

Approved 2-15-90
Date

MINUTES OF THE Senate COMMITTEE ON Labor, Industry and Small Business

The meeting was called to order by Senator Alicia L. Salisbury at
Chairperson

1:30 a.m./p.m. on February 7, 1990 in room 527-S of the Capitol.

All members were present except:

Senator Roy Ehrlich
Senator Paul Feleciano, Jr.

Committee staff present:

Jerry Ann Donaldson, Kansas Legislative Research Department
Gordon Self, Revisor of Statutes Office
Phil Lowe, Committee Secretary

Conferees appearing before the committee:

A. J. Kotich, Department of Human Resources
David DePue, Executive Director, Kansas Council on Vocational Education

The meeting was called to order by the Chairman, Senator Alicia Salisbury, for the purpose of entertaining requests for the introduction of bills. The Chairman announced that at tomorrow's meeting the committee would hear from Ray Siehndel, Secretary of the Department of Human Resources, on the Job Training Partnership Act, and next week's agenda would be the review of JTPA allocations in each Service Delivery Area.

A.J. Kotich, Department of Human Resources, appeared before the committee and gave an explanation of a request for the introduction of a bill. The proposal which was approved by the Employment Advisory Council amends the present Employment Security Law. (Attachment I). The bill provides for a new section to the existing law which addresses two main concerns of the Council: (1) Individual lessee firms and their employees must remain identifiable to the DHR, and 2) must provide a trust fund protection provision. This proposal would also amend K.S.A. 44-703 by defining "Total Wages", "Lessor employing unit", "Client Lessee"; and in K.S.A. 44-709 the amendment clarifies the appointment of the public member on the Board of Review. The Council also proposed an expansion of the number of rate groups in Schedule 1 from 21 to 51 in K.S.A. 44-710a(a)(2)(D), and also as a result of increasing the number of rate groups, that an employer may reduce his rate would be changed from 2 to 5. (Attachment 1).

Senator Morris moved for the introduction of a bill as requested by the Council. The motion was seconded and carried.

The Chairman called on the next conferee, David DePue, Executive Director, Kansas Council on Vocational Education, for a presentation on "How Well Kansas is doing in Preparing for Employment in the 1990's". Dr. DePue distributed handouts and explained charts on - 1) Waves of Technical Change, 2) Decline in U.S. Birth Rates, 3) Changing Roles and Responsibilities, 4) Work Force 1950-2000, 5) Kansas Business Training Survey Sampling Strategy, 6) Retail Trade Services, 7) Evolution of Information Processing, 8) Components of Business Analysis, 9) Technology Related Skills, 10) Basic Components and 11) Core Courses. (Attachment II).

Dr. DePue also distributed copies of a Speech by Willard R. Daggett on The Changing Nature of Work A Challenge to Education. (Attachment III).

The next meeting is scheduled for Thursday, February 8, 1990 at 1:30 p.m.

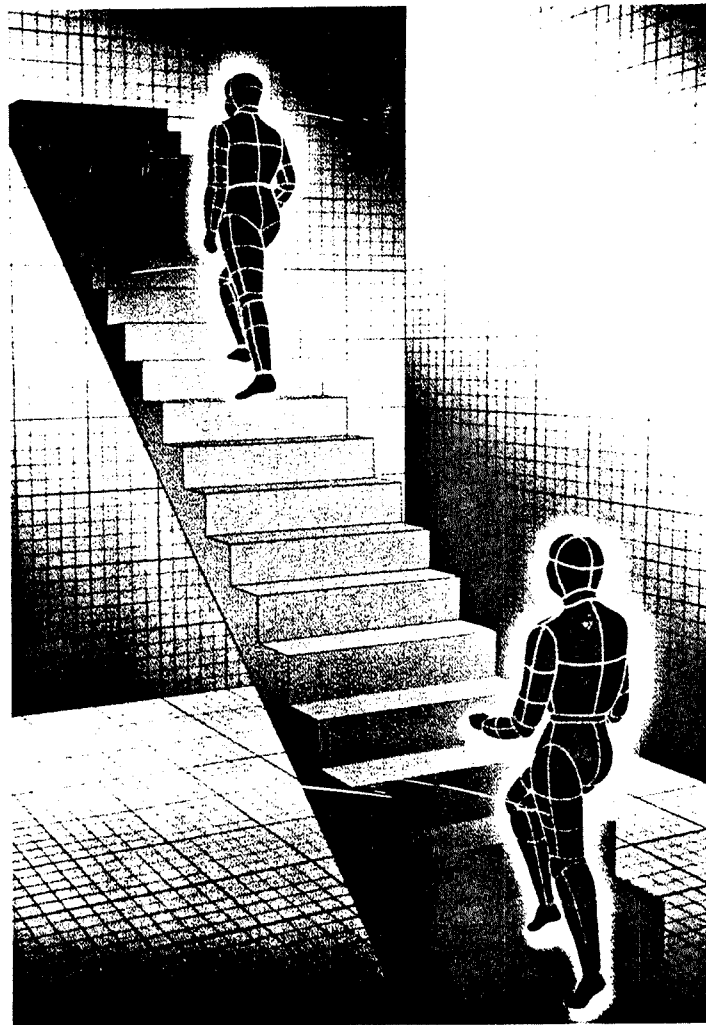
The meeting was adjourned at 2:25 p.m.

1990 Proposed Amendments to
Employment Security Law
Approved by Employment Security Advisory Council

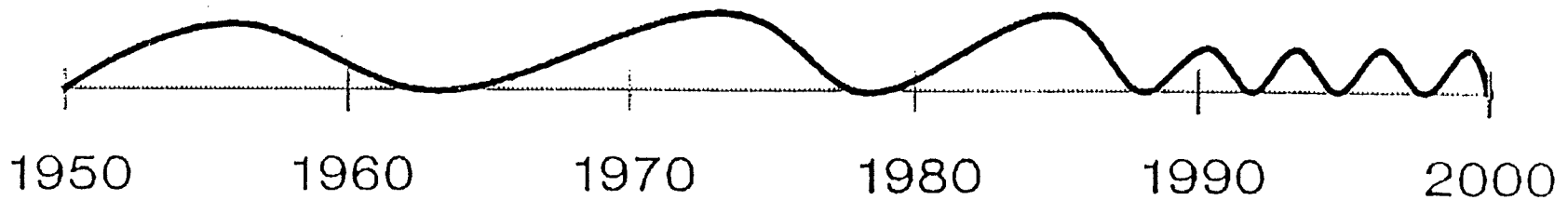
1. New Section--Lessor employing units (Treatment under the Law.)
Employee leasing is a relatively new, however rapidly increasing industry in Kansas. Current provisions of the Kansas Employment Security Law do not allow such firms to operate in Kansas. Recognizing that there are definite advantages to small Kansas businesses through the use of employee leasing, the Council has recommended a proposed amendment to allow employee leasing companies to operate in accordance with the law. This proposed amendment addresses two main concerns of the Council:
 - 1) Individual lessee firms and their employees must remain identifiable to the Department of Human Resources.
 - 2) Must provide a trust fund protection provision.
2. K.S.A. 44-703(a)(3)--Defines and adds a definition for "total wages."
3. K.S.A. 44-703(h)(4)(B)--Successor Employer--technical correction only (removes an extra "or.")
4. K.S.A. 44-703(ff)--Defines "Lessor employing unit."
5. K.S.A. 44-703(gg)--Defines "Client lessee."
6. K.S.A. 44-709(f)--Board of Review--clarifies appointment of the public member.
7. K.S.A. 44-710a(a)(2)(D) and Schedule I--Eligible Employers Computation of Contributing Employer Rates - Schedule I is used to assign tax rates to experience rated employers by the array method which was enacted into the Employment Security Law by the 1974 Session of the Legislature. It is used to divide employers eligible for experience rating into 21 approximately equal groups.

