Adaptability -- The New Mission for Vocational Education

Report of the OCCUPATIONAL EDUCATION COMMITTEE
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TABLE OF CONTENTS

Summary..........................................................3
Findings..........................................................7
Conclusions......................................................29
Recommendations..............................................31
Discussion of Recommendations..............................37
Work of Committee..............................................39
Appendix 1.......................................................43
Appendix 2.......................................................45
Appendix 3.......................................................46
Appendix 4.......................................................47
Appendix 5.......................................................48
Appendix 6.......................................................49
Appendix 7.......................................................51
Appendix 8.......................................................52
Appendix 9.......................................................53
Appendix 10......................................................54
Appendix 11......................................................55
Appendix 12......................................................57
Appendix 13......................................................58
SUMMARY

This study set its sights on gauging how well Minnesota's public investment in vocational training is matched to the needs of a changing economy and to the people who need to be prepared for jobs.

Our findings reinforce the new wisdom that the economy--and hence the job market--is changing at rates and in ways which confound forecasting. There is much disagreement over the numbers and types of jobs, over the mix of high and low "tech", over appropriate training and re-training emphases, over institutional training and on-the-job experience. What is clear, though, is that the jobs most people want require at least some technical training, with increasing pressure for broader related education; and more and more people are showing up needing re-training as the nature of work changes.

Minnesota's system for vocational training is concentrated in 33 Area Vocational-Technical Institutes (AVTIs). To be sure, vocational programs are offered throughout the post-secondary education sector. Community colleges devote about one-third of their programming to occupational objectives. The University of Minnesota has two campuses that offer two-year technical training.

These programs have proved to be an outstanding investment. They have contributed much to the reputation Minnesota has earned for a well-trained, productive workforce. They have offered an option for many students emerging from high school still uncertain about their interest in attending college. They have provided specific training for those who knew where they wanted to work. And they have given significant support to many businesses that have relied upon public institutions to train workers.

But all these institutions involved in vocational training, the AVTIs in particular, face challenges today that cannot be remedied with yesterday's structures. The nature of work is changing, toward a need for broader preparation and more frequent re-training. The workers are changing: they are increasingly older, more likely to be female, almost always working while they're learning. Institutions emphasizing vocational programs are not oblivious to these changes, but the pattern of response is not keeping pace.

The answers lie in three areas.

First we need to encourage institutional focus on the needs of students seeking training and the needs of area businesses. Much attention now is devoted to "mission" clarification, weeding out unproductive duplication and fostering cooperation between institutions. More might be accomplished by focusing on the incentives that institutions have to design and redesign these programs to fit the needs of the students and businesses they serve.

We should get the barriers out of the way and let institutions find the mission that fits. We should be willing to see institutions become more alike or more different if that meets the need. We should shift in our procedures for program change to evaluation and disclosure, shedding any unnecessary bureaucratic barriers to adaptive programming.
Controlling the drift toward wasteful duplication is a matter of information and financial discipline. The Higher Education Coordinating Board (HECB) has long experience operating a largely voluntary program review process. Critics view the process as a stifling form of prior restraint, but it is actually a resource to help institutions and systems avoid programming they are likely to regret. It's time to remember that it is a planning, not a policing, process. The HECB is and should be the nerve center of the post-secondary sector's conscience, gathering comparable data, making evaluations, disclosing results to educators and to policy-makers.

Moreover, the state has an underlying interest in a coordinated review of program changes. Which training programs are offered, and where they are offered, constitute de facto the state's vocational strategy. While enrollment based funding (so-called "average cost funding" enacted in 1983) may not in itself impose sufficient financial discipline, the Legislature is and should make clear its limits on spending. Institutions and systems should recognize and respect those limits and make their priorities among competing programs. Flexibility to make program changes will not be long lasting if, for example, expensive programs in robotics show up in 15 different locations. The temptation to offer everything to everyone and cut no present programs will find no respect in the era of scarce public resources.

Second, adaptive programming should be strengthened with financial incentives. The Legislature should charge the State Board for Vocational Technical Education (SBVTE) with setting aside some of its appropriation to reinforce institutional programming that responds to needed changes. While the agenda of such changes will itself change from time to time, we would put on that list programs that feature evening and part time opportunities, programs that lead to real gains in income, and programs that result in greater sex equity within occupations.

Third, the Legislature should require a solution to the growing accountability crisis within the AVTI sector. The present AVTI system for a generation now has been a loose arrangement between state government and local school districts. The school districts operate the institutes, and the state provides the financing. This is increasingly a poor combination. Financially, the spending decisions of districts (particularly through collective bargaining) do not match what the Legislature appropriates, with negative results for program quality. And the mountain of mandates piled up over the years represents the futility of trying to impose accountability legislatively in the absence of a management structure for carrying out policy.

We suggest that the first fundamental step is to disengage the AVTIs from school districts. The Legislature should set a deadline by which each district currently operating an AVTI must divest operating control, electing one of four options: creating an independent local AVTI with an elected board and some local property tax contribution along with state aid and tuition for operations; joining one or more other AVTIs in a regional institute with regional property tax support combined with state aid and tuition; letting the AVTI join with an existing institution or system; or asking the SBVTE to operate the institute.
None of the steps can be seen as a complete solution. Implementing all of them would not solve all the problems. Some persons argue that structural solutions that stop short of creating a single system of sub-baccalaureate institutions are inadequate. Historically, we have agreed with that position. The immediate challenge, however, is to create the flexibility for institutions and accountability for the state that results in a better match of programs to needs. The time to take the first step is now.
FINDINGS

I. MINNESOTA HAS A LARGE POST-SECONDARY VOCATIONAL EDUCATION SYSTEM, BOTH PUBLIC AND PRIVATE. CONTRARY TO A GENERAL PERCEPTION, VOCATIONAL TRAINING IS NOT LIMITED TO AVTIs.

A. The AVTI system serves the largest number of students and receives the majority of public funds for vocational training. One-third of community college programming is vocational.

Enrollment: The number of individuals enrolled in post-secondary vocational education (excluding adult or continuing education) in Minnesota was approximately 64,000 in 1983-84. Of this total, 70 percent were enrolled in public (state-supported) institutions and 30 percent were in enrolled in private institutions.

Of those enrolled in public institutions:

- 35,175 (ADM*) or 78 percent were enrolled in the AVTIs.
- 8,000 (FYE*) or 18 percent were enrolled in the community colleges. (Community colleges estimate one-third of their coursework as vocational).
- 2,000 (FYE*) or four percent were enrolled in the Crookston and Waseca Technical Colleges of the University of Minnesota.

Total public and private post-secondary vocational enrollment in Minnesota made up 30 percent of total post-secondary enrollment in 1983-84. (See appendix 2.)

Funding: Total state appropriations including financial aid for post-secondary education (public and private) in 1983-84 was $511.3 million. Approximately 26 percent of this total went to vocational education.

- $130.6 million or 21 percent went to the AVTIs.
- $17.8 million or 2.8 percent went to vocational programs in the community colleges.
- $6.1 million or 1.2 percent went to Crookston and Waseca.
- $5.4 million or .85 percent went to private two year colleges and vocational schools.

(see appendix 3)

State appropriations account for approximately 70 percent of operating funds received by the AVTIs and community colleges. Other sources include federal funding and tuition.

*FYE (full year equivalent) enrollments are derived by dividing the total number of earned credit hours by 45. An ADM (average daily membership) is the equivalent of 1,050 clock hours of instruction for 175 days per student.
More than 30 percent or $14.8 million of state financial aid awarded in Fiscal Year (FY) 1984 went to students pursuing vocational education.

Tuition: Resident tuition at an AVTI in 1984 was $980 for nine months, exclusive of equipment charges. Community college tuition was $1,103 and University of Minnesota tuition was $1,834 for the same duration. Students attending public post-secondary programs are paying a larger percentage of the cost of instruction than in 1971. Tuition was not paid by most Minnesota residents enrolled in the AVTIs until 1979; as such, AVTI tuition increased by 72 percent in constant dollars between between 1979 and 1985. (see appendix 4)

Private (both for profit and non-profit) schools charge tuition that is four to five times more than AVTIs'. Of 15 different programs offered by private schools ranging from office, business, and travel to medical technician, the average charge to the student was $5,367 in 1984. (see appendix 5)

B. A significant amount of vocational training is offered outside the post-secondary educational system.

Business and Industry: Business and industry spend a considerable amount of money training workers (usually in the form of upgrading skills). Estimates range from $40 billion to $100 billion a year nationwide. In Minnesota, this could be conservatively estimated at approximately $800 million/year, or two percent of the national estimate of $40 billion. This is more than five times the state's investment in post-secondary vocational education for a year.

Business training is not accessible to the general public since it is primarily for employees of the business or corporation that provides the training. Most of this training is highly specialized and geared towards the specific needs of an employee. Training can range from management courses to skills training on new equipment. Often new equipment training is provided for the business by the equipment manufacturer.

Most business and industry training is part-time. This training can range from a day long seminar to tuition reimbursement for an academic degree. Government employers also provide training. For example, the state of Minnesota provides formalized, short-term training consisting of management, communications, clerical, service and technical training.

Smaller businesses are much less likely to have in-house training; rather, they might contract with an AVTI, a community college or a private school to provide them with training. The AVTIs and private schools have local business advisory committees that determine what type of training is needed in the community. Often this can translate into a program being designed for a specific local business, either on a contract basis or, if there is a long term need, as a permanent, continuous program.

Jobs training programs: These are programs that are designed to help disadvantaged and unemployed people, through classroom or on-the-job training. Some of these programs include: Job Training Partnership,
Minnesota Emergency Employment Development (MEED) program, the Job Corps and vocational rehabilitation.

Jobs and employment programs often are considered separately from vocational training funding. Much of the money for jobs programs comes from federal sources, with the exception of the MEED program which has been 100 percent state-funded. (A brief summary of the jobs programs offered in Minnesota is listed in appendix 6.)

Apprenticeships: Approximately 4,000 people were serving in licensed apprenticeships in Minnesota in 1984. This is down from 8,000 in 1980, a decline which might be attributed to a decline in certain manufacturing and construction jobs. Sixty percent of all apprenticeships are in the construction trades. An apprenticeship allows a person to work and earn a wage while learning a skill. The average licensed apprenticeship requires 6,000 hours on-the-job training plus 144 hours related classroom training. Many apprenticeships are handled through the unions, although some are provided by independent employers. The 3M Company for example, has an extensive apprenticeship program (not licensed by the state) in its plant services division, training around 4,000 3M employees at a cost of $360,072 per year.

AVTIs often provide the first year of training in an apprenticeable trade and then help match the student with an employer to begin the apprenticeship. Apart from traditional family connections, this is probably the best way to become involved in an apprenticeship if the job-seeker is totally new to the field. (A list of the 18 most active apprenticeships in Minnesota can be found in appendix 7.)

Secondary vocational education A considerable amount of vocational education occurs in high school. Since a large number of high school graduates do not go on for post-secondary training and, instead, enter the job market immediately, secondary education is extremely important. (For a discussion of secondary center programs see appendix 8.)

II. THREE PUBLIC POST-SECONDARY SYSTEMS OFFER VOCATIONAL TRAINING. EACH HAS A SEPARATE GOVERNING BOARD AT THE STATE LEVEL. PRIVATE PROGRAMS ARE REGULATED BY GOVERNMENTAL AND PROFESSIONAL ASSOCIATIONS.

A. The AVTI system has a complex governance structure involving both local school districts and a state board. Local school boards are responsible by law for owning and operating AVTIs. The state provides the dollars.

