Community Development Administrative Units. To be successful in using the Federal Register, you must continually review the announced programs. This is a daily task. The Federal Register costs $50 per year and can be ordered from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

The Commerce Business Daily. The Commerce Business Daily relates more to contracts than grants, but interestingly, the Office of Education has been using this means recently to fund various activities. This publication is a daily list of U.S. Government procurement invitations, contract awards, subcontracting leads, sales of surplus property and foreign business opportunities. There are not many items that relate to education, but there are enough to render the publication significant enough to be utilized.

The Commerce Business Daily costs $105 per year first class and $80 second class. The document can be ordered from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

RFP (Request for Proposals). A RFP is an announcement of a request for proposals relating to one particular project or area. They are issued from the various offices of the U.S. Office of Education as a need arises due to legislation or identification of special interest concerns by USOE administrators. When a RFP is initiated, notification is usually mailed to appropriate state agencies and parties who are on the master mailing list of the funding division. Frequently, RFP's are announced in the Commerce Business Daily.

It is often difficult to learn of the issuance of the RFP. The best way to remain informed is to identify the Federal or State agency (example: Office of Career Education, Co-operative Education, State Research Coordinating Unit) in which you have an interest and stay in close communication so you will know when they issue an RFP.

Catalog of Federal Domestic Assistance. The Catalog of Federal Domestic Assistance is compiled and published annually by the Office of Management and Budget. The Catalog is a Government-wide compendium of federal programs and activities which provides information on federal programs, types of activities that have been funded, eligibility requirements, types of assistance, restrictions on the use of assistance and contacts including the administering office at the regional and local office. The Catalog costs $20 in looseleaf text material form and can be ordered from the Superintendent of Documents, Government Printing Office SSOM, Washington, D.C. 20402. The "Guide to OE Administered Programs," referred to earlier, includes programs taken directly from the larger guide to federal programs.

State Education Agencies. Each year, State Education Agencies receive hundreds of thousands of dollars via federal sources and state legislation which are committed to Local Education Agencies through grants and contracts. In most cases, the state educational agency will notify various parties of funds available and the procedure to use in applying for the funds. Oftentimes, notification of state grants are given with a very short time for proposal preparation; therefore, it is essential that you stay in close contact with the person who is administrator of your area of interest to insure that you are informed of funding developments.

Foundations. Foundations provide over 2 billion dollars yearly in grants to conduct workshop/seminars, research and develop exemplary projects. The ones that we hear about often are the Ford, Rockefeller, Kettering and Kellogg foundations and the Lilly Endowment. However, there are over 20,000 foundations large and small, spread throughout the United States. Certainly, one should not overlook foundations, especially local/state based foundations, as a source of funds. The approach to foundations is essentially the same as any other source with the exception that there is a need for more personal contact and follow-up.

The Annual Register of Grant Support includes details of the grant support programs of government agencies, public and private foundations, corporations, community trusts, unions, educational and professional associations, and special interest organizations. The Register covers a broad spectrum of interest. The areas include academic and scientific research, project development, travel and exchange programs, in-service training and general competitive awards. The Register is very comprehensive including details on types of grants, purpose, duration and amount of funding available. The Register costs $46.50 and can be ordered from Marquis Academic Media, 200 East Ohio Street, Chicago, Illinois 60611.

The Foundation Directory has become the standard reference publication for information about nongovernmental grant-making foundations. Descriptive information is given on 2,818 foundations which includes aggregate annual funding, size of assets, funding interest, purpose and activities, address, telephone number, officers and board members and grant application information. The foundations are listed alphabetically by state. The foundation Directory is published by the Foundation Center and costs $35.84 per copy. It can be ordered from the Foundation Center, 888 Seventh Avenue, New York, New York 10019.

The Foundation Grants Index includes detailed summaries of grants to nonprofit organizations of $5,000 or more made by over 340 mostly large American grant-making foundations. Since foundations usually do not advertise proposed grants and available funds, the primary use of Grants Index is in reviewing the record of currently funded activities which are generally indicative of a foundation's giving interest. The Grants Index is the most comprehensive publication available with relative foundation grant information, but it should be noted that not all foundations report their grants.

The Grants Index lists foundation grants alphabetically by granting foundation. Additionally, it relates the amount of grant awarded, to whom it was given, the grantee's address, and describes the nature of the grant. The Grants Index is published by the Foundation Center and costs $21 per copy. It can be ordered from the Foundation Center, 888 Seventh Avenue, New York, New York 10019.

Foundation News. The Foundation News is a Journal of Philanthropy which is published bi-monthly by the Foundation Center. The purpose of the Journal is basically to inform administrators of foundations of the happenings throughout the country. The publication announces foundation conferences and publishes a list of recent foundation grants. The most significant part of this publication for you is the comprehensive listing in each publication of the grant awards made by the foundations over recent weeks. This serves as an excellent guide for discovering what foundations are funding, what kind of projects, and what the average size of the grants are. The Journal is comprehensive and contains many worthwhile articles and helpful information for the serious grantsperson. It is probably best used by the less sophisticated grant seeker as an indicator of funding trends and operational areas of interest of specific foundations. Foundation News costs $20 per year for persons who are not members of the Council on Foundations and can be ordered from Foundation News, Box 783, Old Chelsea Station, New York, New York 10011.

The Grant Information System by Oryx Press provides current information about grant programs available from Federal and State governments, private foundations, associations, and corporations for research, training and innovative efforts.

The System is organized by both academic discipline and deadline date. It is the only publication organized in this manner. Notification of available funds is made on a quarterly basis containing information needed by proposal writers, administrators, and researchers. The information is arranged by academic discipline (education, health, etc.) It includes descriptive annotation, essential requirements, basic restrictions, dollar values and names, addresses, and telephone numbers of offices or agencies responsible for administration of the program.

Included in the System is the Faculty Alert Bulletin (FAB) which is received every month. It contains six editions covering broad areas including education. Each issue of each edition of the FAB lists those grant programs for which proposals are due in the next six months. Information about each program is abbreviated, but is sufficient to alert proposal writers.

The Grants Information System including the Faculty Alert Bulletin costs $405. The System can be ordered from Oryx Press, 3930 East Camelback Road, Phoenix, Arizona 85018.

There are several different ways to propose an idea and solution. Generally I recommend the following components.

The Title Page. The title page should be physically well arranged, balanced and generally pleasing to the eye. Its content should communicate basic facts about the proposal and its origin.