The Council has proposed an expansion of the number of rate groups in Schedule I from 21 to 51. The purpose is to allow a positive eligible employer's tax rate to more nearly reflect the relationship of such employer's experience rating to the experience rating of all other positive eligible employers. (Note: Neither the expansion or the contraction of the number of rate groups in Schedule I would have an affect on the overall total planned yield.)
8. K.S.A. 44-710a(c)--Voluntary Contributions
As a result of increasing the number of rate groups in Schedule I from 21 to 51, the number of groups that an employer may reduce his rate would be changed from 2 to 5.

PREPARING FOR EMPLOYMENT IN THE 1990s



WAVES OF TECHNOLOGICAL CHANGE

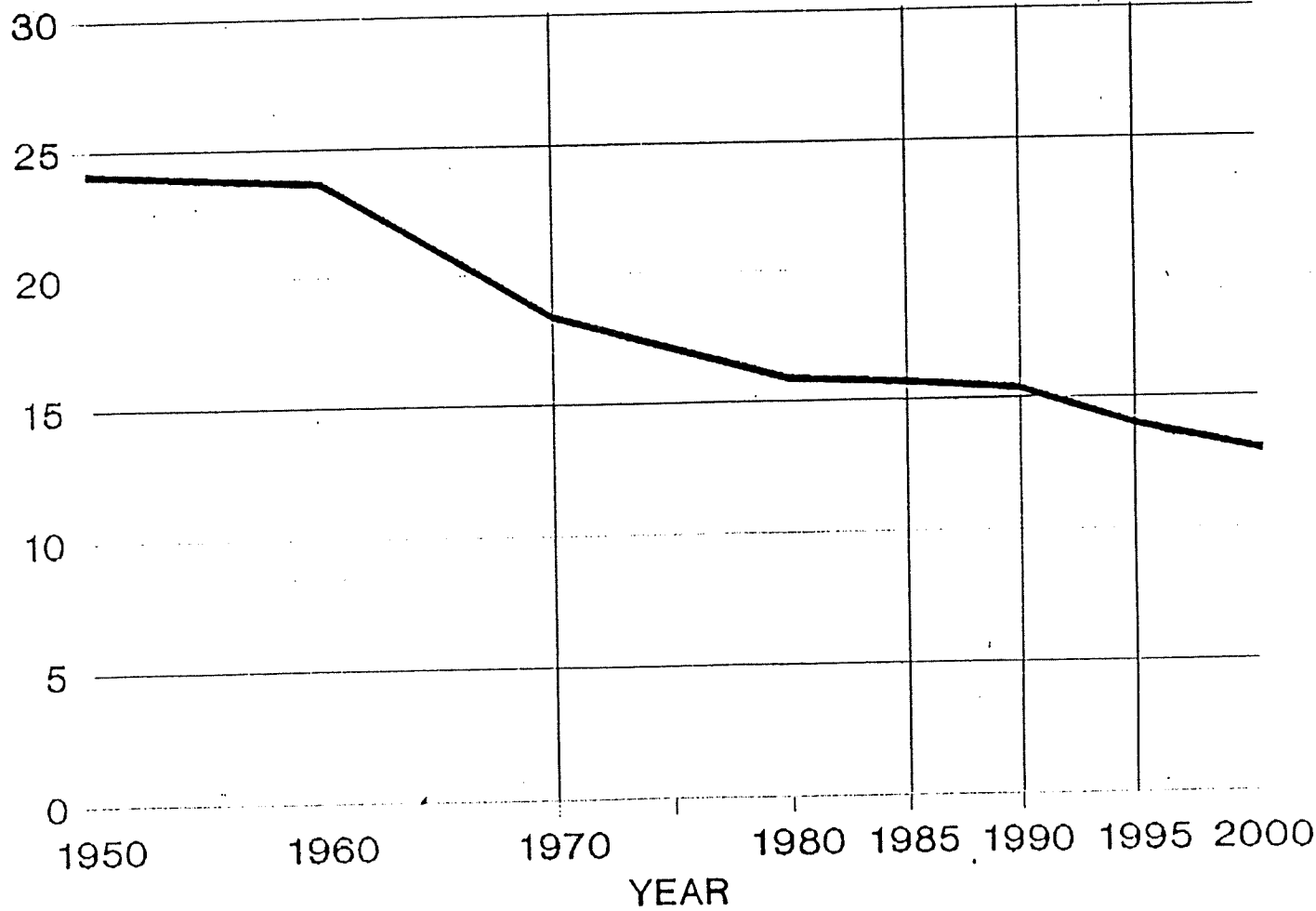


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DECLINE IN U.S. BIRTH RATES

RATE PER 1000



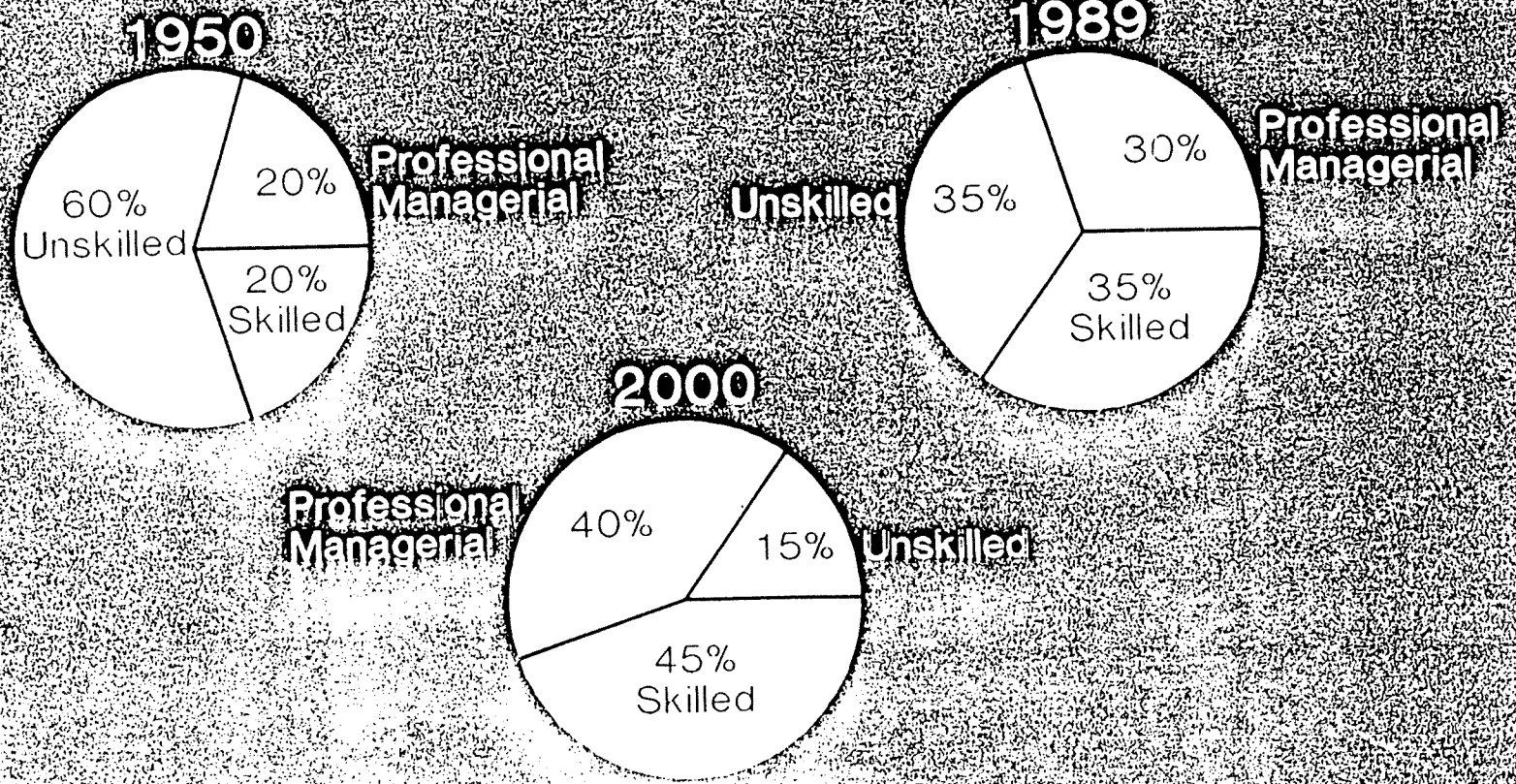
2-3

CHANGING ROLES AND RESPONSIBILITIES

- FROM TASK TO SYSTEM APPROACH
- GRAYING OF SUPPORT AND PROFESSIONAL STAFFING

2-4

WORK FORCE 1950-2000



2-5

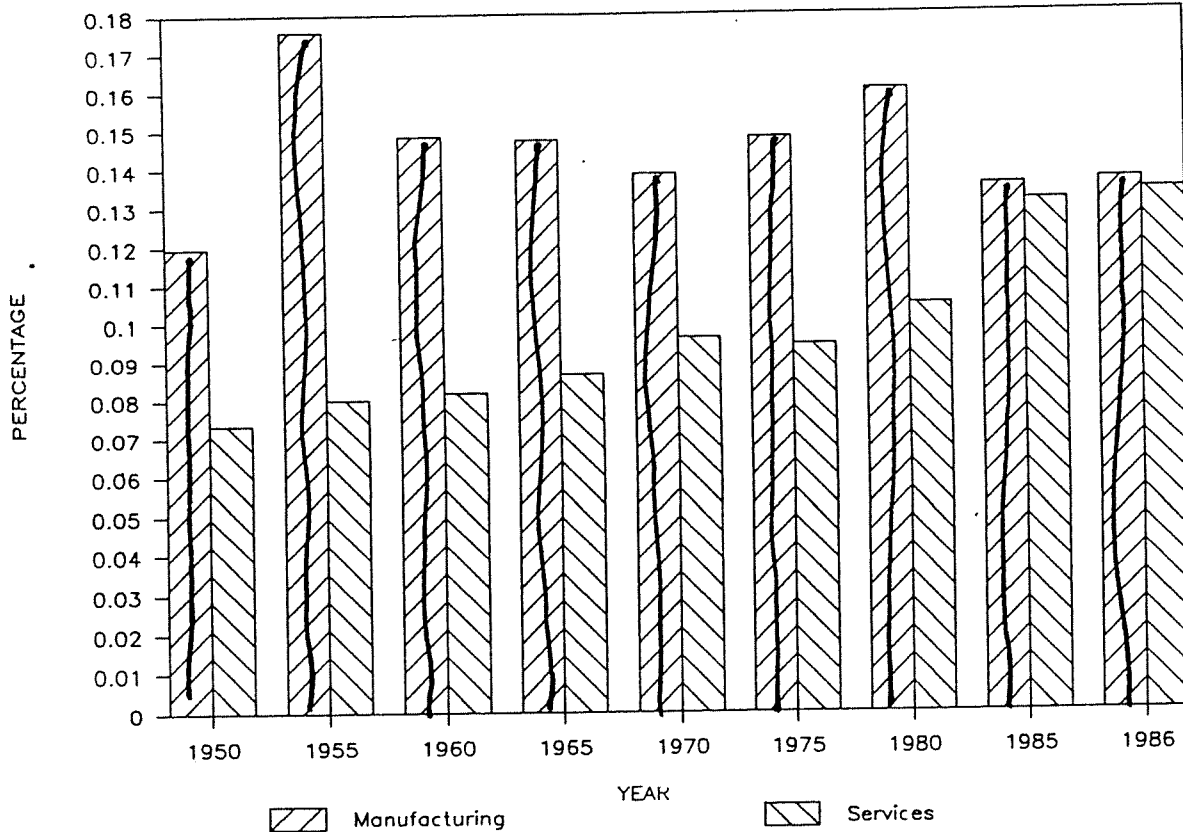
Kansas Business Training Survey Sampling Strategy

Proportion in UI Database

	<u>Total</u>	<u>Small (5-49)</u>	<u>Medium (50-250)</u>	<u>Large (251+)</u>
Manufacturing	1,955 13%	1,387 9%	449 3%	119 1%
Non-Manufacturing	13,440 87%	12,123 79%	1,163 8%	154 1%
Total	15,395 100%	13,510 88%	1,612 10%	273 2%