The State Board for Vocational Technical Education (SBVTE) allocates state and federal funds to 33 AVTIs in Minnesota (see map in appendix 9) and provides overall policy direction through program and budget review. However, it does not have authority over hiring and salaries of the AVTI instructors. That responsibility rests with the local school districts in which the AVTIs are situated. Likewise, the SBVTE is responsible for funding operation and maintenance of facilities, even though they are owned by the local districts. The AVTI director reports to the local school board even though the director's salary is paid by the SBVTE. The combination of 100 percent state funding and local control raises the question of accountability.
The SBVTE's role with the AVTIs includes:

--Deciding policy on admissions, tuition and fees.
--Allocating state and federal money.
--Approving program changes.

The SBVTE receives its funding from the Legislature according to a formula that is applied to all post-secondary education systems. The SBVTE decides how to allocate those funds among the AVTIs.* In general, the allocation is enrollment based.

Revenue for the operation of the system comes from state appropriation, federal aid and tuition. The approximate contributions from each revenue source is as follows: state appropriation, 67 percent; federal aid, eight percent; and tuition, 25 percent.

**Historical context:** In 1945, legislation was passed allowing local school districts to establish area vocational-technical schools and providing for their support through a system of state aids. Mankato set up the first vocational program in 1947. The original state policy was to create a vocational program as an extension of the K-12 system and to use existing school facilities. As time passed, more of the vocational programs were housed in separate facilities with administration of the facilities separated from the K-12 district.

In the original legislation, the school districts were responsible for a minimum of 50 percent of the operating and construction costs of the AVTIs. The rest was paid by state and federal funds. However, if the AVTI accepted a student from another school district, the state would pay the entire cost for that student.

*Each post-secondary education system in Minnesota (AVTIs, community colleges, state universities, and University of Minnesota) receives a lump sum appropriation from the Legislature. Each system allocates its appropriation among its institutions and programs as it decides. The allocation to each system is based on enrollment and a pre-determined dollar amount per student. The amount per student is based primarily on past spending patterns adjusted by an inflation factor. This approach is known as average cost funding.

This financing approach has been in effect since 1983. Before that the Legislature was more directly involved in appropriating money for specific programs. The current approach was devised to require that the systems themselves make tough choices among competing institutions and programs as overall post-secondary enrollment declines. A system that is declining in enrollment won't be told by the Legislature what must be cut or changed. Such decisions are left to the affected system. (For further discussion of Average Cost Funding, see appendix 10.)
Eventually, this led to large differences in the amount of local support for each AVTI. Staples in north central Minnesota received almost 100 percent state and federal funding because the vast majority of its students were from outside the school district. Saint Paul, on the other hand, received less than 40 percent state funding because almost all of its students were from Saint Paul.

This discrepancy led to a law which stated that no school district would receive less than the state average in funding. At the time, the average state aid level was 70 percent. In 1979, local districts were required to levy one mill for operating the AVTIs; this levy totalled $6.4 million. In 1980, the last year that local districts levied money for operating AVITs, the levy was made optional. Even so, 22 of the 33 districts participated and raised a total of $4.4 million in local property taxes. Today, the AVTIs are 100 percent state funded, except that local districts are responsible for 15 percent of debt service.

In 1984, the SBVTE was removed from the Department of Education, established as an independent board, and assumed responsibility for policy governance of the AVTIs. The State Board of Education and the State Department of Education retained responsibility for secondary vocational education as provided through approximately 400 local school districts.

**Intermediate Districts:** In addition to AVTIs being governed by K-12 school boards, in three cases they are governed by intermediate districts: 287 (Hennepin Technical Centers, suburban Hennepin County), 916 (Ramsey and Washington Counties) and 917 (Dakota County). These intermediate districts consist of joint, independent boards made up of representatives from the school districts in the area. The intermediate districts have the same powers granted to a local school board. They also have a separate levying authority that can be used for secondary vocational education, special needs (programs for learning disabled and handicapped) and low-incidence academic programs (such as Japanese).

One intention behind establishing the intermediate districts was to provide secondary students the opportunity to meet their vocational needs on a much larger scale than in each individual school. The intermediates have integrated programs in which secondary students take classes along with post-secondary students for two hours each day. Most of the instruction is individualized and competency-based. Some programs allow students to begin their coursework on any Monday rather than at the beginning of a quarter or semester.

Four AVTIs in the southwestern part of the state have a consolidated structure similar to that of the intermediate districts. Canby, Jackson, Granite Falls and Pipestone AVTIs have formed a joint vocational district which has a governing board made up of members from the four local school districts. District 900 also has an employee bargaining unit that is separate from the local school districts. Unlike the three metropolitan intermediate districts, district 900 does not offer secondary vocational programs.
Proposal for a regional AVTI system: The SBVTE is recommending a change in AVTI governance to the Legislature. In October 1985 the SBVTE established a task force to draft legislation for state appointed regional boards that would assume all powers now held by local AVTI districts. Some 12 to 18 boards would be created. Ownership and operation of local AVTIs would shift to these boards. Regional boards would hire and fire all personnel, including directors.

The responsibilities of the SBVTE would not change. It would continue to allocate funds and review programs.

In its proposal, the SBVTE will ask the Legislature to mandate the transfer of title from local boards to the newly-created regional boards. The state would guarantee that any past or future bonded indebtedness would be paid by the state. The existing intermediate districts would not change. (For a discussion of the Wisconsin regional system of technical institutes, see appendix 11.)

B. As a state system, the State Board for Community Colleges (SBCC) has more direct control over the community colleges than the SBVTE has over the AVTIs. There are currently 18 community colleges located throughout Minnesota. The colleges are organized under a single state governance structure, the SBCC, whose members are appointed by the Governor and confirmed by the State Senate. Eight of the colleges have been reorganized into community college regions: The Arrowhead Region includes Vermillion, Itasca, Hibbing, International Falls and Mesabi Community Colleges and the Clearwater Region includes Brainerd, Fergus Falls and Northland Community colleges. (see map in appendix 12.)

The SBCC distributes appropriations, provides overall policy direction through program and budget review and hires the presidents for all colleges. Like the other post-secondary systems, the SBCC receives a lump sum appropriation from the Legislature and allocates this money according to certain criteria. In general, the allocations are enrollment based, although the board has determined that certain colleges and programs need to receive more money even though they have low enrollments. The board also has set aside approximately two percent of its budget for Indian services and general outreach. The Arrowhead region and north central Minnesota have been targeted for some of this money.

Individual colleges may vary from the SBCC's allocated staffing patterns with permission from the chancellor. Individual colleges have discretion over how they distribute funds received from the state board. Also, if they do not receive the requested amount of funding for a program, they can take money from other parts of their budgets to cover the cost.

Historical context: The first junior college was established in 1914 in Cloquet. In 1915, Rochester opened a junior college which is still in operation, making it the oldest community college in Minnesota.

Before 1957, junior colleges (now called community colleges) were funded solely through local school districts. The colleges were
housed in public school buildings shared with some other unit of the school districts. In 1957, the Legislature determined that the junior colleges were providing a state service and authorized state aid.

In 1963, a State Junior College Board (now the SBCC) was created to set up a statewide system of colleges. Local school districts, which owned and operated the junior colleges, were given the option of maintaining local control and funding responsibility or turning the institutions over to the state which would provide 100 percent funding. All school districts chose the state option. During the 1965 and 1967 legislative sessions, approval for the establishment of eight additional colleges was given, bringing the total number to 18. By 1970, the 10 original campuses had all been moved to new sites and colleges had been built at Thief River Falls, International Falls, and at six locations in the Twin Cities metropolitan area.

C. The other two public providers of post-secondary vocational education, Crookston and Waseca, are part of the University of Minnesota.

Both colleges offer two-year associate degree programs leading to employment in food and fiber related occupations. They maintain a strong tie to the agricultural experiment stations located on each campus. They do not offer four-year degrees.

As separate campuses of the University, Crookston and Waseca each have provosts who report to the President of the University, who in turn reports to the Board of Regents. The Board of Regents has responsibilities similar to those of other post-secondary boards; it also has some autonomy from the State Legislature, having been established before the state constitution. The Regents provide overall policy direction for the University through budget review and approval. Staffing is handled by the individual colleges or departments within the University.

Historical context: In 1965, The University of Minnesota Technical College at Crookston was established at what had been an agricultural school and experiment station. The same action was taken at Waseca in 1971. These two campuses now provide sub-baccalaureate post-secondary education emphasizing technical skills and management abilities in agriculture and agriculturally-related businesses.

D. Private vocational schools are regulated by various state departments. Most private, proprietary schools fall under Chapter 141, enforced by the State Department of Education (SDE). This law regulates private, for-profit business, trade and correspondence schools, which include such fields as business, secretarial, travel and modeling. The HECB regulates non-profit schools, all degree granting institutions and programs that offer financial aid. Some private vocational schools are regulated by SDE and HECB. For example, a for-profit business school offering an associate degree would be regulated by both.
According to the Minnesota Association of Private Post-secondary Schools (MAPPS), Minnesota has more than 100 private post-secondary vocational programs; 86 are licensed by the SDE, 30 are regulated by the Department of Cosmetology, three hospital schools of nursing are regulated by the Board of Nursing and three programs are regulated by the Board of Barbers. Specialty programs offering courses in such areas as real estate and tax preparation are regulated by special boards. Still others are licensed by the HECB.

Chapter 141, which is the most detailed set of laws governing private vocational schools, stipulates that in order to operate in Minnesota, a school must: 1) post a $10,000 bond, 2) indicate that the business is financially sound, 3) engage in truthful advertising, 4) demonstrate that the program has "a sufficient number of qualified instructors trained by experience and education in the specific field", 5) disclose placement rates of the previous year's graduates in the occupation for which they were trained and 6) maintain a catalogue with admission, cost and refund policies as well as a detailed course outline. Chapter 141 emphasizes prior restraint, meaning that a program must be approved before it can begin operation in the state. This differs from the HECB approach that allows private programs to start up without review and then evaluates the program once it is in operation.

Private schools also submit voluntarily to accreditation by one or more of 12 national or regional organizations approved by the United States Department of Education.

E. HECB is responsible for program review of all post-secondary systems in Minnesota. The HECB reviews proposed new programs of instruction and periodically reviews existing programs. The guidelines for review are:

1. Mission of the proposing institution.
2. Evidence of institutional readiness.
3. Cost of the program.
4. Geographic area that the program is designed to serve.
5. Justification for implementation of the program.
   a. Student demand.
   b. Duplication with other programs.
   c. Utilization and capacity of existing programs.
   d. Placement data for graduates from existing programs.
   e. Assessment of how training needs are currently served.

Based on an analysis of these guidelines, the HECB makes a favorable or an unfavorable review to the affected system about proposed new programs or changes in an existing program. The HECB's review is made available to the Legislature as well. The system has the final decision of whether or not to implement the program. Unfavorable action by the HECB is the exception rather than rule for two reasons. First, an extensive review process at the institutional and system levels prevents some program proposals from reaching the HECB. Second, review by the HECB's Program Advisory Committee, as well as staff evaluations, exerts pressure on institutions to withdraw programs of questionable merit before they reach the board. The program review process generally takes two months.
The HECB has authority to withdraw financial aid authorization to an institution if that institution is not in compliance with standards set by the HECB. The criteria used by the HECB staff in evaluating an institution's eligibility is as follows:

1. The program is located in Minnesota.

2. At least one course is offered that:
   a. is vocational or academic in nature;
   b. leads to a certificate or degree;
   c. is 10 weeks long; and
   d. involves at least 12 academic credits or 300 clock hours.

3. The program must be one of the following:
   a. accredited by a federally recognized accrediting agency or association; or
   b. approved to offer degrees or use terms in its name according to the Private Institutional Registration Program; or
   c. is licensed by an appropriate state agency.

Currently, 150 public and private institutions are authorized to offer financial aid in Minnesota. The HECB has rarely withdrawn financial aid authorization from a school for non-compliance with eligibility criteria.

III. THE AVTIS AND THE COMMUNITY COLLEGES HISTORICALLY HAVE RESISTED MERGER. EVEN THOUGH THEIR MISSIONS TEND TO BE SIMILAR, COOPERATIVE PROGRAMMING HAS BEEN DIFFICULT.