The Abstract. The abstract is a summary of the entire project. It is usually the second page of the proposal and is contained on one page if possible. It tells (1) what, (2) why, (3) where, and (4) with whom. Use your outline as a guide for writing the abstract. This will help you condense the main points. Write the abstract in plain language for the reviewer may not be a specialist in the field and thus would not understand technical or specialized language. Keep in mind that the abstract is the "sales pitch." A reader who has a large number of proposals to read in a short time will concentrate on the abstract because of its brief but comprehensive nature. Carefully plan your abstract so that it will catch the reviewer's interest and entice him/her to read on. The abstract should give an accurate preview of the proposal and it should make that proposal sound as appealing as possible.

Introduction. Mistakenly, many proposal writers feel that the introduction referred to at this point is the introduction of the problem. Not so... statement of the problem comes later. This section acquaints the reader with the individuals or organizations that will be involved in the proposal's plan. The introduction should be used to emphasize the correlation you see between your interest and abilities and the needs of the funding source. In short, the introduction should introduce you and your colleagues, your organization and your support. In doing so, it should establish your reputation and give evidence of your ability in the specified area.

Statement of the Problem. According to National Institute of Education research, 90% of all proposals are turned down at the federal level because they are projects of insignificant importance. Therefore, it is imperative that the serious proposal writer be armed with ideas of substance, and state the problem with brevity, clarity and conviction. The problem statement usually requires one to two pages.

Generally, one will need two or three paragraphs of general background information and problem introductory remarks. This should be followed by explicit remarks relating the specific area of the problem that you plan to deal with. Define the problem limits very clearly by stating the major and minor needs in descending order.

One should include a short review of the literature which is a general summary of what has been done in the subject area. Pertinent projects, activities or writing should be mentioned. This is evidence that the pro- d effort will continue to build on a good foundation of previous endeavors and thinking. It is recommended that footnotes be placed at the bottom of the page so that the reviewer does not have to waste time looking for your reference in another place. A bibliography for the literature you have quoted should be included in the appendix. As for statistical data, you may want to use a few key items in the text where support or emphasis is needed. However, place any lengthy or extensive statistics in the appendix.

Need or Rationale. Basically, the need will have been covered in the statement of the problem. However, this is an optional component that may be used if you feel that the need is one of the better "selling points" for your proposal or if you need to elaborate on what has been said about need in the problem statement. Possibly, you might want to use this opportunity to pinpoint needs that correlate on a national or regional basis with local needs.

Objectives are statements that tell what you hope to accomplish with your available time and funds. They should correspond directly with your stated needs; for every need you identified, you should have an objective or set of objectives. Be sure you know exactly what an objective is: avoid common error. Do not confuse objectives and procedures. Objectives tell what, procedures tell how in detail. Do not confuse or mix objectives and goals. Goals are broad, general statements, and objectives are limited, specific statements.

Be consistent with the kind of objective you use. You may need to consult references to familiarize yourself with kinds of objectives. The use of behavioral or instructional objectives is discouraged. These lend themselves more to the teacher/student situation. Performance objectives are better suited for a wider variety of projects (educational, research, pilot projects, service, etc.)

Performance objectives are concise statements describing what results you expect from your project. Those results are described in measurable, concrete terms. Performance objectives include:

1. Identification of the individual or group that will perform the desired behavior
2. Identification of the behavior to be demonstrated or the product to be developed
3. The primary conditions under which the performance is expected to be measured
4. Minimum level of acceptable performance
5. The means or instrument to measure the performance or terminal behavior

Procedure of Plan. The procedure tells exactly how you plan to carry out your project. The problem statement told "why", the objectives told "what" and the procedures tell "how". If you have written good performance objectives, then these will form a perfect outline for your procedures component. After you have formulated a general outline, then write a detailed overview that will adequately describe:

1. What you are going to do (project description)
2. Who will be doing it (personnel involved)
3. To whom or what it will be done (participant selection)
4. Where it will be done (location or area involved)
5. When it will be done (when it will start and end).

Let the plan description flow in logical, chronological order. It is helpful to break the plan into various phases or steps. Simple flow charts and diagrams will aid in communicating your plan more effectively. There is no "official" format for writing the plan. Any orderly, logical, clear design is acceptable.

Personnel and Resources. This component is used to specifically enumerate and describe who is going to be involved in the project. You have listed the personnel in the Procedure section, but this gives additional information. It also establishes what resources (people, services, facilities) you will be using.

The project director should be identified first; then outline key staff personnel such as curriculum specialists, workshop presenter, etc. Briefly describe their backgrounds, work experience, publications and related activities. If it is necessary that these listings be extensive, place them in the appendix.

Significance of the Project. This component should be used only if there is something extremely unique about the significance of your proposal, the participants or the agencies involved. Another significant aspect would be if the event or idea were significantly timely. This should be limited to not more than one page if it is used at all. Do not use this component to restate general values of the project that have already been enumerated or implied.

Dissemination means getting the results of your project out to others — sharing. Most funding agencies are interested in this if you have the kind of project whose example, results, findings or materials would be beneficial to others or would promote the reputation or goals of the funding agency.

Dissemination is tricky and costly. You might budget some funds for dissemination, but be sure the amount is not so great as to outweigh its advantages. Printing and mailing out information is the standard procedure for sharing; however, you can also consider publication in state and local newsletters or professional journals, presentations at workshops, seminars or conventions and invitations to interested parties to visit the site or project. A representative of the project may also personally visit government officials, personnel from other agencies or institutions and business people who might be interested. Sharing your project can have a multiplier effect. You don't have to see personally that everyone knows about it. Just place the information in a few key spots, and it will spread on its own if it is worthwhile. But by all means, do make an effort at dissemination. The most significant projects, astounding research or fantastic ideas are virtually worthless if they are kept under wraps. Also, projects are costly; it is frugal to share the results in order to get as much utilization from the efforts as possible.

Geographical Area to be Served. In most cases, this will be listed in the plan. However, you may take this opportunity to elaborate if there is a need. These needs might relate to something extremely consequential about the geographical area or might concern something in the guidelines which designate a specific area. For example, guidelines often specify that a project be conducted in a rural area, an area containing a high ratio of minority or disadvantaged persons, or an area supporting a particular socio-economic or subculture group. Whatever the reason, if geographical area plays a major role, take the extra time to emphasize your location choices and reasons.

Proposed Timetable. This component is usually best presented in the form of a chart or outline. It should be very brief but very specific. The timetable shows when you plan to do things and when they should be completed. This is invaluable for you and the funding agency. Neither party wants to find itself with a project that does not meet its deadlines. A timetable will keep you from procrastinating in certain areas and will give the funding agency certain check points to evaluate and monitor your progress.

Commitment. In some circumstances, the guidelines of a funding agency will require the organization or institution requesting funds to make a financial commitment of their own. This may be in terms of matching funds, use of facilities, faculty or personnel release time or providing various services. This section is a statement as to what the contribution will be.