PROPORTION OF KANSAS PERSONAL INCOME

BY INDUSTRY

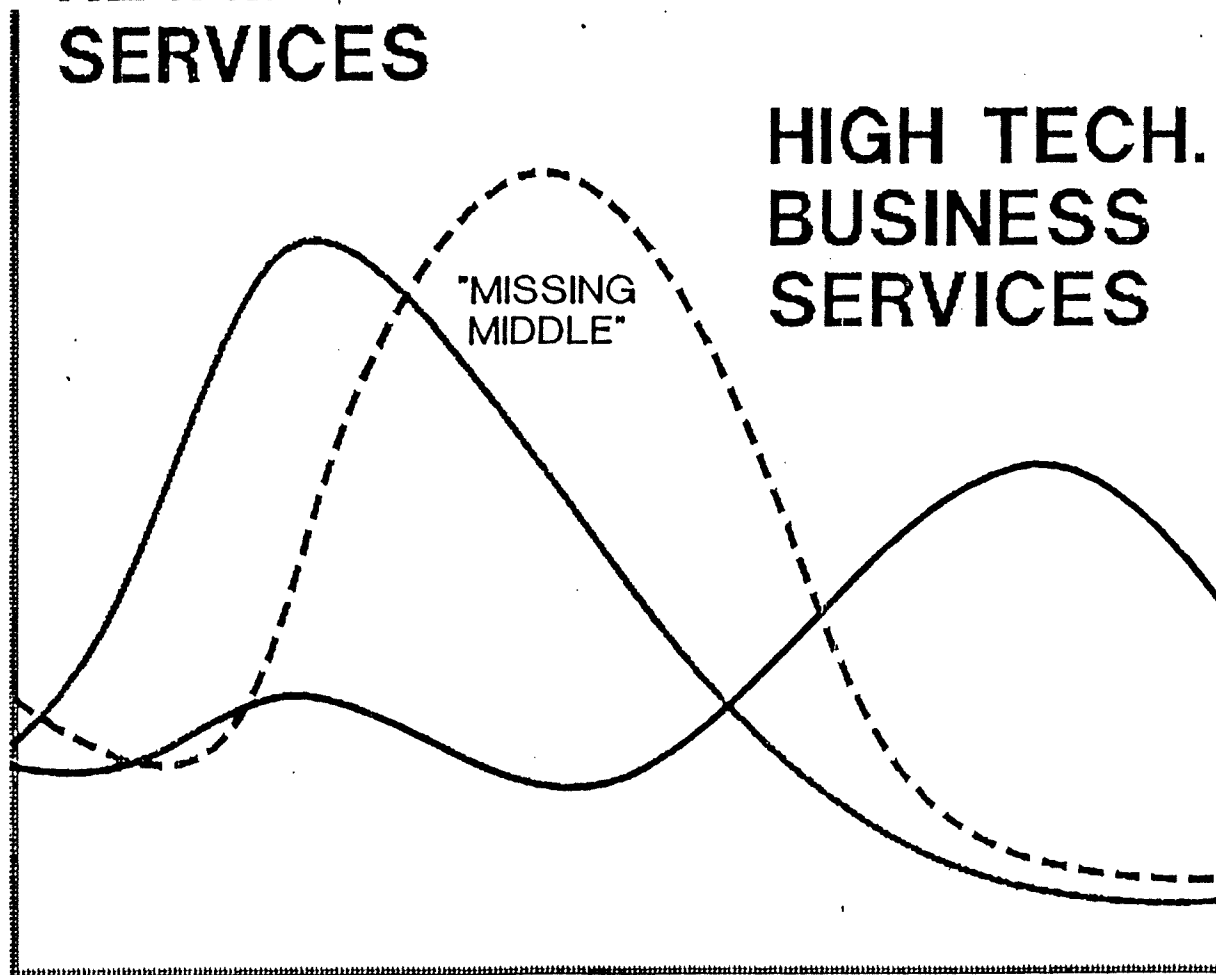


Source: derived from U.S. Bureau of Economic Analysis, State Personal Income, 1929-82, 1984; and Local Area Personal Income: 1981-86, Volume 3, 1988.

RETAIL TRADE SERVICES

HIGH TECH./ BUSINESS SERVICES

NUMBER OF JOBS

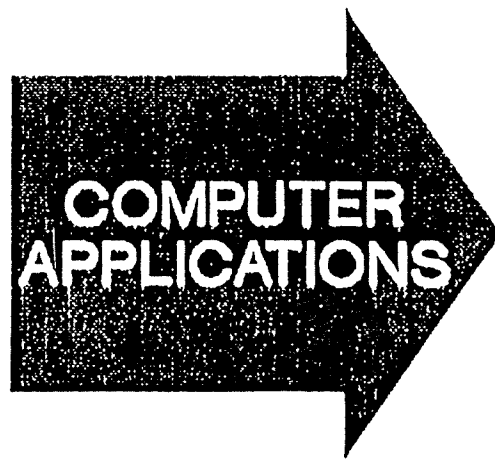
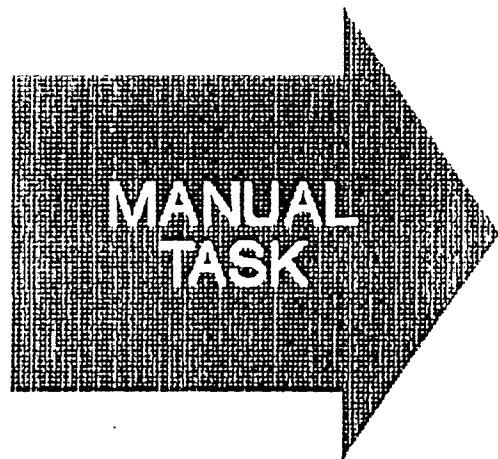


LOW WAGE

HIGH WAGE

2-7

EVOLUTION OF INFORMATION PROCESSING



COMPUTER
FOR ALL
INFORMATION
NEEDS.

COMPONENTS OF BUSINESS ANALYSIS/ BUSINESS COMPUTER APPLICATIONS

- TRANSACTION DRIVEN
- ■ DEFINING INFORMATION NEEDS
- ■ ■ CREATING AN INFORMATION SYSTEM
- ■ ■ ■ ORGANIZATION OF BUSINESS AROUND
INFORMATION SYSTEM
- ■ ■ ■ ■ SOFTWARE NEEDS
- ■ ■ ■ ■ ■ HARDWARE NEEDS
- ■ ■ ■ ■ ■ ■ TRAINING

TECHNOLOGY RELATED SKILLS

- BASICS
- KEYBOARDING
- DATA MANIPULATION
- PROBLEM SOLVING/DECISION MAKING
- SYSTEMS OF TECHNOLOGY
- RESOURCE MANAGEMENT
- ECONOMICS OF WORK
- HUMAN RELATIONS
- APPLIED MATH/SCIENCE
- CAREER PLANNING

BASIC COMPONENTS

OUTCOMES

- CORE SKILLS
- COORDINATED CURRICULUM
- ACCOUNTABILITY

DELIVERY

- FLEXIBILITY IN DELIVERY

2-11

CORE COURSES

- KEYBOARDING
- TECHNOLOGY EDUCATION
- HOME/CAREER SKILLS
- INTRODUCTION TO OCCUPATIONS
- PREPARATION FOR CLUSTER OF JOBS
- SPECIFIC TRAINING
- OCC. ED. FOR GENERAL ED. CREDIT

2

"THE CHANGING NATURE OF WORK -
A CHALLENGE TO EDUCATION"

Speech to Kansas Legislative and Educational Leaders
by Willard R. Daggett
October 1989

I am pleased and honored to be here with you this morning. The reputation of this State in terms of its educational program is one that you should take a great deal of pride in.

The themes that I'm going to speak about this morning are the same ones that Bob Atwell spoke about last night. Bob and I didn't compare notes ahead of time. There is a difference, however, between Bob's message and mine. I think the themes that he addressed are much more urgent than he indicated. I don't believe we are at the 11th hour of our joint themes. I believe that we are within a minute of the 12th hour. This urgency is especially apparent when we look not through the eyes of educational administrators or policy makers, but when we look through the eyes of our young people.

We are going to use this morning as an opportunity to pause for a moment as we wind down 1989 to reflect on the 1980s and to think about what we have done and what we have accomplished. Then we will look towards the 1990s. As we reflect back, we as educators say, "Look at all the things we did in the 1980s." In the 1980s we had all kinds of "actions." Actions in our elementary schools, our secondary schools, our vocational schools, our community colleges and our universities; and, if we keep track of what we did by actions, you've got to give us an A. However, I would prefer not to keep track of what happened by actions but rather by results. And if we measure the results of our collective educational reform movements in the 1980s, I believe we failed. I believe we have done very little to truly impact the future lives of our young people and this nation's economy.

Therefore, I come to you this morning as a person who I hope will draw out of you conflict. My purpose is not to make you feel good. My purpose is not to say, "We've done a great job, we've just got to go a little bit further." My purpose is not to say, "Let me give you some easy, quick solutions." My purpose is to help you collectively understand that American young people and American businesses have enormous problems in 1989, and we are approaching crisis. To do that, I'm going to ask you to do something different this morning. I'm going to ask you to forget that you are an educator. I want you to forget that you're a university president, or a community college dean, or a director of a vocational school or that you are a state legislator. I want you to forget all those things, as hard as that's going to be. What I would like to have you do instead is to select one or two or three young people in your life that are nearest and dearest to you - children, grandchildren, nieces or nephews - and think about my message from their perspective and from your perspective for them. Then, at the conclusion of my speech, I will try to draw a parallel between your desires for your own children and the roles and responsibilities of the community colleges, four-year colleges, universities and vocational schools in the state of Kansas. I believe that

ATTACHMENT III

will help you focus your thoughts differently. As you focus on your children, I hope my words put you in conflict.