A. Historically, the two systems developed separately. AVTIs and the community colleges (originally called junior colleges) evolved out of the K-12 system as extensions to secondary education. Junior colleges became part of a state system in 1965 while the AVTIs remained tied to local school districts.

There has always been a strong division between "vocational" educators and "academic" educators. Vocational educators have been wary of combining academic and vocational programs. They have feared that their courses would take a back seat to academic courses or that vocational students would be disinterested by the prospect of going on to "college". Vocational educators have tried to make their programs as applied to the job world as possible, keeping clear of programs that might be considered too theoretical or academic. The division exists today in the way AVTIs are organized as compared to community colleges. AVTIs have "directors" while community colleges have "presidents". AVTIs operate on "seat-time" or the amount of time on a task while the community colleges use "credit hours" like other post-secondary systems. AVTIs do not offer extra curricular activities or many after-hours student services while the community colleges do. Even the names of the institutions denote a difference in approach: "institutes" versus "colleges". One of the most important differences is in credentialing. Community colleges offer associate degrees while AVTIs offer certificates.
B. The distinction between what is considered "vocational" education and "academic" education seems to be blurring as the AVTIs offer more general education and the community colleges offer more technical programs. AVTIs traditionally have offered hands-on, skills training, which fits under the purest definition of vocational education. They have not offered courses in writing or mathematics unless the courses are very specific to a skill. For example, an AVTI might offer a course in accounting terminology. Local AVTI directors say that they now feel pressure to offer more general courses in order to compete with the community colleges or private vocational schools that offer associate degrees for the same programs AVTIs offer. Some AVTI directors argue that an associate degree in accounting is more marketable than a certificate, which is all an AVTI can offer.

Community colleges offer what they call career or occupational programs that are technical or semi-professional in nature and that generally lead to a specific job upon completion. Community colleges distinguish themselves from AVTIs by requiring courses in the liberal arts and sciences as well as skills training for a specific job. There are exceptions: Vermillion, Fergus Falls, Grand Rapids, Rainy River and Worthington Community Colleges also offer vocational programs without the core curriculum requirements because there is no AVTI in the vicinity.

C. AVTIs and community colleges offer programs in business and health sciences. The AVTIs also concentrate on trade, industrial and technical courses. The majority of vocational students are enrolled in these program areas. In the AVTIs, 35 percent of the students are involved in trade and industrial programs such as welding, carpentry and printing. The second largest curriculum area in the AVTIs is office (secretarial, accounting, clerking and data entry) which accounts for 22 percent of total enrollment. The next largest curriculum areas in the AVTIs are technical (drafting, electronics, civil highway technician, etc.) in which 13 percent of students are enrolled and health (dental assistant, nurse's aid and LPN) which has 11 percent of all students.

In the community colleges, the largest career or occupational enrollments are in business (management and office), health sciences and allied health (nursing, medical technology and chemical abuse counseling) and engineering.

Unlike their public counterparts, private vocational schools usually concentrate on one program area such as cosmetology, business or health. One notable exception is Dunwoody Industrial Institute which offers a comprehensive program in trade and technology. Of the 58 schools reporting to the HECB in 1983, 30 were beauty or barber schools, nine were business and eight were health.

D. Several organizations, including the Higher Education Coordinating Board, have recommended a merger of the AVTIs and the community colleges. The 1983 Legislature mandated cooperation between the two systems. In 1981, the Higher Education Coordinating Board (HECB), recommended a single, state system for AVTIs, community colleges and the University of Minnesota Technical Colleges at Crookston and Waseca.
In 1983 the AVTIs and the community colleges were directed by the State Legislature to develop joint cooperation plans for 13 communities that have both types of institutions. So far, cooperation between them has consisted of: 1) some joint or cooperative programs; 2) shared services such as printing, food service or landscaping; and 3) personnel sharing including clerical, instructional and special services staff.

In 1984-85, 33 joint and cooperative programs between the AVTIs and the community colleges were in operation. All met qualifications for associate degrees. Schools can share instructional services in several ways. One school can contract with another for a specified course, or a cooperative program can be designed with one year's work in each school. A more complex arrangement is a joint or integrated curriculum program which requires concurrent attendance in both institutions, generally because courses must be taught in sequence. (A list of joint programs between community colleges and AVTIs can be found in appendix 13.)

Many barriers to cooperation exist, according to a report prepared jointly by the community college and AVTI systems. Enrollment based funding of institutions doesn't stimulate cooperation because each institution will fear losing enrollments and the dollars that follow. Another barrier to cooperation cited in the report is the differences in employment contracts. Community college instructors are under one statewide bargaining unit while AVTI instructors are in local, K-12 bargaining units. The report suggested that ability to share or reassign staff between the two systems could be improved if control of AVTIs were shifted from local school boards to joint powers boards such as District 900 in southwest Minnesota. (Intersystem Cooperation: A Progress Report, February 1985, State Planning Agency, page iv)

The 1985 Legislature empowered the SBVTE to allow AVTIs to issue associate degrees for programs other than those affected by outside licensure requirements and where cooperation with a community college is not practicable. While discussion continues of a merger of the two-year systems, no serious efforts have been made to move in this direction. The current legislative mandate to cooperate has emphasized efficiency, productivity and adaptiveness to change while maintaining both systems.

The HECB constituted a task force in 1985 to look at mission differentiation among the four post-secondary systems. Among the issues being addressed are: 1) associate degrees 2) occupational programs and 3) credit transfer between systems, all of which have an impact on coordination and cooperation between the AVTIs and the community colleges. The task force is expected to report to the HECB in September 1986.

In November 1985, HECB staff recommended that the HECB endorse a state governance system for AVTIs with regional orientation. This structure would remove AVTIs from local and intermediate school boards and place them under the complete managerial authority of the SBVTE. Each AVTI would be under the direct authority of the State Director and the SBVTE.
IV. THE TYPE OF STUDENT ENROLLING IN VOCATIONAL EDUCATION IS CHANGING.

A. The vocational student population is getting older, and the number of students attending vocational programs directly out of high school is declining. More than half of those students attending full time vocational programs have been out of high school more than two years. This is a change from previous years when the majority of students attending post-secondary institutes were recent high school graduates. The biggest shift in the age distribution has occurred in the community colleges and the AVTIs. Students of "traditional" college age (18-24) made up 72 percent of total enrollment in the community college system in 1974 and 64 percent in 1982. In the AVTIs, students of traditional age dropped from 81 percent in 1974 to 68.5 percent in 1982. In 1984, the median age of new enrollees in the AVTIs was 23, while in the community colleges, it was 20. Seventy-three percent of students attending private-post secondary schools were between the ages of 19 and 25.

In 1974, 47 percent of new AVTI enrollees were age 18 or under. In 1984, only 29 percent of new AVTI enrollees were age 18 or under. The percent of enrollees age 26 and older increased from nine percent in 1974 to 27 percent in 1984.

As high school enrollments decline, the number of students attending vocational programs directly out of high school will decrease. Throughout the 1980s and early 1990s, the number of high school graduates in Minnesota is projected to decrease. According to the State Demographer, by 1992 the number of high school graduates is expected to drop to 48,268, which is a decline of about 27 percent from the 1982 high of 66,429. The HSCB predicts that enrollments in post-secondary programs will decline as well. By 1990, enrollments for AVTIs and community colleges are expected to decline 13 and 10 percent respectively from 1982-83 levels by 1990. Enrollments have remained relatively stable in these systems over the past several years.

B. More women are attending vocational programs; however, they continue to be in "traditional" programs. In 1970, only 3.2 percent of total AVTI enrollment were women. In 1984, women made up 39 percent of total AVTI enrollment. In 1970, community college enrollment was 40 percent women; in 1984, 58 percent.

The ratio between male and female attendees is about one to one when looking at all post-secondary vocational programs; however, the male-female ratio varies greatly among institutions and programs. Clerical, health or service related programs are female dominated while technically-oriented programs are male dominated. In AVTIs, trade and industrial programs have the highest concentration of male students, accounting for nearly three-fourths of all male AVTI students. Office programs are heavily female dominated.

The distribution of male and female students in the community colleges also falls into "traditional" categories. The majority of women are enrolled in office and nursing and the majority of men are in business management and engineering. The same distribution of males and females exists in private schools: the health and secretarial schools are predominately female while the industrial
programs are predominately male. The largest concentrations of male students are in three schools: Brown Institute (broadcasting), Dunwoody Industrial Institute and Northwestern Electronics Institute.

AVTIs and community colleges have begun to look at the sex equity question. The SBVTE has developed workshops for AVTI and high school counselors to develop awareness of the issue and has developed its marketing to eliminate sex stereotypes.

C. Part-time enrollment in post-secondary programs has increased in the past 15 years; however, the number of part-timers in AVTIs and private vocational schools remains small.

In 1970, 35 percent of community college enrollees were part-time; in 1984, 53 percent were part-time. In 1970, the AVTIs had no part-timers and in 1984, only three percent of total day program enrollees were part time. According to the Higher Education Coordinating Board, part time enrollments in all post-secondary systems increased from 8.8 percent of total head count in 1960 to 22.6 percent in 1983.

AVTIs have extensive part time, evening programs separate from the continuous day programs. This training ranges from a two hour gardening course to a year long program (up to 360 hours) that leads to a license or a certificate. The number of students involved in extension courses leading to a license or a certificate is quite limited, however. Some AVTIs do not offer certificate programs in the evening. All AVTIs are involved in part time or adult, extension courses, some much more than others. These programs are offered in AVTI facilities or elsewhere. Extension programs receive state appropriation for up to 75 percent of the cost of instruction; the remaining costs are paid for through fees and tuition. However, the amount of state appropriation for these programs can vary. On average, 50 percent of the costs are paid for by state appropriation and 50 percent by tuition and fees. In FY 1984, 273,960 people were involved in some sort of part time vocational training, and the AVTIs' budget for this training was $6.5 million. The AVTIs' budget for part time programs has been doubled to $12 million for FY 1986.

In addition, 110 school district or secondary center programs in the state offer adult and community education programs. As of July 1985, the SBVTE was the fiscal agent for these programs as well.

The majority of private programs regulated under state law (chapter 141 business, trade and technical) offer their courses on the same type of schedule as the AVTIs -- five days a week, five to six hours a day. Some travel schools offer part-time, short term training specifically designed for those people already in the workforce. An example is the Travel Career School of Minnesota which offers a 35 hour travel agent program for those who already have some business or computer training.

D. Most students enrolled in AVTIs are from greater Minnesota. Of new entering freshmen (fall 1983) in the AVTI system, twice as many were from greater Minnesota (the 80-county area outside the seven-county Twin Cities metropolitan area) than from the Twin
Cities metropolitan area: 1,686 new entering freshmen were from the metropolitan area and 3,262 were greater Minnesota residents. The fact that 26 of the 33 AVTIs are also located in greater Minnesota plays an important role in providing access to non-metropolitan residents. For the community colleges the division between greater and metro Minnesota is more even: 4,226 of new entering freshmen were from the metro area and 3,262 were greater Minnesota residents. Private vocational schools have a similar geographic distribution of their students: in 1983, 1793 new students were from the metro area and 1,423 were from greater Minnesota. Of 86 schools licensed by the Department of Education, only 10 are located outside of the metropolitan area.

E. A substantial majority of students attending vocational programs in Minnesota are Minnesota residents. The system with the largest number of out-of-state enrollees is the AVTIs. Of all students attending the AVTIs in 1983, 2,046 or 11 percent of the total, were listed as out-of-state residents. The next largest group of out-of-state residents were in private vocational schools -- 1,042 or 10 percent of the total in 1983. The community colleges had the smallest number with only 708 (two percent of total enrolled) out-of-state residents in 1983. Out-of-state generally means the four surrounding states of North Dakota, South Dakota, Iowa and Wisconsin; however, there were students from other states and countries as well. Because of reciprocity agreements students from North Dakota, South Dakota and Wisconsin pay resident tuition.

