EMBRACING THE INFORMATION AGE

REPORT BY
THE TASK FORCE OF THE
MICHIGAN STATE BOARD
OF EDUCATION

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EXECUTIVE SUMMARY

The sweeping transformational power of the Information Age holds great promise for improving academic achievement of Michigan schools, especially for those schools that are chronically underperforming. Although much progress has been made, fundamental change must accelerate and broaden, if all our young people are to be equipped to excel in the 21st Century. To reach the needed results for Michigan, we recommend that:

- ➢ **Educator Preparation and Development.** All educators and administrators will be prepared to use Information Age tools and learning techniques and processes.

- ➢ **Standards and Assessment.** State and local academic standards, benchmarks, and assessments will reflect the knowledge and skills necessary for success in the Information Age.

- ➢ **Transcending the Four Walls.** Schools will transcend their four walls and districts - distance learning and other learning resources will be integrated into the learning community.

- ➢ **Virtual Districts.** Chronically underperforming schools and districts will form collaborative partnerships creating virtual districts by which all partners share best practices and resources.

Our final recommendation is that the State Board of Education and Department of Education work with both traditional and non-traditional stakeholders and policymakers to adopt and support these recommendations and help them become reality in chronically underperforming schools and all other schools in Michigan.

With a growing underclass of children all but assigned to failure, the cost of failing to act now is simply too great. In our age, all workers must excel, all community members must be engaged, and all citizens must be knowledgeable participants. The inability to meet that challenge places our economy, society, and republic at great risk. In short, this reform package is one which we must wholeheartedly embrace, if we mean to make a reality our most fervent wish – that all Michigan's children be equipped to excel in the global economy and become engaged, vitally critical participants in our experiment of self-government and constitutional liberty. To proceed with the reforms will be difficult, to ignore them could prove fatal.

INTRODUCTION

THE CHALLENGE OF CHANGE

According to recent opinion polls, most Michigan citizens are satisfied with their public schools. Michigan has long been a leader in public education and continues efforts to improve it. However, as the State Board of Education recognizes, we are living in a period of rapid and pervasive change that require different actions.

To paraphrase Einstein, yesterday's solutions have become today's problems. Although much progress has been made, current educational standards and traditional ways of schooling have become obsolete. Dramatic cultural, economic, political, organizational, and technological changes have taken place throughout the world, creating new demands and expectations for education. In recent decades, agriculture, commerce, industry, and most major institutions have adopted fundamental structural changes and incorporated state-of-the-art technologies into their daily activities.

To succeed in this dramatically changing context, students must possess learning skills and knowledge not even in existence a few years ago. Yet, of all fields, education has been slow to change and embrace the Information Age. Many communities and educators seem too comfortable with an Industrial Age model of mass production learning and an Agricultural Age calendar that bind educators and students in time, place, and purpose.

THE INFORMATION AGE

The Information Age, on the other hand, offers freedom to students to learn and educators to teach, regardless of time, place, ethnicity, or social and economic status. Information technology allows educators to "diagnose" in very particular ways the needs and talents of individual students. An Information Age-focused education allows educators and students to individualize the learning programs for each student, while leveraging technology's ability to scale up for all students. Students would learn not only from their classroom teacher, but also from experts anywhere across the world at any time. Schools would transcend their four walls and become learning communities reaching out to access and incorporate a variety of traditional and non-traditional resources. Students would be encouraged to think critically, ask hard questions, conduct research, and craft solutions to difficult problems. Information technology would be used throughout the learning day, every day. Students and educators would work together to learn, debate, share information, and create knowledge. Educators would become even more crucial as they help guide students through interdisciplinary learning. An Information Age education is the learning process that will enable America to excel in the global economy and maintain its participatory system of self-government and constitutional liberty. In short, an Information Age, technology-rich, learner-focused environment is essential for ALL students to be prepared for 21st Century life.

THE MOST CRITICAL CHALLENGE:
CHRONICALLY UNDERPERFORMING SCHOOLS

Unfortunately, there are communities and schools in Michigan in which students' learning falls far short of current Michigan learning standards. Yearly improvement in such communities and schools is often miniscule or even absent. Of all Michigan's children, the students in such communities and schools need and deserve an education that will prepare them to succeed in the 21st Century. We need to act now, and boldly. The alternative is to further broaden the divide between students in chronically underperforming schools and their more fortunate counterparts.