Even though the guidelines do not specify this type of commitment, it is still a good idea to include evidence of financial or material commitment if you are planning to utilize this type of resource in your plan. This simply assures the agency of your intent and ability to produce.

Evaluation. Most funding agencies consider evaluation to be the third most important part of the proposal after the objectives and plan. The evaluation is the means by which the effectiveness of your program is measured. This effectiveness can be related to how you met the needs of the funding agency or how well you served the participants in a program. Evaluation is directly linked with objectives. Evaluation tells you to what degree you have met your objectives.

If you wrote your objectives in the form of performance objectives (refresh your memory by referring to the elements of performance objectives in the Objectives component), then your evaluation will be easier to formulate. Determine what outcome you desire (this should already be identified), then establish a means to assess that outcome.

The assessment can be a complex and complicated endeavor, especially if you are using an experimental design and involving a statistical analysis for evaluation. Regardless of the type of evaluation, there are some basic principles to follow. Use these as a guide, then seek advice or help from experts in your field if you are unsure of evaluation procedures.

The basic principles include:

1. Studying the objectives to determine the type of evaluation
2. Choosing the instrument or method of evaluation
3. Collecting the data
4. Analyzing the results
5. Reporting the results

Evaluations, like anything else, can be "rigged" or reported from a slanted viewpoint to make things look better than they are. Do not try to do this. Other than being morally and ethically questionable, it renders useless research or information. Agencies want to know what really works. Besides, they usually detect deceptive evaluations anyway!

To be useful, evaluation needs to yield accurate results and be reported in the same manner.

The Budget. Proposal reviewers are experts at scrutinizing budgets. They can usually spot "pads" or unrealistically low requests. Therefore, be sure you know what you are doing when developing a budget.

If you find that you are unsure or foundering at this task, then try these helps:

1. Look at budgets from old proposals. These will at least enable you to familiarize yourself with the format.
2. Ask advice from someone who writes budgets.
3. Rough out a budget and get other's input.

In some cases, the guidelines may stipulate categories to be included in the budget.

This is a general overview of proposal writing. I hope that this information will help in some small way. Best of luck.

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"THE VOCATIONAL SHIP OF STATE"

New Leadership/New Direction, Chart Your Course

Robert Caster
Texas Education Agency

It is a pleasure to be here this morning. I enjoyed last evening and the opportunity to visit with many friends as well as to be with my son. Your presentations today have been quite interesting.

You know, I learned a new term when I came to the Texas Education Agency. It is "displaced homemaker." I had never heard of one and, of course, we have some displaced homemaker programs in the state. I have found that since I am in Austin while my wife and youngest son are still in Texarkana, I fall in the category of displaced homemaker — and I think I need a lot of help!

I'm very impressed with what you are doing at this conference. The import of vocational education is just beginning. The emphasis of vocational education will continue to increase as time goes on, because it's the only salvation we have for the country's productivity.

We are facing a situation in vocational education in which people are much more comfortable in doing things the way they have always done them. Take me, for example. I don't like switching back and forth from Daylight Savings Time to some other time. I am very comfortable with one time all year. Just like a cow going to its stall, I'll continue going to that stall until I *have* to change stalls. And I think that in many cases we are not quite as responsive to needs as we perhaps should be because we don't like to "change stalls." This conference addresses some things that should be done, and it is painful. It is difficult sometimes for me to look at what should be done. It's even harder when someone is not aware of what needs to be done and must be shown what has to be done. And so, for that reason, I'm going to address some of those things this morning.

The Research Coordinating Unit (RCU) is the aspect of vocational education at the state level that is receiving the most scrutiny and the most emphasis. In the Research Coordinating Unit, we have components that allow us to do the things that we have to do. We have integrated research and exemplary programs, evaluation, the state plan, budgeting, personnel development, and curriculum development. The RCU has the components that are necessary to get the job done in a very effective way. Don't misunderstand. I'm not saying that we're not now being effective. I simply think the thrust is that we have to be *more* effective. The RCU is under the capable leadership of Oscar Millican. By working with people in the field, we will get some things done.

Now, I was to talk about the "Ship of State" or the state of the ship — whatever you want to call it. We have a boat and it is afloat. There have been gales and high waves and holes in the hull, but we continually patch or trim, maintain the rudder, and steer. The important thing is first, to decide the port to which we want to go. If any of you are good sailors or mariners you know that sometimes you will be going into a wind and you have to tighten up. You must know what you're doing; but even before that, you must know where you're going.

Another thing, too, the ship in which we are accustomed to riding might need to be streamlined in some cases. You know, they did away with square riggers many years ago. No, I'm not saying that we are square riggers; but, I think we should use the resources that are available. If conditions call for a quicker ship... or a catamaran... or a sunfish... or a steamboat... or a nuclear submarine... or whatever it might be, we need to be willing to modify our craft so it will do the things that need to get done. You would not use a luxury liner to trasport crude oil, and you would not use a tanker to transport persons from one place to another and expect it to be luxurious. We need to determine where we are going and what kind of craft we need for transportation.

A wise man said, "If you don't know where you're going, any road will do." If we determine where we are going and then plot our course and streamline our ship, it will withstand gales, tidal waves, and be seaworthy. Hopefully, we will have the staff and the crew to do what's appropriate to keep that thing on course. Now that doesn't say that we won't get off course occasionally. That's why we're all in the ship together. No one ever made a rendezvous in space without a midcourse correction. So, we'll have to expect midcourse corrections. That's enough to say about the state of the ship or the Ship of State or whatever it might be.

Nevertheless, we are going to have to constantly be looking at innovations. And, hopefully, that's what research is about. If we are not concerned about what we are doing, then we don't need research, do we? How do we come up with concerns? The thing that keeps us all going is trying to make a better mousetrap. Simply because we are doing something one way does not mean that is the only way. When I was a principal, a superintendent, and a classroom teacher, I heard, "That's the way we've always done it." You know, in some cases, we have been doing it wrong. So, simply because "we've always done it that way" does not mean it is always the right way. We are going to assume that what we are doing is right, but we'll try to build a better mousetrap.

We have to prove daily, weekly, yearly, and monthly that we are the best. How do we prove that we are best? When you work with a commodity like education, it is very difficult to prove success. I guess that makes us a little smug as educators. We go to the Legislature and they ask us to be accountable. How do you account? In vocational education, we say we have placed so many students in jobs. But how appropriate was their training for those jobs? I was interested in visiting with my old college roommate last night, John Eagleson. He has his own tax, law, and accounting firm, and I was asking him how appropriate our training is for people in office work. He said, "Well, you're doing a good job training them; but, the things that they're taught aren't really appropriate to what we do. We hire someone and we retrain them."

And I said, "Well what do you mean?"