V. MORE WOMEN AND OLDER WORKERS WILL NEED TRAINING ON A PART TIME AND FLEXIBLE BASIS. VOCATIONAL EDUCATION IS NOT ADAPTING RAPIDLY TO MEET THOSE NEEDS.

A. Most state money spent on public vocational training in Minnesota is for full time instruction.

In 1982, 95 percent of all students enrolled in continuous day programs at the AVTIs were enrolled full time at six hours a day, five days a week. While the community colleges provide instruction on a credit hour basis, only 24 percent of those students enrolled in occupational programs were part time in 1983-84. Of the private vocational programs which report to HECB, 94 percent of the students were full time for the same year. Crookston and Waseca had 78 percent and 67 percent full time enrollments respectively.

B. The vast majority of money appropriated for financial aid is for full time students. In FY 1985, the Legislature appropriated $47,266,000 for grants and scholarships for full time students while only $300,000 was appropriated for part time grants. Thus, only .6 percent of total appropriations was spent on part time grants while 99.4 percent went to full time grants.

VI. THE STATE AND THE NATION ARE UNDERGOING RAPID CHANGES IN THEIR ECONOMIES. WHILE GENERAL TRENDS CAN BE FORECASTED, VERY LITTLE IS KNOWN ABOUT FUTURE SKILLS TRAINING NEEDS OF THE STATE.

A. Minnesota will experience an increase in service and information jobs and a decrease in manufacturing jobs. Occupations with the highest rates of growth, such as high tech, will not account for the
largest number of jobs. According to the Minnesota Department of Economic Security, Minnesota will experience an increase in service and information jobs and a decrease in manufacturing jobs such as textiles and mining. Even though farming occupations are decreasing rapidly, Minnesota continues to be considered an agricultural state because many of its businesses are agriculturally-based.

Overall employment is expected to increase from 1,998,400 in 1982 to 2,313,600 in 1990, an increase of 315,200 workers or nearly 16 percent, representing a growth of about 39,400 new jobs a year. As of October 1985, total employment in Minnesota was 2,098,900, which appears to be following the predictions.

All major occupational categories except farming, forestry and fishing will experience employment growth. The greatest number of workers will be found in managerial and professional, service and clerical occupations. These three categories will comprise 56.6 percent of the state's total employment. Sales workers will be the fastest growing category in Minnesota between 1982 and 1990 with a rate of change of 24.5 percent. Machine operators, with a growth rate of 18.9 percent will be the second fastest (see table 1).
TABLE 1
MINNESOTA OCCUPATIONAL EMPLOYMENT
1982 and 1990

<table>
<thead>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1982-90</td>
</tr>
<tr>
<td>Total</td>
<td>1,997,130</td>
<td>2,313,640</td>
<td>15.8</td>
<td>929,047</td>
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<tr>
<td>Managerial and Professional</td>
<td>465,930</td>
<td>541,690</td>
<td>16.3</td>
<td>202,736</td>
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<tr>
<td>Technical</td>
<td>65,500</td>
<td>77,030</td>
<td>17.6</td>
<td>23,195</td>
</tr>
<tr>
<td>Sales</td>
<td>199,940</td>
<td>248,950</td>
<td>24.5</td>
<td>118,676</td>
</tr>
<tr>
<td>Clerical</td>
<td>333,970</td>
<td>392,320</td>
<td>17.5</td>
<td>162,857</td>
</tr>
<tr>
<td>Service</td>
<td>320,130</td>
<td>373,910</td>
<td>16.8</td>
<td>186,346</td>
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<tr>
<td>Farm</td>
<td>118,110</td>
<td>108,370</td>
<td>-8.3</td>
<td>41,679</td>
</tr>
<tr>
<td>Craft</td>
<td>201,090</td>
<td>232,340</td>
<td>15.5</td>
<td>80,296</td>
</tr>
<tr>
<td>Machine Operators</td>
<td>215,330</td>
<td>256,120</td>
<td>18.9</td>
<td>89,978</td>
</tr>
<tr>
<td>Laborers</td>
<td>77,120</td>
<td>82,920</td>
<td>7.5</td>
<td>23,284</td>
</tr>
</tbody>
</table>

SOURCE: Review of Labor & Economic Conditions, February 1985

Occupations in Minnesota that will see the largest rate of increase in employment by 1990 are health services, personal services, computer operators and mathematical scientists, according to Wilbur Maki, professor of agricultural economics at the University of Minnesota and chair of the Governor's Council of Economic Advisers. These will not necessarily be the occupations with the largest number of people.

Minnesota's labor force will grow more slowly in the mid-1980s and 1990s. According to the state demographer, the rate of growth will decline to 14 percent between 1980 and 1990 and to nine percent between 1990 and 2000. This means that there could be a labor shortage in the next 10 years. Demand will exceed supply mainly in low skilled, low pay jobs such as fast food work and sales clerking.

B. Experts disagree about training needed for future jobs. Some persons argue that very little training will be needed for a large number of future jobs. Others predict that all workers will need much better communication and cognitive skills to deal with information technology. "High tech" jobs may be increasing at a rapid rate; however, they account for a very small percentage of the total number of jobs. Only five to six percent of the total U.S. labor force will have "high tech" jobs, according to Barry Bluestone of Boston College. Bluestone predicts that about one-third of all new jobs will be in services, including low skill/low pay jobs such as fast food workers which will not require much, if any, post-secondary education. In another study, the Bureau of Labor Statistics predicts that not only will high tech provide few job opportunities in the future economy, but most new jobs will require no post-secondary schooling and will pay wages significantly lower than the average. (Forecasting the Impact of New Technologies on the Future Job Market, Rumberger and Levin, Stanford University, February 1984, page 22.)
Still another view comes from a report prepared for Minneapolis Community College citing four trends that will have an impact on vocational education: 1) an increase in the demand for post-secondary vocational education because more jobs will require some training but not four years of liberal arts (in contrast to Rumberger and Levin's thesis); 2) a predicted labor shortage because of the decline in population growth; 3) the need to train more current "old" workers with new skills rather than emphasizing training young workers for new jobs, and 4) an increase in cooperation between education and business and industry to provide training. (Occupation Program Development, A Frame of Reference, Minneapolis Community College, Cynthia M. Heelen, April 1984.)

In contrast to the previous predictions, Marc S. Tucker, executive director of the Carnegie Forum on Education and the Economy, outlines the following set of premises about the future:

Economic growth depends mainly on integrating the use of advanced technologies into existing manufacturing and service industries in the state, turning many old line industries into high tech industries.

Turning many of the existing industries into high tech industries will produce a need, across the board, for a labor force with much higher skill levels than at present, and at very different skills.

The need for narrowly trained people who have low academic skills will sharply decline -- they will be unemployable in increasing numbers.


C. Information is lacking on the types of vocational training that will be needed in the coming years. What is available is not coordinated.

Businesses keep confidential their longer term projections of needs for employees with certain skills. Often they make public estimates of job needs only six months in advance. (Educational providers argue that this is not enough time to prepare a program and train workers.) Another problem with gauging business' needs is their reluctance to make their future plans public.

While there is labor market information available for the Twin Cities metropolitan area, little information is available about rural economies in Minnesota. Since labor market information is not available at a sub-state level where programs are delivered and does not specify skills or competencies needed for new occupations, there is insufficient information to allow recommendations for future training programs, according to the Governor's Task Force on Job Training Needs.
The task force found that many groups collect data on jobs forecasting, industry monitoring and tax forecasting but no integration of these data bases is provided. The sources of data collection:

1. The Department of Economic Security (Now the Department of Jobs and Training), Research and Statistical Services Office, makes five and ten year occupational projections for the state and metropolitan area.

2. The Department of Revenue uses a model package to develop long-term forecasts of employment, personal income, consumer prices, and costs of production. These estimates are used in revenue forecasting for certain taxes and impact analysis of tax law changes.

3. The state economist (Department of Finance) develops a forecast of the Minnesota economy and major tax revenues for two to five years into the future. National economic forecast data is related to a model of the Minnesota economy.

4. The Department of Applied and Agricultural Economics at the University of Minnesota conducts state and sub-state analysis including occupational projections at the state level.

5. The Minnesota High Technology Council completed a survey in 1982 on engineering needs and engineering technicians in the State of Minnesota.

6. The Minnesota Occupational Information Coordinating Committee provides a channel for the dissemination of materials related to labor market information, particularly as it relates to educational programs.

(Source: Job Training Needs in Minnesota, November 1, 1984 Report from the Governor's job training issues team, Monica Manning, Chair.)

The type of data currently available is not sufficient to provide an accurate picture of training needs. One major barrier is comparing occupations to training. A common system is needed to compare both occupations and training. In some cases comparison is simple. For example, the job description for licensed practical nurses (LPN) is closely related to the LPN training one receives. But in many cases such a match is not possible.

An effort is under way at the state level to develop a method of matching training and job classifications. The Minnesota Occupational Information Coordinating Committee (MOICC) is the state counterpart to the National Occupational Information Coordinating Committee (NOICC). NOICC was created by Congress in 1976 to develop and implement a standardized occupational information system and to improve coordination and communication among the developers and users of occupational information. NOICC and MOICC are public inter-agency committees. The members of MOICC include:

SBVTE
Division of Vocational Rehabilitation, Department of Education
Currently, the Minnesota Occupational Information Center (MOIC) is developing a method by which training and jobs will be compared, using examples from other states and the NOICC. MOIC is also coordinating data collection from all public postsecondary vocational training programs and will be analyzing the data based on projections from the Department of Economic Security (now Jobs and Training.) It is hoped that the first report will be available by 1986.

Only AVTIs have the data on student training ready to be compared to occupational projections. The community colleges are involved in the MOIC project and will be reporting their data when it is ready. All other training programs need to be included to make the comparison accurate, including apprenticeships.

VII. SEVERAL EFFORTS ARE UNDER WAY IN THE STATE TO DO A BETTER JOB OF LINKING TRAINING WITH JOBS.

A. The AVTIs are the only institutions that systematically report placement rates of their graduates. While they have been criticized for low placement rates in some areas, the AVTIs have begun to respond to these problems.

In February 1983 the Legislative Auditor reported that the AVTIs had problems with low placement rates, inefficient student-teacher ratios, unnecessary program duplication and high dropout rates. The report recommended that the system achieve a systemwide student-teacher ratio to 17:1 in non-health programs and 12:1 in health programs. The report also found that up to 28 percent of AVTI programs had closely related job placement rates of less than 51 percent.

As a result of the Legislative Auditor's report, the AVTI system has begun to eliminate programs that have placement rates below 51 percent. Those programs that place less than 51 percent of all graduates within a year are subject to review and possible termination by the State Board for Vocational Technical Education if the rate does not improve. All courses are also subjected to a review matrix which consists of gauging student and employer satisfaction, placement and completion rates of programs, costs per student and utilization of instructional staff. The community colleges are now adopting a similar policy.

In a follow-up report on the AVTIs' ability to address these problems, the Legislative Auditor found that the AVTIs had made some progress on student teacher ratios; however, the problem of programs with low placement rates remains. According to the Legislative Auditor:

"Management has identified only one to two percent of programs as having related placement rates under 51 percent. In our 1983 report, we found that at least 10 percent of all programs had broadly-related placement rates under 51 percent."
"Management is using a very lenient method for computing placement rates and in part using school-reported placement data -- a practice we criticized in 1983.

"The AVTI system is still operating a number of highly specialized programs whose existence cannot be justified on the basis of the percentage of graduates who are employed in the type of jobs for which they are trained."