The 1980s have been a decade of conflict for me because of the two roles I assume. I don't think my roles are unique or different from yours. First, I've been a lifetime educator. I was a high school teacher and administrator. I was a dean of a community college. I was an administrator of a university and I taught in a graduate school. I now serve as Director of Occupational Education Instruction in the State of New York. With all that, I've seen many different facets of education, and I believe that we in education have done an enormous amount of good for an awful lot of young people in this country. With that belief, I go to work every day and I make decisions.

In the early to mid-1980s, I began to recognize that I was making decisions based upon my institutional heritage and I would come home and sit across the table from my other responsibility in life. That responsibility is being a parent. We have five teenagers: they are 15, 16, 17, 18 and 19. I recognized I was making decisions based on my institutional heritage rather than the needs of my own children. And when I look at the issues this morning from their eyes, I see them differently than when I look through my eyes as an administrator -- so please forget your educational responsibilities.

What I'd like to do is to give the audience a little pre-test. My pre-test consists of finding out what your goals, your hopes, your prayers and your aspirations are for your own children. Have all of you thought about one, two or three young people? How many of you have as your hopes, your prayers and aspirations for them that they're going to spend their adult years working at the counter of a fast-food restaurant? No one? How many of you have as the hopes, dreams and aspirations that your children will spend their adult years working in the allied health field as a home health aide at \$5.00 an hour, dealing with communicable diseases, insurance liabilities, and long hours. Is that your hope, your dream?

Of course that is not your hope. I wouldn't expect you to raise your hand because that's not the dream for your children. Those jobs are for someone else's kids, not ours. A funny thing occurs to me, however. I've been in urban, suburban and rural America. I've been in every state. I've been in every kind of community that you can imagine. From urban minority communities in New York City to a Native American community in Alaska. I've met with legislators, educational leaders and business leaders -- and there's one unified theme with all of them that keeps coming back to me. The jobs that I just described, that are not for your children, are not for anybody else's children either. You may perceive that your goals and hopes are different for your children than those of other groups, but they're not.

Therein lies part of the problem I'm going to try and share with you this morning. I will speak in clear and simplistic terms about some fundamental structural changes in America that are going to affect your children and mine - where they're going to work and how they're going to

work. Then we'll come back and talk about some needed fundamental structural changes that are needed in your institutions. Please remember, I told you ahead of time, I'm going to say some things that are going to make you uncomfortable. I hope to show you that your institutions are functionally flawed if they are to take care of the needs of your own children and your goals for them. If that's true, we've got a very serious problem in education.

Let me take you from the known to, perhaps, the unknown. Let's reflect on the history of work in America. Agriculture in the 1900s went through a change in this state. I'm sure you know that far better than I, although I grew up on a small dairy farm in upstate New York. If we go back to 1900, 85% of the American work force was in agricultural production. In 1989, however, only about 3% of the American population is employed in agriculture. If I worked in agriculture today, I would be working in an industry that produces about twice the amount of food that this country can eat. In 1900, when 85% of this population worked in agriculture, it produced enough food to feed the country. What happened? It's very simple. We automated. As we automated in agriculture, we dramatically increased productivity. This left agriculture as a central part of this nation's economy, but not the cornerstone of this nation's work force. You know that; it's nothing new. As we automated, we went from a majority of workers being unskilled to a majority in agriculture today that are fairly skilled.

Then we moved to production/manufacturing as the primary sector of our nation's work force. As agriculture declined in the first half of the century, production/manufacturing increased. By 1950, 73% of the American workers were employed in production and manufacturing. In 1989, the best data I can come up with show that only about 18% now work in production and manufacturing. Some people argue that it's 21%; some people argue it's 15%. I don't care. I don't care if it's 21, 18 or 15%. Moving from 73% of the people to 18% of the people is a fundamental change in where people work. What happened? What did we do in production and manufacturing? Is production and manufacturing still an important part of our nation's economy? Sure. Just as agriculture is an important part of the economy, so is production and manufacturing; but this sector of the economy no longer contains the cornerstone of the work force.

I want to give you an example. A few people in the audience were at a recent conference held in New York when we brought in 20 of the nation's largest employers and educational leaders from around the globe to talk about education in the 1990s. At that conference, a small firm called QR Industries also presented. QR Industries produces steel products, including steel clamps that go on hoses in General Motors cars. In 1985, QR Industries had 300 people making these clamps. In 1989, however, our sons and daughters would have a difficult time going to work for QR Industries. Today they make the steel clamps (we'll come back to how in a minute), put them into a box, and put a bar code on the box. Do you know what a bar code is? It's the little label with lines on it that is on all kinds of products. The label can be read by an optical scanner--just like ones seen in supermarkets. The box goes into a truck for shipping. In the

middle of the truck is a conveyor belt. One of the things on that bar code is information stating the 20-minute window during which the box must arrive on the General Motors loading dock. The bar code is read by an optical character reader and communicated to a little computerized monitor on the dashboard of the truck that says when it's to be delivered and where. If it arrives 10 minutes early, there's a penalty. If it arrives 10 minutes late, there's a penalty.

When the truck arrives within its 20-minute window, a robot-like machine comes off the loading dock, enters the truck, reads the bar codes, pulls off the correct boxes, takes them into General Motors and sets them on the assembly line. Another robot-like machine opens the boxes, and a third one leans over and picks up the clamps. If a clamp is 1/100 of an inch off, QR Industries is penalized 70 clamps. That's their contract. Why? Because the robot can't pick it up if it's more than 1/100ths of an inch off.

What happens if they reject one in a 100 clamps? How many do QR Industries get paid for? Thirty, because they're penalized 70. Suppose it rejects two. You would not want to be the owner of QR Industries, would you? In 1986 when the new contract was written, it was rejecting five clamps in every 100, so QR Industries had to become more precise. They had to do better work. So they introduced all types of short-term training programs. After continued failure, they made a major change in their system. QR Industries did exactly what General Motors had done. It robotized its assembly line. Now one clamp in 10,000 is rejected.

I mention that little example to you because in 1982, in America, there were 32,000 robots. How many are there in America in 1989? One-and-a-third million. How many are projected in 1995? 20 to 24 million. What did production and manufacturing do? It automated, just like agriculture did.

Now let's follow the bar code on that box and see what happens to the workers.

- o What happens to the assembly worker in QR Industries -- where are they? They're gone. The company has now moved from 300 employees on the assembly line for that product to just 17 people. They improved their rejection rate from five per 100 to one in 10,000.
- o What happens to the accounts receivable clerk at QR Industries--the person who fills out the bill and records the data in QR Industries accounting system. What happens to that accounts receivable clerk? He or she is gone because that bar code also has an accounting code on it that goes directly to the computer system.
- o What happens to the receiving clerk at General Motors? That person's gone.
- o What happens with the accounts payable clerk at General Motors? He or she is gone too.

- o QR Industries' contract says there must be an electronic bank transfer within 24 hours of the receipt of the item. Therefore, the workers in the accounting department have also been replaced.

We are all aware of the impact on the production worker that automation brings. But I don't think we recognize the impact on the accounts receivable clerk, the accounts payable clerk, the receiving dock worker and the truck driver.

Do our educators understand that such technology has led to the American Association of Truckers identifying computer literacy as one of five basic skills needed by truck drivers? How many of your vocational school, two-year college and four-year college faculties understand that accounts payable clerks are disappearing? If they do, you tell me why we continue to teach it as one of the largest enrolled courses in two-year and four-year colleges. Why do we continue to focus on ledger accounts, accounts receivable and accounts payable in our schools? Because we can't let go. They're our institutional heritage. It has nothing to do with the future work force needs.