He said, "Well, they all take shorthand. No one in our firm uses shorthand or expects them to take shorthand. We have a dictating system. They can use a 10-key calculator, but we don't use 10-key calculators. We have mag card typewriters and we have to train them to use those things." He said the accounting procedures that they're taught in business courses and bookkeeping rather than in vocational courses really are more appropriate for what is done in business today. He said, "I think they do a good job in some basic skills; but, I wish someone would come out and ask me how I would prefer these students be trained. I think that I can speak for a lot of people with firms exactly like mine." He said, "You're doing a pretty good job of putting a primer coat of paint on a student and then they feel that they're qualified to do a particular job. One of three things happens then. I'll hire them at less wages than they feel they should get because of the way they have been trained, or we send them through a training course and then they're either successful or unsuccessful."

So, what he was telling me (and he was not being critical of what we are doing) was just that maybe we should look at what we are doing. That points up the fact that in vocational education we are going to have to communicate with business and industry. We have to be responsive and make some changes. I know we have excellent vocational office education teachers and programs. John was not saying that they are all bad. He's saying, basically, we are doing a good job but we could do a better job.

Historically, however, we have not been responsive to business and industry. Let's be honest. We develop programs at the state level, then a school district applies for that program and hires the teacher. We give them a curriculum, and the teacher goes to an inservice workshop. We show them how to fill out the appropriate forms, how to work through the curriculum and then, years later, the person is still doing what we hired him or her to do and what we trained them to do. We are still putting out people with the same skills and curriculum because that is what the guide says. Bob Caster is being critical of all of us, and I think it's constructive criticism. I think we need to open our eyes a little because it's revealing to think about what we do. Now, how do we go about determining what we should be doing? I think there's got to be some linkage between business and industry and vocational educators. When we know the needs of business and industry, we can be responsive.

You know, the post-secondary institutions that I've had the opportunity to work with since I have been in Austin are in many cases more responsive than secondary schools. They will change a course or drop or add a course during a semester. They will develop a course quickly and get it in when it's needed. When it is no longer needed, they drop it.

We need your help; I need your help. How do we redirect programs? Now, I'm not saying, "Wipe out a program." But, how do we make it more responsive to the needs of business and industry? You are the people who are going to have to find out, through research, what is needed. How can we do it? What does research say? So often we will develop a program, put a teacher and equipment in there, and then start teaching. But after we've taught it two or three years, then we develop curriculum. Is that true or not true? Curriculum proposals come through our department, and they make it possible for teachers to get together during the summer and write what they have been doing. That may not be exactly true, but that's pretty close. Now, maybe I'm idealistic or maybe I don't understand, but it would appear to me that we should determine a need for a structural model for certain skills. Then we should look at what is available to supply the need as far as equipment, personnel, students, and so forth. And, it appears to me that we should perhaps field test some strategies next.

Let's pick two or three districts where we feel there might be a chance that a new approach would fly and try it. When we do it everywhere, the chances of success are pretty small because people have built-in defense mechanisms about "their" programs. They have worked hard, spent many hours, and are very dedicated. They're doing what they think is right. So, if you start saying anything about what they are doing, they feel you are criticizing the individual more than the program. So, we have to work slowly and we have to field test ideas. That's part of the process. After the research is done, innovative/exemplary money should flow to fund and pilot test some of the programs. Now at the same time, we almost have to have a pert chart. They are going to say we are going to put a program here, and there should be some curriculum work done prior to that exemplary program. Hopefully, there would be.

There has got to be some personnel development. I think you need to take teachers and train them, cross train, or give them some skills they didn't have before. When we change a program, I don't want to clean the deck and say we don't need you any more — your program is not useful. And, I think it's our responsibility to use personnel development money to train people to do things differently. We tell people out in the field that everyone will change what they do four or five times in their lifetime. But, we are telling everyone that but ourselves. We are saying, "You all have to change; but, when I've become a homemaking teacher or agriculture teacher, I'll do that the rest of my life." Well, that's fine, but what I'm saying is that we need, at the same time, to consider how we can be responsive and flexible enough to meet the needs of business and industry. We may not change jobs, but we must change, nevertheless. That's the key.

So the point that I'm trying to make is that I think we have to be innovators. And innovator shouldn't be a dirty word. It should be comforting to know that you are going to be able to be responsive. When the accountability reports come in and you see what happens to the students when they're placed in jobs, you can say, "OK. We've placed students in areas in which they were trained.

Accountability, more and more, is going to be very important to us. As I understand it, dollars at the federal level are getting fewer, and we are going to have to take the ones we have and do a better job. After we have field tested the research with an exemplary/innovative program, let's get the institutions to do curriculum work for us. Let's help the teachers before we hit the streets with a new program. Let's come up and say, "Here are some options. Here's a way to do it. We are going to provide training for those schools who will modify to meet the needs of business and industry. We are going to give you a bonus." Something will have to be done to make it lucrative and attractive for teachers to try something new.

We are going to have to sell what we are doing, and we will have to be convinced that what we are selling is viable. "Viable." That's the bad word. I've heard "viable" in so many educational conferences, I completely avoid it. "Articulation." Have you ever heard that one before? What we need is better articulation. If you say that every once in a while, they know you are an educator. You know a lot of people say the world is going too fast. I think it's going too fast for people who are going too slow. Really. Maybe we need to step on the accelerator and take it out of neutral. The train starts its route and some people get on it and some people don't. What we need is to be ready to get on the train. Have your ticket bought and know where you're going.

We said a little about innovation being a dirty word. I don't know if innovation is the word we want to use or not. I was making some notes, and I don't know if the better word is modification or improvement or redirection. I think you have to come up with a word that's soft enough that people accept it but is hard enough that you know what you are talking about. We as educators need to get together and determine what we're going to do. Then we can move so suddenly and have things so well prepared that people don't really realize when it happens. That's the way you do it.

But that has not happened in many cases. It's always like pulling teeth, and people become very territorial. "This is my turf and no one's going to tamper with it." We have to work and show that there is a need.

In think the evaluation project in vocational education is coming around. Mr. Millican and I worked with Educational Testing Service last week. It's going to show us some things, and I'm not concerned at all about what it is going to show. I am concerned about what we'll do with the results. It will give us some wood to split and show some water holes. I think we'll get there.

I'm concerned a little, too, that sometimes innovation or a model for improvement is not accepted by many because of jealousy over where it was developed. For example, Texas Tech did that or Sam Houston did that, or North Texas or that school district over there did that, and we don't want to do that because they did. I think we're going to have to be very ecumenical in approach. I see a consortium of institutions working together with the Texas Education Agency, public schools, and business/industry. Through the RCU and through interested people, we can tie these things together. As I said last night, I want a state conference or regional conferences that deal with all of them. But we need to have someone pull these things together so that we are all singing off the same page and in the same book. Just to sing is not good enough. We all should be singing the same song.