(Post-secondary vocational Educational Follow-up Study, March 1985)

AVTIs are the only institutions in Minnesota that conduct such an extensive follow-up study of their students. AVTIs also collect data on job salaries of graduates one year after graduation and are the only system to systematically collect this information. Of those students who graduated in 1983:

7 percent were earning less than $7,200.
36 percent were earning between $7,200 and $10,800.
35 percent were earning between $10,800 and $14,400.
20 percent were earning over $14,400.

B. Several efforts are under way to improve the link between training and jobs.

Futures Advisory Committees: The staff of the SBVTE and the staff of SBCC are currently working on a proposal to develop statewide and regional futures advisory committees. These committees would be made up of executives and marketing people in various industries who would advise both state boards on future job needs. The AVTI system would continue to have local advisory committees for each occupation, concentrating on current curriculum matters.

The Minnesota Job Skills Partnership: The Partnership was created in March 1984 to help link businesses with educational providers. The Partnership provides matching funds for training programs that meet expanding business needs, enhance the capacity of education institutions to work with business and provide access to training for displaced workers. Businesses match the funding provided by the Partnership and work with educators to design and implement training programs. The Partnership has funded mostly public institutions, although two private institutions, Autotech and St. Mary's College, have also participated. Over 2,000 individuals, ranging in ages from 21 to 55, have participated in the training programs so far; 60 percent have been displaced workers and 10 percent have been minorities. Most of the projects (12 of 18) have been located outside the metro area.

The Job Training Partnership Act (JTPA): JTPA, successor to the federal Comprehensive Employment and Training Act (CETA), provides training for economically disadvantaged people in the classroom and on the job. JTPA utilizes performance-based contracting which is an attempt to encourage both educational providers and students to
train for jobs that have future potential. Educators are judged on their success in placing students in longterm jobs and are awarded accordingly. JTPA also uses Private Industry Councils, made up of business, labor, government and industry officials who set up the training programs and monitor program operators.
CONCLUSIONS

THE SHAPE OF MINNESOTA'S FUTURE OCCUPATIONAL EDUCATION--PREFERRED CHARACTERISTICS:

I. Be responsive to the changing nature of work: The system must adapt to fundamental changes in the nature of work that indicate individuals in coming years will need more generalized work skills in addition to skills for particular jobs.

II. Be responsive to the changing nature of workers: The system must adapt to changes in the nature of workers, as increasing numbers of them are women and increasing numbers of all workers, men and women, are able to obtain training only part time and at odd hours. Great progress has been made in reducing the barriers to access created by geography or financial capacity. Progress has also been made in reducing the barrier of prior academic records. But much more needs to be accomplished in making occupational training accessible in terms of when the training is offered and who is encouraged to attend.

III. Be supportive of multiple providers of vocational education: Although we need to improve our ability to project the long range needs for job training, the difficulty of predicting future trends demands that training be flexible. This implies that our policies should recognize and support the fact that there are multiple providers of occupational training, including public and private vocational schools, community colleges, businesses, professional associations and non-profit organizations. This array of providers should be encouraged, for it gives choices to students and leverage to employers.

IV. Be accountable to funding sources: Funding comes from both the student and the state. Institutions that offer training must be responsive to student needs and be accountable to the state. To the extent a state agency provides money, a training institution must be accountable to the state for decisions on program content and budget.

V. Have good information available on the kinds of jobs and training in coming years: Students, employers, and institutions providing training all would benefit from a much better idea of what kinds of jobs will be available in coming years and what kinds of training will be needed for those jobs.

VI. Have governing structures that are fully supportive of, and able to adapt to, changing needs: The ability of vocational training institutions to adapt can be helped or hindered by the governing structures under which they operate. The governing structures in Minnesota should change, to make it more likely that Minnesotans receive the training they desire and that businesses receive the trained workers they need.
RECOMMENDATIONS

I. Broaden the capacity of vocational education providers to respond to changes in work and in workers.

The emphasis in this series of recommendations is oriented more to initiatives from the bottom (at the individual student level) instead of from the top (at the state board level). These initiatives occur in such a way that: a) accountability is linked to student preferences, b) flexibility is extended for students and for institutions and communities, and c) cooperation among two-year institutions is enhanced. Thus a major structural question—whether vocational schools and community colleges should merge—is not directly addressed in this report. Instead, the recommendations emphasize adaptability within a variety of structures.

A. We recommend that the Legislature enable institutions that offer vocational education in Minnesota (mainly AVTIs and community colleges) to modify their programs in whatever ways they judge will prepare individuals for work. This recommendation should let institutions take steps to serve students best without necessarily undergoing merger. Specifically, the following steps should be taken by the Legislature to implement this recommendation:

1. Place AVTIs, community colleges and two-year technical colleges of the University of Minnesota under a common set of objectives. These objectives should state that these institutions are to provide sub-baccalaureate vocational-technical and academic training as the institutions and their governing systems so determine.

2. Require AVTIs to adopt a credit-hour system like that of other post-secondary institutions to enable students to transfer credits more easily.

3. Give AVTIs more flexibility to respond to students' need for evening and part time programs by disengaging AVTIs from the K-12 education system. (Discussed further under Recommendation III)

4. Provide financial incentives for vocational education vendors to offer programs that:

--Are suited for evening and part time students,
--Do not stereotype occupations by sex,
--Are likely to produce well-paying jobs for graduates,
--Have good job placement rates.

(Discussed further under Recommendation II)

5. Authorize AVTIs to issue any certificates or degrees that match the level and extent of education and training offered. This will encourage these institutions to broaden the base of training to include experiences that build adaptiveness and
offer students a wider field of preparation. Issuing degrees also brings on the conventional process of seeking formal accreditation as a degree-granting institution from regional accrediting agencies. This recommendation builds upon a 1985 law that enables AVTIs to offer associate degrees when community colleges are not located nearby.

6. Allow, but not require, AVTIs to change the identification of their institutions and the titles of their administrators to those terms used by other post-secondary institutions. For example, an AVTI might want to have the word "college" in its title and refer to its chief administrator as "president". An AVTI should be allowed to identify itself as a college when accredited as a degree-granting institution.

7. Remove policy barriers to development of more occupational training programs in community colleges. This sector of community college programming has been the most rapidly growing in recent years and shows evidence of responding to the changing market of the needs of students of all ages.

8. Increase the flexibility of AVTIs and community colleges to change and add courses. The Legislature should allow an AVTI or community college to offer courses similar to those of a neighboring institution, provided that students get the right to decide where they want to take them. This means, for example, that an AVTI could add a course in general English for computer trainees but the students would have the full right to take the general English course in the neighboring community college should they prefer. Of course, every institution can limit the total number of transfer credits earned at other institutions.

The HECB should be notified of pending program changes. HECB could decide whether to comment on a pending change, but formal submission of proposed program changes for HECB review no longer would be required.

9. Reaffirm the financing strategy of enrollment based funding, to control any drift toward wasteful duplication, while offering students and institutions more flexibility. Under this strategy the Legislature appropriates a lump sum to each post-secondary education system based primarily on two factors: (1) historical per student expenditure patterns in the system and (2) current enrollment. Enrollment based funding has the effect of requiring the post-secondary education systems to correct inefficiencies in delivery of services and to set priorities among competing programs.

The power of HECB to comment, combined with the fiscal restraints of enrollment-based funding, should be sufficient to assure that vocational and community college systems would not abuse their freedom to make their own decisions. (While this measure of flexibility might represent policy progress for all the post-secondary sector, this report limits itself to those institutions involved directly in sub-baccalaureate occupational training.)
We expect that institutions will act responsibly in broadening course offerings. An enlightened institution will recognize that revenues don't increase automatically if courses are added; revenues only increase when enrollment increases. We also believe that institutions will encourage their students to take courses at neighboring institutions when that is the most cost-effective approach.

If our expectations are inaccurate—that is, if institutions start offering wastefully under-enrolled courses—the Legislature can halt such action. But the Legislature need not anticipate a problem where none might exist.

10. Instruct the HECB to report periodically to students and the general public, AVTIs and community colleges, and the Legislature itself on:

--Course offerings and enrollments, with particular emphasis on those situations where similar or identical courses with below-standard enrollment are provided in institutions located very near each other.

--How well the AVTIs and community colleges are responding to the changing nature of work and the changing nature of workers.

--The proportion of graduates who receive jobs in the fields for which they are trained.

--The number and types of jobs likely to be available for Minnesotans in coming years and the amount and kinds of training likely to be needed to match the job demand.

The effect of this recommendation is that HECB would be performing an auditing function, trying to identify any abuses that might be occurring, instead of exercising prior restraint.

(This role for the HECB is analogous to that of the Metropolitan Health Planning Board in reporting on the capability of health care institutions. To illustrate: the Health Planning Board may report that a hospital is offering kidney transplants even though the number it conducts is below a recommended standard. Such information is given to those who buy or consume that care as they select a hospital. Similarly, the HECB would report enrollment in courses, compared to a recommended standard, with the consumer deciding whether to attend.)

II. Distribute additional dollars to strengthen adaptive programming.

We recommend that the SBVTE be responsible for distributing appropriations from the State Legislature to AVTIs. Specifically, we recommend that dollars be distributed as follows:

A. The Legislature should determine a lump sum appropriation for AVTIs, using the same enrollment based formula it now uses for distributing dollars to the SBVTE and other post-secondary systems.
B. The Legislature should require the SBVTE to divide the lump sum in two parts. One part, approximately 85-90 percent of the total, should be allotted to the AVTIs according to a formula that the SBVTE would develop. In effect, the SBVTE would distribute this portion of the state appropriation largely in the same way it makes an allotment to AVTIs now.

The other part, approximately 10-15 percent of the total, should be distributed as financial rewards for AVTIs that offer programs with a) high enrollments of evening and part time students, b) high enrollments of women in traditionally male-dominated programs, c) high salaries for graduates, relative to the expense of the programs themselves, and d) high placement rates.

C. The Minnesota Job Skills Partnership should continue to provide discretionary and incentive funding for occupational programs submitted by private or public vendors in collaboration with business. Regardless of where programs are housed, vendors would have to collaborate with a business partner to qualify for Job Skills Partnership funding.

III. Disengage AVTIs from school districts.

We recommend that the Minnesota Legislature separate the governance of AVTIs from K-12 school boards. Rather than mandating one approach, the Legislature should set a deadline by which school boards that now own and operate AVTIs must choose a preferred approach from several options:

--Option 1. Establish a free standing AVTI, with its own board: Under this approach, policy control for an AVTI would be transferred from a local school board to a new elected board. Because policy and administrative responsibility would lie with a local governing board, to ensure a measure of accountability at the local level, the Legislature should require that the board levy a limited amount of property taxes for AVTI support. The levy would be equalized to account for differences in local taxing wealth. Such a levy is not required today.

--Option 2. Join with other AVTIs in a regional organization with its own board: School boards operating AVTIs in the same region could choose to form a new regional structure. As with the first option, the new board would have all authority over the AVTIs that now rests with the local school board. The new board would be elected. Because this option also provides for control below the state level, the Legislature should require that the regional board levy a limited amount of property taxes for AVTI support. As in option 1, the levy would be equalized.

--Option 3. Transfer responsibility for the AVTI to another sub-baccalaureate, post-secondary institution: Policy control could be transferred from one AVTI to an already existing free-standing AVTI or regional AVTI organization. Among the options would be to transfer an AVTI to a community college. Of course, under this option, transfer could not occur without approval of the sending and the receiving bodies. Under this option required local levy provisions cited in options 1 and 2 would apply if the transfer
occurs to a sub-state body. If the transfer occurs to a state body, such as a community college, local levy provisions would not apply.

--Option 4. Transfer responsibility to the SBVTE: Policy control would shift from the local level to the SBVTE. Such a shift would represent a new role for the SBVTE, because it exercises no direct operating responsibilities over AVTIs now. Local levy provisions would not apply.