In effect, what happened in production and manufacturing is exactly what happened in agriculture - we automated. As we automated, unskilled workers were no longer an economic commodity. The skills that people need today are dramatically different than they were 30 years ago. Between 1950 and 1989, we have seen major changes in business. I wonder how it's changed your two-year colleges, your four-year colleges and your technical schools?

Where do these changes leave us in 1989? They leave us with a bi-modal distribution of jobs in America. As noted in the overhead (Attachment 1) the center dotted line represents the jobs in America in 1964. If we classify jobs by low, medium and high income levels, we find in 1989 that low wage is anything below \$13,600, high means anything above \$45,700. Medium is between the two. Correcting those figures for inflation, we find that in 1964, 78% were in the middle - 22% on the extremes.

Now let's compare those figures to 1989. If we take everybody who took a new job in the last three years - if you moved from being a dean to a college president, you're counted. If your 17-year-old took his or her first job, he or she is counted. If you retired and took a retirement job, you're counted. What percentage is in the middle? Sixty-six percent!

Who's the largest single employer by the number of people they employ in America? What one business? McDonald's. Who's number two? Burger King. Number three? The federal government. Number four? Sears. Your children aren't going to work in these jobs right? Your children are going to work in production and manufacturing or in agriculture because that's what mom and dad taught them. Do they have the skills to work in the sophisticated manufacturing workplace? Do you want to have them work where the jobs are - in the service sector? Twenty-two of the 25 top employers in America are in the retail trade/service sector.

Another part of the picture is that 21 to 23%, depending on the data source you look at, work in the high wage sector. But are they your sons and daughters right out of high school or college? Are they your recent university graduates? No, they're the baby boomers who have degrees, who have the education and 20 years of work experience.

I have a question. Where are your sons and daughters going to work? In the low wage sector? You tell me no. In the middle, where 11 to 13% of the new hires are going to work? Clearly only a small percent of your children can work there.

Now let me review the future of the service sector. I'm going to give you two important messages today. The first one is that THE SERVICE SECTOR IS ABOUT TO ENTER THE BUSINESS OF AUTOMATION. What happened in agriculture and production/manufacturing when they were automated? A decline in the number of workers, not a decline in the importance of the industry, and those workers that are left are no longer unskilled. They are sophisticated workers.

Let's look at the service sector because I think the phenomenon happening in that sector has more to do with two-year colleges and universities as well as your vocational schools than virtually anything happening in this State. Does anybody know what an ATM is? It's the automatic teller machine used in banks. Fifty-five percent of all consumer banking transactions in 1988 were done with an automatic teller machine. What percentage of transactions were they used for in 1982? Zero. Why? Because ATM's did not exist in 1982. What has happened to the number of cashiers and tellers in the banking industry in America in the last six years? They have been reduced by 40%. This number is projected to decline by an additional 40% between now and 1993. The banking industry has become automated.

What are the banks scrambling for today? Technicians that can run the ATM systems. What happens when the ATM is temporarily out of service? To find an adequate number of technicians to keep the system operating, Citibank, the largest banking institution in this country, has decided that in 1990, they will hire 1,800 technicians to run their ATM system and keep it going. They are not going to hire even one American because not one of your universities or one of your colleges is producing a single technician that can run the system. Oh, aren't we doing a wonderful job in American education?

Where are your sons and daughters going to work? In many communities around this country, the fast-food industry is going through an enormous transition. You know what that transition is? It's automation, just like the banks. In some communities you can go in, push one button to indicate you want a quarter pounder and another to indicate how you want it cooked - which is an option you don't have now. You can also indicate what you want on your hamburger. You put in your money, like you put it in a soda machine and 13 seconds later you get a cooked hamburger untouched by human beings. Nobody takes your order, and no one prepares the food. Why?

Because the fast-food restaurant has gotten tired of trying to attract quality workers that can do the level of work they want for a price they are willing to pay.

I recently met a 23-year-old who had bought a house from a chemical engineer who worked for the General Electric Company. I mention that it was a chemical engineer who left because the guy made pretty good money. They left to go to a new community and sold their house to this 23-year old who earns enough money to live in that house. He had no family income behind him, did not have a day of postsecondary education and doesn't speak English very well. He's a German whom the local fast-food restaurant hired to run the high-speed laser cooker. What happens when the high-speed laser cooker shuts down? They're out of business, aren't they? Like the bank. Do you know what they pay the German to run that high-speed laser cooker system? They pay him \$29.50 an hour. This young man has a 24-year-old friend who shares that responsibility with him. She doesn't speak English very well either. She's from Japan and is without a day of postsecondary experience.

Don't worry, your sons and daughters are not going to work in the fast-food restaurants! Why? Because they can't. Not because the high schools didn't do their job, not because the two-year colleges didn't do their job, not because our universities didn't do their job. Because we collectively, as the educational leaders in this country, have lost sight of the fact that our young people can't compete in a technological world. Sad story. I'll tell you an even sadder part of that story. My daughter, who is multiply handicapped, had in the 1980s, for the first time in American history, a real opportunity to be employed - as a worker in the fast-food industry. Not any longer, because they will go from 200 employees to about 20 in each location when the automation is adopted. Those 20 will require very sophisticated skills. I wonder where my daughter's going to work. Well, if that's not sad enough, what about my other four kids, some of whom are very bright. Where are they going to work? Where are your children going to work?

Let me give you another example of the service sector. What is the fastest growing firm in America according to the Wall Street Journal? It's a company called Checker Robotics located in Deerfield, Florida. Guess what they make? They make automatic, roboticized checkout counters. I go to my checkout counter, I pull up my basket. The robot picks up my 16-ounce bottles of Diet Pepsi. It reads them using the bar code and packs them in a bag with the heavier size items on the bottom and the lightest ones on the top every time. Why are supermarkets moving to this technology? Because the quality of the work force and the cost of American labor to do that job has been outstripped by the technology. The technology does the job less expensively and more efficiently.

Your sons and daughters won't work as cashiers any more than they will plow fields by hand or than they will assemble a product on an assembly line. The service sector is about the business of automation. In 1985, Checker Robotics had 100% of their employees working in America. The percentage today is two percent. Where are their employees today? Checker

Robotics has opened firms in foreign countries - one in China, one in Korea, one in Japan and one in Germany. Why? Because they couldn't find the labor force who could do the work in America. For that same reason, American industry last year imported one million foreign-born, foreign-educated workers with no work experience to America. These young immigrants are serving as well-paid technicians. They're working at Citibank, they're working at fast-food restaurants and they're working at Checker Robotics.

How are your institutions preparing your sons and daughters for their future?

I've spoken about the agriculture, manufacturing and service sectors of the economy. Let me move now to the fourth and final sector of the American economy. The one sector projected to grow dramatically in the 1990s. The one sector of the American work force that is growing like crazy is the information sector. The U.S. Department of Labor projects that by the year 2000, 44% of all workers will be in the business of collecting, analyzing, synthesizing and retrieving data.

How many of you can type, not well, just type at all? What's the most commonly taught vocational course in two-year colleges? One course that has three times the enrollment of any other course - typing or keyboarding. What about in secondary schools? Typing or keyboarding. Well, let's see how we're doing with the most commonly taught course. In 1983, seven percent of all paid working hours in America were on the keyboard. In 1987, 13% and by 1995, 25% of all paid working hours are projected to be spent on the keyboard. Given that it is the most commonly taught course and most commonly used tool in business, we must do a pretty good job with it. Don't you agree?