Now, I think that is the key to all of this — working together. That's what we are talking about. Vocational offerings, vocational education, preparing people for jobs. The key word in all this should be *student*. I had been at the Agency over a month and I'd never heard anybody say "student." We talked about inservice, we talked about travel, we talked about state plans, we talked about curriculum development, and we talked about travel reports. Never was "student" mentioned. We need to back up and say, "Why are we in business?" Persons that we serve, that's the reason we're in existence. What do they need? In developing the application for federal funds this year, one of the biggest problems we had was the reversal of thought processes about vocational funding. Because in the past, moneys have flowed to programs. If you have a program you've got $1,625 travel money; you've got $400 materials money; you've got equipment money to set up the program; you've got the teacher's salary. So everything went to the program. Never was "student" mentioned. But the federal application now requires that we identify students, types of students, and student needs. Dollars have to flow through needs as indicated by the application. It's been very difficult for me, even Bob Caster, and I still catch myself. And Oscar is always quick to tell me, "You've got to turn, think the other way." It's very difficult for school administrators, vocational teachers, and directors to think the other way, but hopefully they can.

The thought of serving students can pervade everything that we do. If we are providing a program, the only reason that we're providing it is to meet student needs. And if we're not meeting a student need, we really don't need the program. We need something else.

Now, I hope that you will serve as change agents and catalysts and take some of the ideas you learn at this conference home. I think innovation or change or modification, if needed, should be very appropriate. I don't believe in change for change's sake. We must consider needs all the time. You know, the Congress made a very important point when it said that the research projects must result in improved teaching techniques or curriculum materials that will be used in a substantial number of classrooms or other learning situations within five years after completion. Hey folks, with this year's research and exemplary programs and curriculum and staff/personnel development, we're going to lick this. We are going to weigh proposals by what the law says. Oscar, is that right? Don't you require in your proposals that this will be in a substantial number of classrooms or other learning situations within five years?

You know, before I went to the Agency, I heard about the million dollar shelves. You've heard of the million dollar shelves? Those are the shelves that hold the reports of research projects, exemplary/innovative programs, that sort of thing. It has been said that the reports are sent to people and then put on a shelf. Nothing is tied together — and so it's no one's fault. But, Mr. Millican, Ms. Lindley, and others have said, "Let's get together and do something about it." So, we are going to get into a position where we can come up with some RFPs based on what we know already. And, when we get ready to look at a topic in any of these areas, we should immediately go to the shelves and see what has been done in the past. There's no need to rediscover the wheel. We might need a different kind of wheel, but the design is basically there.

As I said, I want the results of research and other projects to be of help to people who need it. A conference is one way we bring people together to provide that help. We're going to have to advertise and do what's necessary because we need "all hands on deck" in looking at ways to improve. I don't think Bob Caster, or Camille Bell, or John Hoyle, or Sharon Colson, or any of us can come up with the solution. Working together, there's bound to be enough people to get the job done. Someone has said that if you put 10 million monkeys in a room with typewriters for a thousand years one of them is going to type the Lord's Prayer. Perhaps if we have enough people looking for solutions, we will come upon some solutions — not by accident, but by design — if we concentrate enough. We are going to have to be change agents and innovators in using the RCU to get the job done.

I want us to be innovators, and I guess that I'll try to look for some things that describe an innovator. One source said, "An innovator adopts new ideas earlier than his peers in a social system," and I think that is appropriate in the sense we are using the word.

Innovators are adventuresome individuals. They desire the hazardous and the rash. They are on guard to the risks (not too risky, I hope; not too rash, I hope), but I do hope we will take some chances — not with students, but with our own ways of doing things. Innovators have a consistent pattern of behavior. You can't be an innovator one day and not the next day. You know people who are aggressive, who are willing to look at things and question. An innovator, more than anything else, is someone who will ask "Why?" That's one of the toughest questions to ask, and it is sometimes harder to answer. The answer you hear most often is, "We've always done it that way." We need to ask why? We may be doing the very thing we should do; but, I think we should consider "Why?" Innovators are described as the first 2.5% that have adopted an idea. Pretty small percentage, isn't it, "2.5?" I want us all to be somewhat innovative.

Communications is going to be very important. Perhaps we need to look, Oscar, at just how we do communicate because we can do a lot of things. As long as we are in a room by ourselves and no one else knows, we have not really accomplished a whole lot. We may have stroked our own egos. It's very important to get the word out.

In summation, we are going to have to be a little unsettled. We are going to have to ask, "Why?" We're going to have to ask, "Where, how, when, who?" We are going to have to ask those questions about what we are doing in vocational education. We are going to have to be impatient and to let people know we want to build a better mousetrap. And that's what we're doing. History bears out the fact that the future has always belonged to the discontented. If you are contented with what you are doing, in many cases your future is not very bright. But, if you are discontented, and willing to do something about it, then the future is yours. So, I want us to be open minded, aggressive, discontented, and to come up with some solutions. Let me assure you that at the Texas Education Agency we are supportive of what you are doing.

I'm quite interested in the research and innovative programs and we will continue to be supportive, but we need your help. We need your advice and we need your counseling. Don't be fearful of telling some of us, "Hey, I think you're doing it wrong. I think that you should do it another way because we can't respond to that appropriately." We might be doing it wrong and there might be a better way. I hope there always will be a better way.

I appreciate having the opportunity to talk with you. It has given me the chance to say some things I wanted to say to the people I wanted to say it to. I think we really need to stimulate interest in what we are doing. If we do, we can expect large crowds at meetings describing new ideas. We should try to find people who are willing to serve students through better programs.

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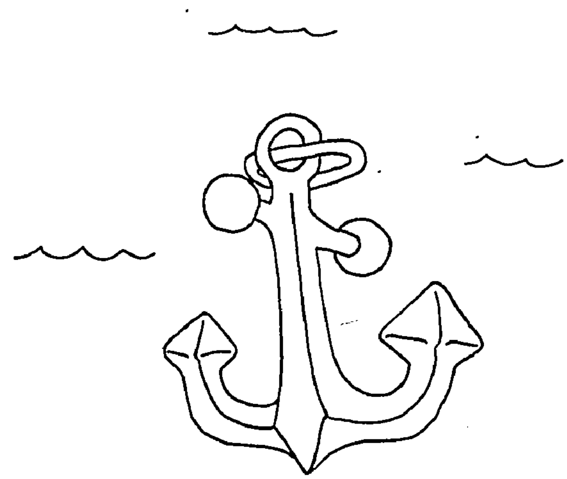
You can't cross the sea merely by standing and staring at the water. Don't let yourself indulge in vain wishes.
Rabindranath Tagore



Abstracts of Funded Research

ABSTRACT, TOPIC NO. 1

TITLE OF PROJECT: Development of a Competency Based Curriculum of Related Instruction for Maintenance Apprentices in the Chemical Industry

ORGANIZATION: College of the Mainland
Texas City, Texas 77590
(713) 938-1211

PROJECT DIRECTOR: J. J. Rubio, Jr., and William L. Raley

DURATION OF PROJECT: 7-1-79 to 2-28-80

OBJECTIVES

The objective of the maintenance apprentice project will be to write a task-derived program of related instruction for apprentices in nine maintenance crafts common to the chemical industry. The crafts are: boilermaker/rigger, carpenter, electrician, instrument repairer, insulator, machinist, painter, pipefitter, and pumper gauger.