The governing body that is selected should have overall responsibility for policy and operations of the institution, including: hiring and firing the director and other AVTI staff, negotiating and approving collective bargaining agreements, and purchasing supplies and equipment. A governing body might choose to centralize all these functions in one location. Or it might decentralize some. For example, a governing body responsible for several institutions might empower each institution to handle its own purchasing. Ownership of facilities would rest with the governing body.

Tuition in AVTIs should be set by the SBVTE.

Regional governing boards already in existence, such as the intermediate districts in the metropolitan area, also should select one of the above options. If they choose sub-state arrangements, they would be subject to local levy provisions. They would be allowed to continue to levy for, and provide, secondary vocational training.
DISCUSSION OF RECOMMENDATIONS

These proposals are designed a) to serve the needs of students, b) to allow institutions maximum freedom in deciding how best to serve those needs, and c) to allow organizational structures to vary, in line with local preferences.

Widely differing ideas are present in the debate over the future of AVTIs and community colleges.

Some persons and groups contend that the Legislature should end distinctions between the two types of institutions by merging them under a single state board. Under this approach AVTIs and community colleges would offer under the same roof programs now offered separately.

Others suggest that the distinctions between AVTIs and community colleges should be sharpened, and that the two remain organizationally separate. Supporters of this approach contend that AVTIs should emphasize occupational training that prepares students for specific jobs and that community colleges should concentrate on "academic" courses that offer a broader type of education.

Our proposal is different from both extremes. We think first of the needs of students and in the motivation of individual institutions to respond to those needs. Consequently, we propose that the Legislature empower AVTIs and community colleges to evolve in whatever ways the institutions themselves determine.

Each institution should be empowered to identify those types of students it believes it can serve best. Some AVTIs might choose to emphasize job-specific occupational training, to the exclusion of more general courses. Some community colleges might choose to emphasize general academic education. Some AVTIs and community colleges might select any number of combinations of job training and academic education as they deem desirable.

Individual institutions should not be restricted by the Legislature or any state agency other than their own governing system in offering the mix of programs they determine is most appropriate for the students they want to serve.

The HECB currently is seeking to define the missions of postsecondary institutions in Minnesota. A broad mission statement for sub-baccalaureate institutions, encompassing AVTIs and community colleges under the same objectives, would be consistent with our proposal. A mission statement that seeks to sharply differentiate the missions of the AVTIs and community colleges would be inconsistent with our proposal.

Another major area of controversy concerns where AVTIs should be placed, organizationally. We agree with the SBVTE and the HECB that AVTIs should be disengaged from local school districts. AVTI employees no longer should be subject to locally-negotiated collective bargaining agreements that include K-12 teachers. Moreover, local school boards should be freed from policy responsibility for post-secondary education institutions.
Local school boards should play a role, however, in determining the disposition of their institutions.

Our recommended approach differs from that of the SBVTE, which recommends that AVTIs be placed in regional governing arrangements, and from that of the HECB staff, which has recommended that AVTIs be made state institutions, with regional administration.

We propose that instead of mandating one solution, the Legislature should let local school boards that operate AVTIs a choice of organizational arrangements:

--establish a freestanding locally-elected AVTI board, organizationally separate from the local school district.

--establish a regionally-elected AVTI board, encompassing two or more AVTIs.

--merge with another institution already offering post-secondary education.

--become a part of a state system under the SBVTE.

Whatever level of government is responsible for AVTIs also should bear responsibility for raising at least some of the dollars. This means that if a school board chooses a sub-state option, some portion of the dollars supporting the AVTI should come from a property tax levy over the affected geographical area.

Currently, local school districts do not have to invest local tax dollars in for AVTI operating expense. The only levy required is a modest amount for debt service.

Our proposal is designed to satisfy the central objective--disengaging AVTIs from local K-12 school systems--without forcing every AVTI into the same structural mode. Local school districts have a great deal invested in their AVTIs. Our proposal gives them a significant role in determining the institutions' future.
WORK OF THE COMMITTEE

CHARGE TO COMMITTEE

Following is the text of the charge to the Occupational Education Committee, as prepared by the Citizens League Board of Directors:

"Nearly every factor affecting the provision of training for jobs seems to have changed substantially in recent years. Demographic changes, labor market changes, labor force changes, rates of change brought about by new technology -- these and other forces have so restructured the nature of employment that a fresh examination of the way we provide training has become a compelling obligation.

"The centerpiece of the Minnesota discussion of strategic economic development has been high technology. Still, much of the state's actual economic future seems destined to depend on other sectors, such as manufacturing and agriculture. Moreover, the preponderance of jobs generated by high-technology firms are of a low-technology nature, with well over half of all new jobs in the last quarter of this century forecasted to require skill levels not exceeding those presumably held by a high school graduate.

"This study is focused on those programs and systems for providing education and training, private as well as public, that are designed to prepare people for specific jobs. While occupational training, so defined, reflects a range from beginning typing to neurosurgery, the intention here is to concentrate primarily on sub-baccalaureate level training.

"The principal charge to this committee is to review the present relationship of public and private training programs to the needs of the emerging economy and to recommend what the state's policy should be in providing training for jobs during this period of redevelopment and restructuring.

"The committee should examine the differences in training provided in the employment setting and training provided institutionally, whether public or private. Is there any clear set of conditions that would suggest policy preferences for either setting? What kind of feedback system is needed in order to keep training opportunities current with emerging job opportunities for individuals and the needs of industry? And, what is the proper public subsidy? How much of this subsidy should be developed through a system of public institutions or programs, how much should be expressed through financial aid to individuals, and how much to help business provide training? As retraining needs greatly exceed the volume of first-job training, how should access to public assistance in getting training change?

"The committee should consult broadly with employers of different types and size, and from different geographical settings, learning particularly how decisions are made about employer-provided training and how it is financed; with officials of public and private training institutions; with labor leaders and with others involved in employment services."
COMMITTEE MEMBERSHIP

The following persons participated in the committee on a regular basis:

Jessica Shaten, chair
Virginia Carroll
Bright Dornblaser
Kitty Goodrich
C. Joseph Howard
John Johanneson
Monica Manning
Patricia McNamara
Dick Moberg
Mary Jo Richardson
Dottie Speidel

COMMITTEE WORK

The committee began its work on March 29, 1984 and met 39 times. The last meeting was held on September 5, 1985. The committee devoted its testimony stage to learning about vocational education in Minnesota: how much is provided by the state and how much is private, who is served, what kinds of training is available and what efforts are made to link future jobs needs with current training. The committee relied heavily on testimony from resource people familiar with the subject as well as local and national publications.

Detailed minutes were kept of each committee meeting. A limited number of copies of the committee's minutes and background materials are available from the League office.

COMMITTEE RESOURCE GUESTS

Bill Blazar, tax policy consultant
Gerald Christenson, chancellor, State Community College Board
Rick Clugston, research associate, Center for Educational Policy Studies, University of Minnesota
Paul Collins, technical writing instructor, St. Paul Vo-Tec
Deb Davis, administrator, Training Needs & Assessment, Control Data Business Advisers
Joe Duda, director, Hubert H. Humphrey Job Corps Center
John Durand, president, Minnesota Diversified Industries
Stanley Edin, director, Staples AVTI
Ron Erpelding, director, Wilmar AVTI
Craig Proke, manager, instructional services, State Board of Education
Joe Graba, director, State Board for Vocational Technical Education
Mary Groeschner, director, district field operations, Minnesota Dept. of Economic Security
Curt Johnson, executive director, Citizens League
Bev Jones, research analyst, Minnesota Dept. of Economic Security
David Krogseng, lobbyist, Minnesota Association of Private Post-Secondary Schools
Fred Lane, field representative, apprenticeship division, Minnesota Dept. of Labor & Industry
Chris Larson, director, Governor's job training office, Minnesota Dept. of Economic Security
Leon Linden, director, St. Paul AVTI
Dr. David Longanecker, executive director, Higher Education Coordinating Board
Wilbur Maki, professor, Agricultural & Applied Economics, U of M
CONSIDERATION BY THE BOARD OF DIRECTORS

The committee's report was debated at two meetings of the Citizens League Board of Directors in September and October 1985. Following the second board meeting, a special task force made up of committee and board members was constituted to address questions raised at the board meetings about the report. Among the questions were whether the Legislature should establish a regional system of AVTIs and whether closer cooperation between AVTIs and community colleges should be encouraged or required. Some questions related to a 1967 recommendation of the Citizens League that AVTIs and community colleges be merged.

Shaten, Dornblaser, Goodrich, Manning and Richardson were named to represent the committee on the task force. Board members on the task force were Jean King, Ronnie Brooks, Ted Kolderie, Dean Lund, and Peter Vanderpoel. King chaired the task force.

The task force met four times. Staff also conducted extensive consultations with people involved in vocational education to test their reactions to the task force's proposed recommendations.

The board met again on January 8, 1986, and approved a revised report as submitted by the task force.

STAFF

The committee and task force were assisted by Paul Gilje, Curt Johnson, Donna Keller, Joann Latulippe and Laura Merriam of the League staff.
# APPENDIX:

## VOCATIONAL TRAINING IN MINNESOTA

<table>
<thead>
<tr>
<th></th>
<th>AVTIs</th>
<th>CCs</th>
<th>PRIVATE/ PROPRIETARY</th>
<th>UNIONS</th>
<th>U OF M</th>
<th>AVTIs</th>
<th>CCs</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>FULL-TIME</td>
<td>FULL-TIME</td>
<td>FULL-TIME</td>
<td>PROFESSIONAL</td>
<td>APPRENTICESHIP</td>
<td>WASCAC/CROOKSTON</td>
<td>FULL-TIME</td>
</tr>
<tr>
<td></td>
<td>(Continuous)</td>
<td>83-84</td>
<td>83-84</td>
<td>15,000</td>
<td>4,000 (est.)</td>
<td>2,000</td>
<td>243,960</td>
</tr>
<tr>
<td><strong>A. Students</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Number enrolled</td>
<td>35,175</td>
<td>24,000</td>
<td>15,000</td>
<td>4,000 (est.)</td>
<td>2,000</td>
<td>243,960</td>
<td>19,125</td>
</tr>
<tr>
<td>*Age</td>
<td>23 (median)</td>
<td>20 (median)</td>
<td>73% are</td>
<td>19-25</td>
<td>19-25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Yr. of HS grad.</td>
<td>20% 1977</td>
<td>24% 1977</td>
<td>23% pre 1977</td>
<td>23% pre 1977</td>
<td>82% 1983</td>
<td>85% 1982</td>
<td></td>
</tr>
<tr>
<td><strong>B. Programs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Schedule</em></td>
<td>6 hours/day</td>
<td>10 credit hours/week</td>
<td>Varies</td>
<td>Between 8,000-4,000 hours with employer plus 140 related hours class instruction/year</td>
<td>12 credits hours/week full time</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Staff qualifications</em></td>
<td>Vocational license</td>
<td>BA/S or MA/S no license</td>
<td>No license</td>
<td>Licensed by Bureau of Apprent. Dept. of Labor &amp; Industry</td>
<td>No license</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Relationship of staff to institution</em></td>
<td>Collective bargaining</td>
<td>Collective bargaining</td>
<td>Wascac is collective bargaining Crookston is not</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>C. Program Cost</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Tuition</em></td>
<td>$980/9 months (3 quarters) plus equipment charge (1984)</td>
<td>$1,103/9 months (3 quarters) (1984)</td>
<td>Varies</td>
<td>Work at 50% of wage then move up</td>
<td>$1,834/9 months</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>D. Governance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Source of program decisions</em></td>
<td>State board local school districts</td>
<td>State board colleges</td>
<td>Individual institutions</td>
<td>Individual employer/unions</td>
<td>U of M Regents (Pres. office)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Source staffing</em></td>
<td>Local</td>
<td>State</td>
<td>Individual institutions</td>
<td>Industry/labor</td>
<td>Individual campuses</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Source funding</em></td>
<td>State</td>
<td>State</td>
<td>Individual institutions (Some grants &amp; tuition)</td>
<td>State</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### E. Accountability

* Basis for receiving revenues: Budget request average cost funding.
  