Again, how many of you type? Let me see your hands. Okay, I want you to put your fingers on the keyboard. Now, reach for the letters A, E, I, O, U. Too fast? A, E, I, O, U - the most commonly used letters in the English alphabet. Why do we use the smallest fingers and the longest reaches for the most commonly used letters in the English alphabet? Because, scientifically we have the slowest keyboard that can be made. That's a fact. One hundred years ago, the typists used to jam up those old metal arms in the equipment. We've gone through three generations of keyboards - including what is known as the Dvorak keyboard - and we continue to use the original keyboard, which is the slowest keyboard made. In addition to using the smallest fingers for the longest reaches, you use your left hand for 72% of the keystrokes and your right hand for 28%. There is a great deal of research that shows by doing nothing other than changing the keyboard, you can increase your productivity by 28 to 37%.

Yet, at the community college level and at the high school level, we can't change. It's part of our institutional heritage. Our business teachers would be upset if we changed. Our teacher educators wouldn't know how to deal with it.

We are the only country in the world that has not changed. If you

bought a computer manufactured in America in 1988 or 1989, it's got both keyboards imbedded within it. WordPerfect, the most commonly used software package in America, has imbedded within it both keyboards. Why? Because they sell the product in countries other than America. Now the fact that 44% of the jobs in this country are going to be about the business of collecting, analyzing, synthesizing, storing and retrieving data has nothing to do with that issue, does it?

Let me take you to a little community called Chichester, England, where I happened to be on July 2, 1988. I'm going to tell you about some new technology I witnessed there. You may have seen it recently on 60 Minutes. I was at the International Center for Information Technology. I was to give a speech at a conference comprised of CEO's and board members of Fortune 500 firms, 21 ministers of education from various countries around the world and 10 state superintendents of schools or commissioners of education from the United States. I gave a speech not unlike what I'm giving to this audience today. I did not have it in writing ahead of time. They did not know precisely what I would say. The next speaker on the podium was James O'Sullivan. James got up and said, "Bill Daggett" - which is my name - "said a few things that set the stage for my comments so I thought you might like a copy of his speech. I'm going to ask my staff to hand it out to you at this time." Ninety seconds after I completed my speech - 90 seconds - his staff walked down the center aisle and handed out the complete text of my speech, from my voice to hard copy in 90 seconds. Do you know what spellcheck is? It corrects the spelling of 50,000 words in your system. The system used by James O'Sullivan had a 500,000 word spellcheck in it. It corrected grammar and punctuation as well using the same technological concepts as spellcheck. Furthermore, the conference was being translated into Spanish, German and French. I was speaking in English so James' staff did not hand out one copy, they handed out four copies, one in French, one in Spanish, one in German and one in English of a 45-minute speech that I completed 90 seconds earlier with grammar, punctuation and spelling corrected. How are your kids going to deal with that technology?

James O'Sullivan closed his speech in 1988 by telling the audience that none of them could afford the technology he had just shown them. The capability is there, but they couldn't afford it because it's not commonplace yet. However, James O'Sullivan said that in five years if they don't have it in place, they won't be a Fortune 500 firm. Then he turned on a video. He said he wanted to show them two reasons why he believed that. James showed a video of himself, in the same room speaking to executives in 1981, eight years earlier. He mesmerized the audience with a piece of technology and closed his speech by telling them none of them could afford it. However, he told them that if they didn't have it in place by the end of the decade, they would no longer be a Fortune 500 firm.

Does anyone want to guess what it was? A personal computer, or PC. PC's didn't come out until 1982. What did PC's do to the workplace in the eighties? What runs our offices? What runs the fast-food restaurant system I described to you earlier? An IBM PC. What runs the computerized bar codes of QR Industries? Not mainframes - PC's. What happens to the

American work force?

He then turned on a second video. The second video was James again in the same room in 1986. He closed by saying he had shown them a piece of technology none of them could afford, but that if they didn't have it in place in five years, they wouldn't be a Fortune 500 firm. FAX. FAX has been around for the last 35 years, but in the present form, it didn't come out until the fall of 1986. James O'Sullivan projects - as he had done in 1981 and 1986 - that in five years voice recognition, voice print, and language translation with spelling, grammar and punctuation correction will be commonplace. Maybe he's wrong - maybe it's eight years. So what? What will your sons and daughters be able to do? How are your universities doing?

James O'Sullivan closed his speech in 1988 with this message to the educators, "Stop trying to keep up with the technology." Isn't that a strange message. Stop trying to keep up with the technology, because you can't do it. The waves of technological change are becoming shorter and shorter and shorter and the equipment you buy, that you try to teach people how to use, is going to be outdated before they graduate. Instead, he suggested we start teaching the basic concepts, principles and systems of technology. He then asked the ministers of education, state commissioners, and university presidents gathered from 21 nations across the industrialized world to forward the basic concepts, systems and principles of technology they teach to the International Center. He asked for this material so that we, as the industrialized leaders of this globe, could help the third-world countries. Twenty nations in the world had no problem whatsoever sharing that with the third-world countries - one could not. I wonder how many of your faculty members could even tell me what are the basic concepts, principles and systems of information technology, physical technology, and bio-technology. I think I know the answer. None - because we don't deal with that in America. We deal with our traditional institutional courses and programs - that's our heritage. How are your sons and daughters going to compete in the global economy?

What about in China where 200 of the Fortune 500 firms today, in 1989, have English-speaking vocational education programs? I've sat in mid-town Manhattan, and dictated a memo. Three minutes after dictating that memo, I had a hard copy in front of me to sign. Guess where it was typed. It was typed in China. It went from my voice - to a reader - to a satellite - to a Chinese worker keying. Then it was sent back to the satellite, and back to Manhattan. Why would a company do this? Why do 200 of the Fortune 500 firms use this technology? Because when 44% of the jobs in America in the 1990s will be about the business of collecting, analyzing, synthesizing, storing and retrieving data, they come to a very simple conclusion. It's cheaper and more efficient to move work to a worker in China or in the Yucatan Peninsula or in South America than it is to have our people sitting in offices here in America.

Earlier I told you that I had two important concepts to share with you today. My first one was that the service sector is about the business of automation. The second one is that IN A GLOBAL ECONOMY, THE MOST IMPORTANT

SINGLE RESOURCE PRODUCT IS OUR WORK FORCE. North America, Europe and Japan account for 20% of the world's population. As we head towards the year 2010 this figure is projected to drop to 10%. What percentage represents the remainder of the world's population today? Eighty percent. What's the average salary for that 80% of the world's population? Fifty cents an hour. Why does American industry transport work to China? One page of typed material in America according to McGraw Hill costs an average of \$9.80. The total cost per page in China, including the satellite system and its amortization, is \$1.18.

Why don't firms transport those jobs to Kansas? Because your sons and daughters cannot compete in a global economy. The cost of American labor is too high in terms of our output. Not one person in this room will raise their hands to indicate that your goals, your hopes and your dreams for your children are for them to work on the counter of a fast-food restaurant. Don't worry - they won't. Even those jobs pay \$5.00 an hour. Five dollars an hour - 10 times the average wage of 80% of the world's population and that's who your children have to compete against.

What's happening in Portland, Oregon and Seattle, Washington in terms of the wood and pulp industry? Does anybody know? They are cutting the trees down, but where do they send them to be processed? They send the trees to Japan because the increased efficiency in the transportation system has made it possible to transport them to Japan and back cheaper than doing it here. What about using fiber optics? A fiber optic is 1/6 the thickness of a human hair, and AT&T has in place today the capability to transport 45 million words around the globe in five seconds. A little quicker than that boat going to Japan, isn't it? All of this says that if your sons and daughters can't compete against 50 cents an hour labor, where 44% of the jobs are, your sons and daughters aren't going to compete.