PROCEDURES

In cooperation with Monsanto and Union Carbide, the project will build on a comprehensive job analysis of the nine maintenance crafts developed by a consultant firm. The project will write curriculum documents for instructors which accurately translate the weighted tasks and duties of the job analysis into learner's performance objectives. The systems approach to instruction will be used to develop up to 69 courses encompassing 727 modules.

EXPECTED CONTRIBUTION OR POTENTIAL IMPACT ON VOCATIONAL EDUCATION

Curricula will be utilized to train over 300 maintenance apprentices enrolled at COM. Selected courses and modules will be employed in providing supplemental instruction to approximately 700 journeypersons. All products will be distributed to other Texas public vocational institutions with chemical plants in their districts. These products will help institutions to meet the training needs of local industry and to promote apprenticeship as an instructional strategy.

ABSTRACT, TOPIC NO. 2

TITLE OF PROJECT: Pilot Testing a Curriculum in Energy Conservation to Train Secondary and Post-Secondary Vocational Students

ORGANIZATION: Navarro College
Corsicana, Texas 75110
(214) 874-6501

PROJECT DIRECTOR: C. Paul Green

DURATION OF PROJECT: 9-1-79 to 6-30-80

OBJECTIVES

Navarro College proposes to pilot test the eleven module energy conservation curriculum in four secondary and four post-secondary schools. It will use a Learner Verification and Revision approach to accomplish the following objectives: pre-tests will be developed; post-tests will be designed; teaching time for each module will be determined; student laboratory activities and textual material will be evaluated; reading level of the modules will be determined; module and unit sequencing will be evaluated; articulation between secondary and post-secondary programs will be analyzed; an audio-video tape as a dissemination and diffusion tool will be developed.

PROCEDURES

The pilot test phase will include two inservice workshops for secondary and post-secondary teachers to discuss the objectives of the pilot test and procedures for implementing the project. Each module will then be pilot tested a total of four times each on each educational level. Once the pilot test and evaluation has been completed, the modules will be revised, reprinted, and prepared for dissemination and diffusion.

EXPECTED CONTRIBUTION OR POTENTIAL IMPACT ON VOCATIONAL EDUCATION

The potential utilization of the results described in this section demonstrates a reasonable probability that the project will result in improved teaching techniques or curriculum materials that will be used in a substantial number of classrooms or other learning situations within five years after the termination date of the project.

ABSTRACT, TOPIC NO. 3

TITLE OF PROJECT: Identification and Utilization of Employer Requirements for Entry-Level Health Occupations

ORGANIZATION: East Texas State University
Commerce, Texas 75428
(214) 886-5623

PROJECT DIRECTOR: John H. Hayes

DURATION OF PROJECT: 7-1-79 to 6-30-80

OBJECTIVES

- Identify, through research of the literature, tasks performed by workers in selected health occupations.
- Survey employers regarding their requirement of entry-level tasks required for selective occupations, and identify at which educational level of training these competencies can be developed.
- Establish a progression from simple to complex skills in selected health occupations, based on employer requirements for entry-level employees, and the educational level at which these skills should be taught.

PROCEDURES

Through the use of a continuing committee and preliminary research, employers in the health care field will be surveyed through the use of the Delphi technique regarding their expectations of skills required of entry-level workers. These identified skills will serve as a baseline for educators to use in structuring secondary health occupations training, in view of guidelines established by control agents.

EXPECTED CONTRIBUTION OR POTENTIAL IMPACT ON VOCATIONAL EDUCATION

- Competency listings for occupations within the Health Career Ladders.
- A plan for training students in secondary health occupations programs for the identified jobs.
- A methodology for deriving generic competencies in any occupational area that can be used to articulate training at the secondary and postsecondary levels.

ABSTRACT, TOPIC NO. 4

TITLE OF PROJECT: Vocational Education Programming for Special Education Students in Texas — 1980

ORGANIZATION: The University of Texas at Dallas
Richardson, Texas 75080
(214) 690-2021

PROJECT DIRECTOR: George W. Fair

DURATION OF PROJECT: 9-1-79 to 6-30-80

OBJECTIVES

- To determine the vocational assessment/diagnostic procedures that are being utilized for handicapped students.
- To determine the involvement of vocational education personnel in the development and implementation of the individual educational plans (IEP) for handicapped students in vocational education programs.
- To determine the number of special education students served in the regular, CVAE, and VEH programs.
- To investigate the instructional process with specific reference to personnel, the organization of resources, supportive services, and instructional strategies and techniques.
- To determine the type of services and/or resources that are required to increase participation of special education students in vocational education programs.

PROCEDURES

Forty independent school districts will be selected for a detailed two-day interview on the status of vocational education programming for the handicapped. These districts will be selected randomly with stratification for geographical location and average daily attendance. The data from each interview will be analyzed, interpreted and reported in relation to the five objectives of the study.

EXPECTED CONTRIBUTION OR POTENTIAL IMPACT ON VOCATIONAL EDUCATION

The information that will be reported is important in planning for the inclusion of handicapped students in vocational education programs. This data will be helpful to independent school districts for planning and implementing programs for individual handicapped children, to institutions of higher education for planning pre-service and inservice training programs, and to the Texas Education Agency for evaluating local programs and for future planning.

ABSTRACT, TOPIC NO. 5

TITLE OF PROJECT: Texas Industrial Arts: Search for Effectiveness

ORGANIZATION: Texas A&M University (College of Education)
College Station, Texas 77843
(713) 845-3016

PROJECT DIRECTOR: G. E. Baker

DURATION OF PROJECT: 7-1-79 to 6-30-80

OBJECTIVES

- To develop a model to evaluate career development outcomes of industrial arts within the vocational education continuum.
- To identify specific factors, such as class size, facility conditions, or youth clubs which could affect the quality of career development outcomes of industrial arts.