<table>
<thead>
<tr>
<th></th>
<th>AVTIs FULL-TIME (Continuous)</th>
<th>CCA FULL-TIME</th>
<th>PRIVATE/PROPRIETARY</th>
<th>UNIONS (APPRENTICESHIP)</th>
<th>U OF M HOUSTON</th>
<th>AVTIs PART-TIME</th>
<th>CCA PART-TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FY 1984</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Appropriations</td>
<td>122,808,300</td>
<td>48,652,700</td>
<td>NA</td>
<td>NA</td>
<td>9,342,000 (FY '83)</td>
<td>7.4 million (FY '84)</td>
<td></td>
</tr>
<tr>
<td>Total Expenditures</td>
<td>179,130,600</td>
<td>81,329,500</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Appropriations</td>
<td>FY 1983</td>
<td>122,698,400</td>
<td>43,862,000</td>
<td></td>
<td>7.4 million (FY '84)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Expenditures</td>
<td>FY 1983</td>
<td>176,499,700</td>
<td>70,924,100</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Community Colleges

@ Not available

* Usually funded by four cents/hour contribution by employers and employees.
### Table 2

**Projected Full-Year Equivalent and Average Daily Membership Enrollments by System, 1983-84 - 2002-03**

<table>
<thead>
<tr>
<th>System</th>
<th>Full-Year Equivalent Membership</th>
<th>Average Daily Membership</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Minnesota</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State University System</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area Vocational-Technical Institutes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community College System</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Minnesota Higher Education Coordinating Board, Staff Technical Paper, January, 1984
DISTRIBUTION OF STATE APPROPRIATIONS FOR INSTITUTIONAL OPERATION AND FINANCIAL AID BY SYSTEM, CATEGORY OF INSTITUTION AND STATEWIDE FUNCTION, FISCAL YEAR 1984

Private Two-Year Colleges and Vocational Institutions
$5.4 Million
.85%

Private Four-Year Colleges and Universities
$15.6 Million
2.47%

Mayo Medical School
$1.3 Million
.20%

State University System
$109.7 Million
17.40%

Community College System
$53.4 Million
8.47%

Area Vocational-Technical Institutes
$130.6 Million
20.71%

University of Minnesota
$305.0 Million
48.30%

Statewide Programs and Coordination, Interstate Tuition Reciprocity, Medical Student Loans
$9.6 Million
1.53%


DISTRIBUTION OF FINANCIAL AID AWARDS BY SYSTEM FISCAL YEAR 1984

University of Minnesota
$87.7 Million
17.13%

Private Two-Year Institutions
$5.4 Million
10.6%

State University System
$85.5 Million
16.79%

Community College System
$4.8 Million
9.4%

Private Four-Year Colleges
$15.6 Million
30.7%

Area Vocational-Technical Institutes
$7.8 Million
15.4%

### APPENDIX 4

#### TABLE 3

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Current¹</th>
<th>Constant¹</th>
<th>University of Minnesota¹</th>
<th>State University System¹</th>
<th>Community College System</th>
<th>AVTs</th>
<th>Private Four-Year Colleges¹</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Per Capita Income</td>
<td>Per Capita Tuition</td>
<td>Current</td>
<td>Constant</td>
<td>Current</td>
<td>Constant</td>
<td>Current</td>
</tr>
<tr>
<td>1971</td>
<td>$3,791</td>
<td>$3,791</td>
<td>$522</td>
<td>$522</td>
<td>$379</td>
<td>$379</td>
<td>$353</td>
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<tr>
<td>1972</td>
<td>4,107</td>
<td>3,953</td>
<td>525</td>
<td>508</td>
<td>416</td>
<td>403</td>
<td>386</td>
</tr>
<tr>
<td>1973</td>
<td>4,630</td>
<td>4,259</td>
<td>641</td>
<td>599</td>
<td>416</td>
<td>389</td>
<td>386</td>
</tr>
<tr>
<td>1974</td>
<td>5,084</td>
<td>4,198</td>
<td>683</td>
<td>588</td>
<td>453</td>
<td>390</td>
<td>420</td>
</tr>
<tr>
<td>1975</td>
<td>5,533</td>
<td>4,198</td>
<td>714</td>
<td>554</td>
<td>479</td>
<td>372</td>
<td>420</td>
</tr>
<tr>
<td>1976</td>
<td>6,108</td>
<td>4,357</td>
<td>772</td>
<td>556</td>
<td>519</td>
<td>374</td>
<td>461</td>
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<tr>
<td>1977</td>
<td>6,744</td>
<td>4,505</td>
<td>815</td>
<td>556</td>
<td>545</td>
<td>372</td>
<td>495</td>
</tr>
<tr>
<td>1978</td>
<td>7,536</td>
<td>4,618</td>
<td>927</td>
<td>585</td>
<td>590</td>
<td>372</td>
<td>518</td>
</tr>
<tr>
<td>1979</td>
<td>8,474</td>
<td>4,645</td>
<td>994</td>
<td>569</td>
<td>608</td>
<td>348</td>
<td>540</td>
</tr>
<tr>
<td>1980</td>
<td>9,330</td>
<td>4,580</td>
<td>1,060</td>
<td>543</td>
<td>675</td>
<td>346</td>
<td>574</td>
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<tr>
<td>1981</td>
<td>10,285</td>
<td>4,530</td>
<td>1,194</td>
<td>513</td>
<td>726</td>
<td>335</td>
<td>637</td>
</tr>
<tr>
<td>1982</td>
<td>10,828</td>
<td>4,312</td>
<td>1,264</td>
<td>513</td>
<td>802</td>
<td>326</td>
<td>697</td>
</tr>
<tr>
<td>1983</td>
<td>11,466</td>
<td>4,479</td>
<td>1,521</td>
<td>587</td>
<td>989</td>
<td>382</td>
<td>839</td>
</tr>
<tr>
<td>1984</td>
<td>N/A</td>
<td>N/A</td>
<td>1,673</td>
<td>634</td>
<td>1,246</td>
<td>472</td>
<td>1,018</td>
</tr>
<tr>
<td>1985</td>
<td>13,518²</td>
<td>4,790³</td>
<td>1,834</td>
<td>662</td>
<td>1,433</td>
<td>518</td>
<td>1,103</td>
</tr>
</tbody>
</table>

Percent Change 1981-1985

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Current²</th>
<th>Constant²</th>
<th>University of Minnesota²</th>
<th>State University System²</th>
<th>Community College System</th>
<th>AVTs</th>
<th>Private Four-Year Colleges²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Per Capita Income</td>
<td>Per Capita Tuition</td>
<td>Current</td>
<td>Constant</td>
<td>Current</td>
<td>Constant</td>
<td>Current</td>
</tr>
<tr>
<td>1981</td>
<td>256.58%</td>
<td>26.35%</td>
<td>251.34%</td>
<td>26.82%</td>
<td>278.10%</td>
<td>36.68%</td>
<td>212.46%</td>
</tr>
<tr>
<td>1985</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹ Twin Cities Consumer Price Index, 1971 = 100. Fiscal Year 1985 inflation rate is estimated to be 5 percent. Tuition rates are for full-time undergraduates.

² Non farm personal income on calendar year basis.

Tuition and required fees at College of Liberal Arts, Twin Cities campus.

⁴ Institutions in the Minnesota Private College Council.

⁵ Estimate.

⁶ Tuition and maximum required fees. Excludes Metropolitan State University.

APPENDIX 5

TABLE 4

Private Vocational Schools
A Sampling of Tuition & Placement Rates

<table>
<thead>
<tr>
<th>MN School of Business:</th>
<th>Tuition 1984/85</th>
</tr>
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<tbody>
<tr>
<td>Junior accounting program: 1200 hours</td>
<td>$ 5,806</td>
</tr>
<tr>
<td>Business management: 1440 hours</td>
<td>6,960</td>
</tr>
<tr>
<td>Computer programming: 720 hours</td>
<td>5,065</td>
</tr>
<tr>
<td>Court reporting: 2600 hours</td>
<td>10,476</td>
</tr>
<tr>
<td>Fashion merchandising: 960 hours</td>
<td>4,590</td>
</tr>
<tr>
<td>Administrative secretary: 1200 hours</td>
<td>5,105</td>
</tr>
<tr>
<td>Legal secretary: 1200 hours</td>
<td>5,105</td>
</tr>
<tr>
<td>Electrical engineering, technician: 1920 hours</td>
<td>9,740</td>
</tr>
</tbody>
</table>

| Hotel Sofitel French Cooking School:          |                  |
| 2150 hours                                   | $ 5,950          |

| Lakeland Medical Dental Academy:              |                  |
| Medical assistant: 931 hours                 | $ 3,495          |
| Dental assistant: 1003 hours                 | 3,495            |
| Medical administrative asst.: 975 hours      | 3,915            |
| Medical lab. tech: 1617 hours                | 4,495            |

| Travel Career School:                        |                  |
| 186 hours                                    | $ 1,575          |

| McConnell School (travel):                  |                  |
| McConnell 18: 700 hours                     | $ 2,190          |
| McConnell 20: 300 hours                     | 1,890            |

| Rasmussen Business College:                 |                  |
| All programs: 1200 hours                    | $ 4,220          |

SOURCE: Private Vocational School Unit, MN Dept. of Education, 1985
APPENDIX 6

State and federal jobs programs in Minnesota: The programs are under the Department of Jobs and Training, formerly Department of Economic Security.

Community Work Experience Program: Set up under federal law in eight Minnesota counties during the past two years, it requires employable adults receiving Aid to Families with Dependent Children (AFDC) to do community service work for their welfare grants.

Displaced Homemakers Program: An effort begun in 1978 for economically disadvantaged people, mostly women, who were homemakers and who have lost a source of income through divorce, death or other circumstances. It offers career exploration, counseling, support groups, workshops, placement for individuals and some contacts with employers to develop openings for the individuals. 1983-1985: 1132 participants.

Job Corps: Located on a former college campus near the Minnesota Fairgrounds, the corps offers residential vocational training to disadvantaged people 16 to 22. In addition, it offers training in social skills and basic academic skills. There are 250 students currently enrolled.

Job Service: Probably the best-known of all the job programs because of its longevity (dating back to the 1930s) and its size (more than 100,000 people registered). It offers counseling, testing, job searches and referrals for anyone who wants its services, including people who are employed and want to find a better job. 1984: 88,855 individuals placed.

Job Training Partnership Act Title IIA: The successor to the Comprehensive Employment and Training Act, it offers classroom and on-the-job training, as well as job searches, counseling, assessment, job-search training and placement. It is mostly for economically disadvantaged people, many of whom are drawing public assistance. 1984: 20,133 individuals served.

Job Training Partnership Act Title III: For dislocated workers who have lost jobs through plant closings, total or partial, or who have been laid off with little likelihood of returning. Offers skills evaluation, job-search counseling, and training.

Minnesota Emergency Employment Development Act: Begun in 1983 and funded through 1986, it is designed for unemployed people who have no unemployment insurance. It helps place individuals in jobs by offering six-month subsidies for their wages up to $4 an hour plus $1 for fringe benefits. For jobs in the private sector, a portion of the subsidy must be paid back by the employer unless the employee stays more than a year. From August 1983 to January 1985 6,200 individuals placed, 28,600 individuals registered.

Opportunities Industrialization Centers: A support program of three centers in the Twin Cities that serve economically disadvantaged people who are unemployed or underemployed and who can't afford training for a new or different job. They offer vocational training, usually on the premises, as well as training in basic academic skills and in good job habits. 1984: 1,026 individuals employed.
Targeted Jobs Tax Credit Program: It offers employers a tax credit for two years if they hire people from nine "targeted" groups, such as youths from low-income families, welfare clients, felons with low income, handicapped people and low-income Vietnam veterans. 1984: 16,642 vouchers distributed to employees.