Many changes must occur, especially in the chronically underperforming schools, to create learning environments in which ALL Michigan students will develop the requisite knowledge and skills to succeed in the Information Age. These changes must involve all aspects of society and people of all ages, occupations, and viewpoints. We are advocating bold, cosmic change. Only by embracing wholeheartedly such change can Americans ensure that they will maintain their freedoms and excel in the global economy.

OUR VISION

All learning organizations in Michigan will acknowledge that technology has and will continue to create an unprecedented rate of change that is pervasive throughout the world. Following the lead of global commerce and industry, schools will recognize that information technology can provide educational opportunities beyond those offered through traditional school models and that the very organization and management processes of educational institutions will be transformed. Stakeholders in the education system will aggressively support the premise that students' ability to find, analyze, and synthesize information is critical, and that information technology will play an increasingly fundamental role in teaching, learning, assessment, and educational management.

Enabled by a technology-rich learning environment, an Information Age education system will be marked by:

1. Equitable access for all learners, regardless of race, economic status or location, to high quality learning experiences tied to State standards **(Information Age education is equitable so all can meet State standards)**.

2. Use of sophisticated data to effectively monitor and manage educational performance and human and financial resources **(Data are used to manage and monitor learning and operations)**.

3. Powerful instructional models that engage learners through rich multi-media content, the Internet, and other interactive resources that also assure all children learn to read, to use mathematics, and to socialize with their peers **(Students learn media-rich content but also learn to read, compute, and get along with others (not cocooned)).**

4. High-level teaching practices, supported by specialized curriculum-related technologies, that promote media literacy and enhance students' abilities to find, analyze, and use information from many sources **(Superior teaching, supported by technologies, leads to media literacy and analysis (learn to separate wheat from chaff))**.

5. Individualized student learning through information technologies that lead to personal or small group learning on an on-call 24/7/365 basis **(Learn any time, from anywhere, independently or with others)**.

6. Greater student responsibility for learning through self-directed activities supplied by multiple providers and based on individual needs, interests, and preferences **(Students assume responsibility for their learning and can learn from a variety of sources)**.

7. A student-learning focus that replaces traditional age and grade-based groupings with grouping by learning mastery and maturity levels and that also replaces single subject classes within prescribed time limits with interdisciplinary learning environments **(Demise of wooden subject-based, time, and place-based education).**

8. Innovative tools and services that expand and improve communication and collaboration between and among educators, parents, students, and communities and help guide decision-making, instruction, assessment, and educational choice **(Everybody needs to know what is going on for responsible decision-making to occur)**.

9. The transformation of the organization and management of all education institutions to increase flexibility and openness to ongoing change **(All education institutions will change and continue to change)**.

10. Modernized teacher preparation programs that both use and encourage innovative use of technology in delivering instruction, preparing future teachers to experiment with new and innovative digital instruments, and interactive digital content as it develops **(New technology-based instructional preparation and continuous updating is vital for all educators).**

11. Teacher and administrator professional development that reflects lessons learned from the private sector, including highly specialized updating in content or technology "just-in-time learning", often delivered via technology **(All in education adopt efficiencies learned from the private sector)**.

THE CURRENT STATE OF AFFAIRS

The Task Force acknowledges and applauds the hard work of the State Board of Education, the Legislature, the Governor, educators, parents, foundations, businesses, and others in their efforts to introduce Information Age practices and technology in Michigan schools. A very general review of the State Board's reform efforts, *Historical Overview of the State Board of Education and Education Reform*, is attached as an Appendix to this report. Recent initiatives like the Michigan Virtual High School, teacher technology standards, the Technology Literacy Challenge Fund, the Ameritech Technology, Academy, the Gates Leadership Grant, and the Teacher Technology Initiative have made some progress in moving Michigan's schools into the Information Age.

Nevertheless, much of that progress has been disjointed, uncoordinated, and moved forward, without a bold, unifying vision from the State level. In some critical areas, Michigan is simply an average state. In other critical areas, such as the number of instructional computers and access to computers, Michigan lags behind neighboring states. In any event, no State has undertaken the necessary, dramatic, and bold change captured by the Vision described above. An Appendix to this report, *Information Age Practices and Technology in Michigan Schools*, reveals that Michigan is at a crossroads – we can continue to languish in the middle of the pack, or we can leverage our strengths and undertake the transformational Information Age reform needed to create the leading educational system in the world.

POLICY RECOMMENDATIONS

In light of the foregoing, this report makes four fundamental policy recommendations that, if followed, will propel Michigan's chronically underperforming schools into the Information Age. In fact, we expect that if these policy recommendations are implemented wholeheartedly throughout Michigan's schools, ALL of Michigan's students will be well-prepared for, and able to adapt to, whatever changes the future brings. The recommendations are:

> - **Educator Preparation and Development.** All educators and administrators will be prepared to use Information Age tools and learning techniques and processes.