PROCEDURES

- Use an advisory committee to select schools and measures.
- Administer initial tests on a cross sectional basis, grade 7-12. Use both IA and non-IA students.
- Develop statistical model for analyses.
- Rate schools and collect "end of year" data.
- Conduct analyses, report findings.

EXPECTED CONTRIBUTION OR POTENTIAL IMPACT ON VOCATIONAL EDUCATION

- Provide a model to assess the vocational outcomes of Industrial Arts programs on a local or statewide basis.
- Provide a means of maximizing the effectiveness of career development outcomes in Industrial Arts which could contribute to the efficiency of subsequent placement.
- Identify factors that affect program quality in industrial arts.
- Provide information regarding the vocational development of Texas students belonging to particular segments such as sex, economic status or race.

ABSTRACT, TOPIC NO. 6

TITLE OF PROJECT: Developing Curriculum for Interpreter Training Programs in Vocational Education

ORGANIZATION: Texas State Technical Institute
Waco, Texas 76705
(817) 799-3611

PROJECT DIRECTOR: Melinda McKee

DURATION OF PROJECT: 7-1-79 to 6-30-80

OBJECTIVES

There are three main objectives in this project: conduct research to identify skills, tasks, and knowledge to be taught; research all existing materials and determine areas where materials need to be developed; develop a model training program which includes flexible curriculum and comprehensive syllabi to support the training of workforce engaged in providing professional interpreting services for deaf people; and validate the curriculum developed for revision purposes.

PROCEDURES

Through the use of principal investigator, a task inventory and task analysis will be conducted followed by job characterization and terminal task development. All existing materials dealing with interpreter training will be gathered, edited and adapted to the needs of Texas. A comprehensive curriculum will be developed together with syllabi. The materials will be evaluated by conducting inservice training for persons already in the field.

EXPECTED CONTRIBUTION OR POTENTIAL IMPACT ON VOCATIONAL EDUCATION

Curriculum and syllabi developed will be available for use in the development of interpreter training programs in Texas. This will provide a resource for persons in Texas to receive materials and program information enabling them to implement the model training program, thus alleviating the manpower shortage and enhancing public acceptance of interpreter services for deaf consumers.

ABSTRACT, TOPIC NO. 7

TITLE OF PROJECT: Mainstreaming the Handicapped Student in Vocational Home Economics.

ORGANIZATION: Stephen F. Austin State University
Nacogdoches, Texas 75962
(713) 569-4502

PROJECT DIRECTOR: Gloria E. Durr

DURATION OF PROJECT: 9-1-79 to 6-30-80

OBJECTIVES

The primary purpose of this study is to assist the vocational home economics teachers in meeting the challenge of mainstreaming handicapped students in vocational home economics programs. A second purpose is to serve the handicapped student by assisting vocational home economics teachers in providing a stimulating learning environment that meets the needs of individual students. Supporting objectives include: identification of problems, identification of services and materials available that may be of value to vocational home economics teachers in implementing a "mainstreaming" program, development of guidelines and materials for use by vocational home economics teachers in "coping with" and "educating" the handicapped student in the regular home economics program.

PROCEDURES

Extensive library research will be conducted to aid in the development of two instuments for data collection. One instrument will be developed to be used in an interview "fact-finding" situation at selected agencies, departments, or commissions to determine services and materials provided that may be of value in mainstreaming the handicapped student in home economics. Findings will be tabulated, evaluated and presented in one section of the mainstreaming manual. The second instrument will be developed, evaluated by a committee of jurors and will be used to collect data relative to problems encountered by home economics teachers in "Mainstreaming." Site visits will be made to observe actual mainstreaming situations and to observe practices being employed in the instructional program. Data will be analyzed using university computer services. A mainstreaming manual will be developed to assist the vocational home economist.

EXPECTED CONTRIBUTION OR POTENTIAL IMPACT ON VOCATIONAL EDUCATION

The potential utilization of the results in this project demonstrates a reasonable probability that the project will result in improved teaching techniques or curriculum materials that will be used in a substantial number of classrooms or other learning situations within five years after the termination date of the project. The first impact will be felt in vocational home economics programs in 1980. Continued use of the manual will influence the future quality of education provided for the handicapped student.

ABSTRACT, TOPIC NO. 8

TITLE OF PROJECT: A Comprehensive Model for the Development of Training Coordinators

ORGANIZATION: The University of Texas Health Science Center at Dallas
Dallas, Texas 75235
(214) 688-2820

PROJECT DIRECTOR: Nora S. Ernst

DURATION OF PROJECT: 7-1-79 to 6-30-80

OBJECTIVES

This proposal provides a model for the development of a sequence of needs, assessment, curriculum design, pilot course execution, and as a final product, a comprehensive resource manual. Within this framework, a complete package will be available for use on the university or the community college campus, and in the rural or the urban milieu.

PROCEDURES

The entire project will run twelve calendar months and include input from thirty related institutions. From the initial needs assessment and established techniques for adult education, a curriculum will be designed and a pilot course package offered to the trainers.

EXPECTED CONTRIBUTION OR POTENTIAL IMPACT ON VOCATIONAL EDUCATION

The culmination will take the form of a finalized curriculum and a companion resource manual which can be put to practice easily and inexpensively. As an immediate result, many new positions will open to technically trained persons, and later to those professionally trained. Subsequent results will include a higher standard of care for clients in the respective institutions and greater job satisfaction for employees because of increased capabilities.

ABSTRACT, TOPIC NO. 9

TITLE OF PROJECT: Identification and Analysis of New Occupations in Vocational Office Education

ORGANIZATION: Texas A&M University
Texas Engineering Experiment Station
College Station, Texas 77843
(713) 845-5110

PROJECT DIRECTOR: Ken Hogue

DURATION OF PROJECT: 7-1-79 to 6-30-80

OBJECTIVES

Identify and document training requirements for new and emerging office occupations and existing office occupations that have not received placement and training emphasis in the past.

Evaluate existing curriculum for use in these areas and demonstrate the techniques for collecting, analyzing and applying occupational information in developing curriculum and job performance tests.

PROCEDURES

A large sample of employers and other concerned individuals will be selected and a modified version of the job analytic method used to analyze jobs in the D.O.T. will be used to analyze new and emerging occupations and relative job information. In addition, a large sample of incumbant workers and supervisors will be asked to identify critical work requirements for a selected office occupation. The requirements will be analyzed and the results will be translated into specific assignment manuals and support materials.

EXPECTED CONTRIBUTION OR POTENTIAL IMPACT ON VOCATIONAL EDUCATION

The results of this project will be made available to vocational educators for use in their placement, training, and instructional material development activities.

ABSTRACT, TOPIC NO. 10

TITLE OF PROJECT: An Assessment of Occupational Orientation Investigation Activities and Course Content at the Local Level to Determine its Effectiveness.