Trade Adjustment Assistance (TAA): The program is designed for people who have been put out of work by foreign competition for the products they make. It offers training, relocation subsidies, allowance for travel to search for a new job and an extension of unemployment insurance. TAA entitlements: 457.

Vocational Rehabilitation: A program for unemployed people who suffer from medically diagnosed problems that are keeping them from working. It offers training in vocational schools and colleges and on the job. It helps clients develop their career plans and find jobs. 1984: Basic rehabilitation: 4,221 employed; long term sheltered work: 6,275 served.

Work Incentive Program: For employable people on AFDC, it generally requires recipients to register for work. It also offers classroom and on-the-job training. 1984: 5,168 entered permanent unsubsidized employment.

Unemployment Insurance Eligibility Review Program: A portion of the unemployment insurance recipients are given advice in how to look for a job, how to be interviewed and so on."

(Source: Minneapolis Star and Tribune, April 14, 1985)
Below is a list of the eighteen most active apprenticeable trades in Minnesota which are approved by the Division of Voluntary Apprenticeship, Department of Labor and Industry (1983):

<table>
<thead>
<tr>
<th>Top 18 Trades</th>
<th>Number of Apprentices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carpenter</td>
<td>945</td>
</tr>
<tr>
<td>Electrician</td>
<td>713</td>
</tr>
<tr>
<td>Roofer</td>
<td>315</td>
</tr>
<tr>
<td>Painter, Decorator, Drywall Finisher</td>
<td>254</td>
</tr>
<tr>
<td>Plumber</td>
<td>246</td>
</tr>
<tr>
<td>Pipefitter</td>
<td>242</td>
</tr>
<tr>
<td>Automechanic</td>
<td>240</td>
</tr>
<tr>
<td>Millwright</td>
<td>202</td>
</tr>
<tr>
<td>Sheet Metal Worker</td>
<td>189</td>
</tr>
<tr>
<td>Bricklayer</td>
<td>162</td>
</tr>
<tr>
<td>Power Lineman</td>
<td>150</td>
</tr>
<tr>
<td>Machinist</td>
<td>138</td>
</tr>
<tr>
<td>Power Plant Attendant</td>
<td>106</td>
</tr>
<tr>
<td>Lithographer</td>
<td>101</td>
</tr>
<tr>
<td>Iron Worker</td>
<td>96</td>
</tr>
<tr>
<td>Glass Trades</td>
<td>93</td>
</tr>
<tr>
<td>Fire Fighter</td>
<td>89</td>
</tr>
<tr>
<td>Floor Coverer</td>
<td>68</td>
</tr>
</tbody>
</table>
Secondary Center Programs

Secondary centers are cooperative ventures among school districts to provide vocational/technical programs that could not be offered by any one school. Similar to the intermediate AVTI districts, secondary centers receive funding through the districts that they serve and through state categorical aid. Categorical aid accounts for 45 percent of their revenues.

There are 41 secondary centers in Minnesota, all outside the Twin Cities metropolitan area. They serve strictly high school students and provide such programs as automotive care, food preparation and child care. One example: the Leaf River Cooperative Center in Wadena serves the Wadena, New York Mills, Sabeka and Menahga school districts. Students are bused to the center for two hours a day. If there is not a central building (as in Wadena), then the programs are divided up among schools of member districts.

Students attending secondary center programs or high school vocational education programs do not necessarily get credit at AVTIs. Intermediate districts 916, 917 and 287 do give credit towards post-secondary training because the students are taking regular AVTI courses.

Secondary schools also offer part time, evening adult vocational and continuing education courses. Adult vocational education receives 75 percent reimbursement from the state, while continuing education is totally fee supported. Adult vocational education uses licensed teachers, while continuing education, which offers everything from microwave cooking to outboard motor repair, is not required to use licensed instructors and often does not. Adult vocational education programs are under jurisdiction of the SBTVE. Funding for these programs, even if they are offered in high school facility, goes through the AVTIs.
Average Cost Funding (Enrollment Based Funding)

Average cost or enrollment based funding was implemented in 1983 by the Legislature to do the following things:

1. Provide uniform definitions of instructional costs.
2. Establish tuition as a specified and standardized proportion of instructional cost.
3. Relate overall instructional spending to enrollment (i.e., dollars follow students).
4. Emphasize the responsibility of each system in setting its own instructional goals and priorities.

A central element in the 1983 post-secondary funding package known then as "shared responsibility", average cost funding essentially establishes the funding level of post-secondary systems using an historical base to justify differences across systems and "averaging" all program costs within each system. Legislative appropriations then become the product of those average costs and expected enrollment.

At the same time, the Legislature expanded the authority of governing boards to reduce programs and even close entire institutions. The message was clear: the Legislature was putting limits on total funding, increasing tuition, relating tuition to costs and telling systems to work out their internal priorities.
The Wisconsin system of Technical Institutes

Wisconsin has a regional governance structure for its system of vocational technical institutes. Most of the authority rests with these regional districts; the regional governing boards have control over personnel and programming. They also have regional levy authority which is collected through local taxing jurisdictions. The amount of money raised on the regional level varies by district. An equalization factor gives poorer districts more state funding and requires wealthier districts to pay up to a maximum of 60 percent of all costs through local property taxes. If a district is at the state average, then the district pays 50 percent and the state pays 50 percent.

The regional boards are appointed in two different ways, depending on the district. The regional director is appointed by the regional board. In some districts, the members are appointed by the chairs of the county boards in that district; in others, members are appointed by the chairs of the local school boards. Appointment versus election of members has been an issue for many years in the Wisconsin Legislature; each session a law to move to elections is brought up and resoundingly defeated. It is said that the regional boards have considerable lobbying power.

The State Board of Vocational Technical Adult Education is charged with program approval or disapproval. It also oversees standards related to certificates and associate of applied science degrees which are offered by the technical institutes. Its third major responsibility is approve or disapprove any new construction in the technical institutes. The state board has a labor market economist who compiles figures on future job skills needs; most of the information comes from the Wisconsin Jobs Service and statewide technical advisory committees that meet on a regular basis to discuss future needs. Some needs identification is done at the regional level as well.

According to State Director Bob Sorenson, the state board does not have much direct control over the regional districts. "The state board must do a lot of stroking and persuading to see that state directives are followed." Sorenson says that, at times, this is difficult because the Governor will want the state board to take action on an issue and the regional districts do not necessarily pay attention to its directives. As the director of Southwest Technical Institutes put it: "He who has the gold makes the rule".

When asked about the success of a regional system, Sorenson feels that it still is superior to a state run structure. He feels that the local bodies are more able to react and respond to local needs and that the Wisconsin system is flexible and adaptive. He does feel, however, that the local or regional districts are less able to see the larger picture. The state board should play a greater role in providing direction that addresses statewide needs, he said.

One positive aspect of the Wisconsin system in comparison to Minnesota, according to Sorenson, is the fact that there are only two post-secondary systems: The University of Wisconsin and Wisconsin Technical Institutes. Between the two systems, there actually are more facilities and campuses than in Minnesota but governance is divided by
two systems rather than four. The University of Wisconsin has 13 four year campuses and 12 two year University Centers. Like Minnesota's community colleges, these two year centers offer transfer coursework and associate of arts and science degrees. The Technical Institutes are located in 16 regional districts and have 42 separate campuses. In some instances, the technical institute is located next to a university center and there is cooperation between the two. The technical institutes can offer associate of applied science degrees and often have some general education courses included in their programs.

Wisconsin has three joint committees that oversee cooperation between the two systems: 1. The Joint Administrative Committee on Academic Programs (JACAP), deals with transfer of credits and duplication of programs. 2. The Joint Administrative Committee on Continuing Education deals with cooperation between University of Wisconsin extension programs and adult education at the technical institutes. 3. The Joint Administrative Committee on Facilities deals with cooperative use of facilities and equipment between the two systems. While these committees may look very good on paper, Sorenson admits the usual tension between academic and technical educators exist. There is not total cooperation and compatibility.

The same complaints heard in Minnesota about the time it takes for program approval are heard in Wisconsin as well. The regions must go through a three step process for program approval: 1. Indication of interest. 2. Study of the field and survey of need and 3. Detailed program outline. Programs that are less than nine months in duration can be approved through a phone call to the state director and do not need to go to the board.

While there is no formalized connection between the post-secondary technical institutes and secondary vocational education, many local school districts contract with the regional districts for vocational programs. The state board also has some federal money to allow this cooperation to occur.

Initiation of new programs comes both from the state board and the regional districts. The state board will ask for bids on specific programming from the regional districts and the regional districts can initiate their own programs. When asked whether or not regional districts compete with one another for students and programs, Ron Anderson, Director of the Southwest region, felt that the competition was strong and healthy. There is an interdistrict tuition program which will subsidize a student who wishes to attend a program in another district if that program is not offered in his/her own district. If it is, the student must pay out-of-district tuition.
APPENDIX 12
MINNESOTA COMMUNITY COLLEGES
WITHIN ECONOMIC DEVELOPMENT REGIONS
OCCUPATIONAL PROGRAMS WHICH ARE
SHARED BETWEEN A COMMUNITY COLLEGE AND AN AVTI

Programs listed are those functioning in 1984-85. There are other
programs under development.

<table>
<thead>
<tr>
<th>College &amp; AVTI</th>
<th>Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anoka-Ramsey &amp; Anoka AVTI</td>
<td>Air traffic control/aviation administration, Electroencephalographic technician, Medical records technician, Occupational therapy assistant, Respiratory therapy technician</td>
</tr>
<tr>
<td>Austin CC &amp; AVTI</td>
<td>Farm operations/management, Numerical control machining, Radio-TV broadcasting</td>
</tr>
<tr>
<td>Brainerd CC &amp; AVTI</td>
<td>Business mgmt./entrepreneurship</td>
</tr>
<tr>
<td>Hibbing CC &amp; AVTI</td>
<td>Law enforcement, Medical lab technician</td>
</tr>
<tr>
<td>Inver Hills CC &amp; Dakota County AVTI</td>
<td>Automotive technology</td>
</tr>
<tr>
<td>Lakewood CC &amp; 916 AVTI</td>
<td>Apparel services, Bio-medical equipment technician, Child development, Dietetic technician, Fashion merchandising, Interior design &amp; home furnishings, Orthotics technician associate, Prosthetic technician, Graphic arts management</td>
</tr>
<tr>
<td>Minneapolis CC &amp; AVTI</td>
<td>Data processing, Public safety coordinator</td>
</tr>
<tr>
<td>Northland CC &amp; Thief River Falls AVTI</td>
<td>Airframe/powerplant aviation maintenance</td>
</tr>
<tr>
<td>North Hennepin CC &amp; Suburban Hennepin AVTI</td>
<td>Construction supervision, Fire protection, Manufacturing management</td>
</tr>
<tr>
<td>North Hennepin CC &amp; Anoka AVTI</td>
<td>Medical records technician</td>
</tr>
<tr>
<td>Rochester CC &amp; Red Wing AVTI</td>
<td>Computer programming, Electrical musical instrument repair, Human services technician, Radiological technician, Respiratory therapy</td>
</tr>
<tr>
<td>Shared with Rochester AVTI</td>
<td></td>
</tr>
<tr>
<td>Shared program with Mayo</td>
<td></td>
</tr>
<tr>
<td>Shared with Mayo</td>
<td></td>
</tr>
</tbody>
</table>
Practical nursing in AVTIs transfers to Associate Degree Nursing in 12 Community Colleges: Anoka-Ramsey, Austin, Brainerd, Hibbing, Inver Hills, Lakewood, Minneapolis, Normandale, Northland, North Hennepin, Rochester and Willmar. This relationship is essentially a "shared program" for increasingly large numbers of practical nurses who choose this alternative.