This tells me that the only thing we can do is to work smarter. We can't work harder and compete against that 50 cents an hour labor, therefore, we must work smarter. Remember the Barbara Walters show on American education? The show noted that in basic literacy, in 1969, America ranked first of the 148 nations in the United Nations. Where were we in 1979, ten years later? We ranked 21st. Where are we in 1989? We are 49th.

Where are our graduates of our two-year colleges and universities in technological literacy, basic concepts, principles and systems of technology, folks? We are 102nd - tied with 46 other nations. We can't measure it because we don't even know what is. How are your sons and daughters going to do? How are they going to compete?

The world is changing. While that is happening we are spending our time figuring out how to maintain our institutional heritage. As noted in the overhead (Attachment 2), in 1950, 60% of the jobs in America were unskilled. In 1989, the figure is 35%, and it is predicted to be 15% by the year 2000. At the same time, how are we doing in American education? We find that one in five students drops out of high school. Are they prepared for that work force that I just described? Another one in five

graduates from high school from what is known as the general track. The general track is that program in our schools that is neither a college prep program nor a vocational program. Still another one in five graduates and goes on to college and lasts only a day, a week or a semester before dropping out.

I thought it was incredibly interesting last night that Bob Atwell talked about the success of the American postsecondary experience when he said 50% of our young people go on to postsecondary education and compared that to Japan, Germany, England and others where it's estimated to be 25-30%. The question I raise is, what percentage of our students complete college? What about Japan? Contrary to popular belief, 100% of the Japanese students entering college do not finish - only 98% do. Germany is no good at all - only 96%. China is 92%. In America, our college drop-out rate is over 50%. How are we doing? Are your dreams for your children that they'll go to high school and drop out, or go to high school in the general track and not make it, or go on to a postsecondary experience and drop out and not make it? Those scenarios represent 60% of the young people in this country. Therein lies the problem in American education. We focus on the 40% who make it and forget the other 60%. I think we have to make some major changes in our system.

I'll bring my presentation to a close with two simple statements to you in terms of what I think we need to do. There needs to be some core skills in American education and I'm going to give you a list of them in a second. We need to recognize that American education is not a group of independent, unrelated courses. American education is about the business of educating people, not about the business of teaching courses, majors and programs. Once we get beyond the sixth grade in America, we lose sight of an awfully important issue. We teach people - not courses, majors or programs.

These are the ten core skills I believe we need to focus our education system on:

- o Basics - reading, writing and mathematics
- o Keyboarding
- o Data manipulation
- o Concepts, principles and systems of technology
- o Resource management
- o Problem solving/decision making
- o Economics of work
- o Human relations
- o Applied math and science
- o Career planning

Basics - do you need them to work in that world I just described to you? Keyboarding - do you need it? Data manipulation, spreadsheets, databases, information systems, do you need them? The basic concepts, principles and systems of technology, do you need them? Resource management, the economics of work, human relations, applied math and science rather than theoretical and career planning, do you need them?

Every industrialized nation of the world in the 1980s was about the business of education reform. Every industrialized nation of the world, except America, focused on these ten while we focused on courses, tenure and roles of one school over another. Why? Because we are about the business of institutional management. They were about the business of their young people's future.

As I close I bring no solutions other than the fact that we must recognize that we have a problem. Collectively, are we the solution - or, collectively, are we in this room in the State of Kansas the problem?

I close with a simple plea. Focus on our children's future rather than on our institutional responsibilities. Then you will change your schools and colleges.

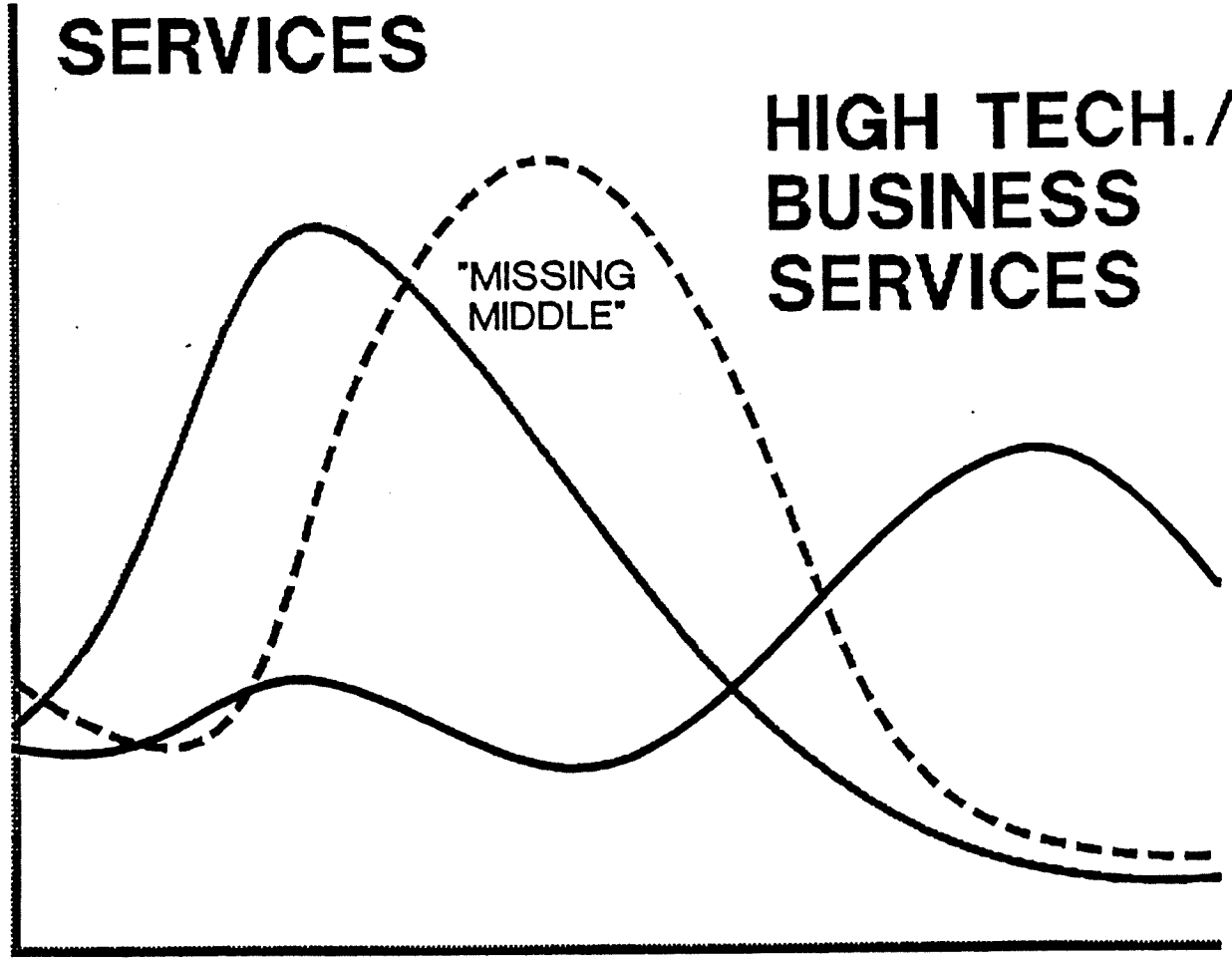
Thank you.

3-14

RETAIL TRADE SERVICES

HIGH TECH./ BUSINESS SERVICES

NUMBER OF JOBS



LOW WAGE

HIGH WAGE

3-15

FORCE 1950