ORGANIZATION: North Texas State University (College of Education)
Denton, Texas 76203
(817) 778-2231

PROJECT DIRECTOR: Norris Fox

DURATION OF PROJECT: 7-15-79 to 6-30-80

OBJECTIVES

The objectives of this proposal are to improve occupational investigation curriculum materials by assessing the curriculum being used at the local level, to validate goals and objectives for the program and to determine terminal performance objectives in order to organize current curriculum activities.

PROCEDURES

The above objectives will be accomplished by surveying teachers of occupational investigation. From this survey, goals and objectives will be identified for validation. After the validation process, terminal performance objectives for occupational investigation students will be written. The final step will be the completion of a curriculum outline with terminal performance objectives and facilitating activities taken from the existing curriculum activities.

EXPECTED CONTRIBUTION OR POTENTIAL IMPACT ON VOCATIONAL EDUCATION

Curriculum for use in the occupational investigation classroom will be assessed and improved. The validated goals and objectives will then provide a method of measuring curriculum content, student performance and local program effectiveness.

ABSTRACT, TOPIC NO. 11

TITLE OF PROJECT: An Analysis of Problems as Perceived by Male Students in Vocational Homemaking Education Programs.

ORGANIZATION: Texas Tech University
Lubbock, Texas 79409
(806) 742-3037

PROJECT DIRECTOR: Camille G. Bell

DURATION OF PROJECT: 9-1-79 to 6-30-80

OBJECTIVES

The major purposes of the project are to determine: problems male students themselves feel that they have in vocational home economics programs; problems which are thought to be student-oriented (background, attitude, effect of opinion of peers, etc.); problems which are thought to be school-oriented (organization of classes, schedule of classes, extra-curricular activities); problems which are thought to be curriculum-oriented (concepts and learning experiences that have been included or omitted); correlation of perceived problems to certain demographic variables; and correlation of perceived problems to the size of the school.

PROCEDURES

Data will be collected by a rating scale questionnaire based on problems obtained from interviews with male students, vocational homemaking teachers, and student teachers. Responses will be catagorized as to the type of problem as well as to whether they were caused from the students themselves, from the school, or from the curriculum. Data will be analyzed using statistics to determine significance of rankings.

EXPECTED CONTRIBUTION OR POTENTIAL IMPACT ON VOCATIONAL EDUCATION

The potential utilization of the results to be achieved in this project demonstrates a reasonable probability that the project will result in improved teaching techniques or curriculum development that will be used in a substantial number of secondary and university classrooms within five years after the termination date of the project.

ABSTRACT, TOPIC NO. 12

TITLE OF PROJECT: Dissemination Conference on Occupational Research.

ORGANIZATION: Texas A&M University
College of Education
College Station, Texas 77843
(713) 845-5311

PROJECT DIRECTOR: Donald L. Clark/Sharon Colson

DURATION OF PROJECT: 7-1-79 to 6-30-80

OBJECTIVES

The objectives of the project will focus on: follow-up study of June 1979 conference; research completed during the past year; funding priorities for fiscal year 1981; new legislation concerning occupational research and development.

PROCEDURES

The Conference will be held on the campus at Texas A&M University during February, 1980, in the conference facilities that are available for such meetings. Evaluations of the Dissemination Conference held in June will be analyzed and a follow-up study of participants will be conducted. From these two activities, planning and organizing for the February conference will be shaped. The last month of the project (March) will be used to write the final report and complete conference proceedings.

EXPECTED CONTRIBUTIONS OR POTENTIAL IMPACT ON VOCATIONAL EDUCATION

Participants at the conference will receive information on recent research findings in occupational education and technology. Dissemination of research results to decision makers from vocational areas in Texas schools indicate a reasonable probability that the project will result in improved teaching techniques or curriculum materials that will be used in a substantial number of classrooms or other learning situations within five years.

Presenters and Participants

Name	Position	Institution
Carol Anderson	Associate Professor	Texas A&M University
Sharon Baggett	Gerontology Researcher	University of Texas Health and Science Center
Camille Bell	Head, Home Economics	Texas Tech University
Dee Bonorden	Vocational Administrator	Hearne I.S.D.
James L. Boone, Jr.	Professor, Industrial Education	Texas A&M University
Chris Borman	Head, Educational Psychology	Texas A&M University
Lester Buford	Assistant Professor	Texas A&M University
Robert Caster	Associate Commissioner	Texas Education Agency
James E. Christiansen	Professor, Agricultural Education	Texas A&M University
Birdell B. Clark	Vocational Director	LaPorte I.S.D.
Donald Clark	Associate Dean of Education	Texas A&M University
James L. Cockrum	Publications Director	The University of Texas at Austin
Sharon Colson	Assistant Research Scientist	Texas A&M University
Jerry Crossland	Vocational Director	Lewisville I.S.D.
Joyce Crow	Vocational Administrator	Taylor I.S.D.
Nan Crowell	Graduate Student	Texas A&M University
Charles Curtis	Instructor, Texas Engineering Extension Service	Texas A&M University
Gloria Durr	Professor, Home Economics	Stephen F. Austin State University
John Eagleson	Accountant	Houston
George Fair	Professor	The University of Texas at Dallas
Linda R. Glosson	Director, Home Economics Center	Texas Tech University
James Goke	Graduate Assistant	Texas A&M University
Doug Goodgame	Resident Specialist	Texas A&M University
Al Goodwin	Professor of Education	Sam Houston University
Leslie L. Mackenzie-Graham	Graduate Student	Texas A&M University
Gary Green	Associate Professor of Education	Kansas State University
Dale Gutcher	Professor, Industrial Education	Texas A&M University
Chester Hastings	Vice President	McLennan Community College
John H. Hayes	Director of Vo. Curriculum Center	East Texas State University
Don Herring	Associate Professor, Agricultural Education	Texas A&M University
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Kathryn Hollenbeck	Teacher Educator	North Texas State University
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Clint Isbell	Graduate Student	Texas A&M University
Yasin Ishaq	Graduate Student	Texas A&M University
Diane E. Johnson	Researcher	East Texas State University
Gary Kahn	Graduate Student	Texas A&M University
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Marilyn Kuhn	Vocational Administrator	Bastrop I.S.D.
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Mildred Thomas	Vocational Counselor	Bryan I.S.D.
C. W. Thompson	Superintendent	Elgin I.S.D.
Ken Turner	Assistant Research Specialist	Texas A&M University
Gene Uselton	Director, Center for Education and Research in Free Enterprise	Texas A&M University
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Robert N. White	Assistant Professor	Texas A&M University
Sue White	Graduate Student	Texas A&M University
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Jim Zukowski	Curriculum Specialist	East Texas State University