> - **Standards and Assessment.** State and local academic standards, benchmarks, and assessments will reflect the knowledge and skills necessary for success in the Information Age.

> - **Transcending the Four Walls.** Schools will transcend their four walls and districts - distance learning and other learning resources will be integrated into the learning community.

> - **Virtual Districts.** Chronically underperforming schools and districts will form collaborative partnerships creating virtual districts by which all partners share best practices and resources.

EDUCATOR PREPARATION
AND
PROFESSIONAL DEVELOPMENT

INTRODUCTION

A very large percentage of our educators are not sufficiently prepared to use information technology effectively in the classroom, and addressing this situation is especially important for our chronically underperforming schools. There is evidence that when curriculum, pedagogy and technology are well aligned, learning improves. Teacher preparation and professional development in this arena are essential to ensure that student learning is current, dynamic, and engaging. To ensure quality educator preparation and development, we must provide (1) meaningful State standards, (2) sufficient financial support to meet the State standards, (3) a limited number of State endorsed programs to provide aligned choices for educators, (4) a support network for educators at the school level, and (5) incentives to meet and exceed the State standards.

POLICY

Based on the foregoing, adoption of the following policy is imperative:

> ➢ **All educators and administrators will be prepared to use Information Age tools and learning techniques and processes.**

KEY RECOMMENDATIONS

As the primary guiding authority over teacher preparation and educator professional development, the State Board of Education will undertake the following initiatives:

> ➢ In December, 2001, replace the outdated State Board standard for teacher preparation regarding technology (commonly referred to as the 7th Standard), with the 2000 International Society for Technology in Education (ISTE) standards, modified in light of the particular needs of Michigan and the Information Age Vision described above and to include administrators. The recommended new 7th Standard is set forth in Appendix III.

> ➢ In December 2001, require the Michigan Department of Education (MDE) to test adherence to the new 7th Standard in the Michigan Test for Teacher Certification beginning in 2002 as a demonstration project, in 2003 as part of the score, and 2004 as a minimal threshold requirement for certification.

➢ In December, 2001, adopt Information Age Standards for School Administrators, based on the product of the Collaboration of Technology Standards for School Administrators, as modified in light of the particular needs of Michigan and the Vision described above and consistent with the new 7th Standard. Modify accreditation criteria to ensure that school improvement plans will include professional development and adherence to those standards.

➢ Adopt a policy that (i) beginning with the 2002-2003 school year, all educators who have at least 4 continuing education units outstanding will obtain at least 1 continuing education credit related directly to the new 7th Standard, and (ii) beginning with the 2003-2004 year, all educators who have at least 4 continuing education units outstanding will obtain at least 2 continuing education credits related directly to the 7th Standard.

➢ By March 2002, adopt criteria for approving programs that apply to continuing education credits related to the 7th Standard, including criteria that the proposed professional development program has a successful track record, such as the Ameritech Technology Academy. The MDE shall promptly review applicable programs to enable educators to enroll no later than September 2002.

➢ Target criteria for the Technology Literacy Challenge Fund (TLCF) (implemented in 1997, which included the four pillars of the National Plan for Technology in Education) to professional development in alignment with these recommendations, with special emphasis on chronically underachieving schools. Develop additional grant criteria to gear funds toward such schools, to include teachers, principals, & other administrators.

➢ Adopt by March, 2002 an amendment to the Michigan Curriculum Framework that provides standards that educators will develop and use individual learning plans for students.

➢ Direct the MDE to support school buildings and districts to identify and select support personnel in the area of technology in chronically under performing schools.

In addition to the State Board of Education, effective implementation of this recommendation also requires action from the Governor and Legislature, Department of Education, educator preparation institutions, boards of education, superintendents, principals, teachers, and teacher unions. Roles for each are described in Appendix IV.

Measurable Outcomes of Success

➢ The new 7th Standard will be integrated into the Michigan Test for Teacher Certification as a demonstration project beginning in 2002. In 2003, the new 7th Standard will be included as part of the score, and in 2004 all candidates for teacher preparation will need to pass the portion of the test addressing the new 7th Standard in order to be certificated.

➢ During the 2002-2003 school year, all teacher and administrator preparation institutions will begin providing programs to meet the new 7th Standard and the Information Age Standards for School Administrators.

➢ All new teachers who are certificated in 2004 will meet the new 7th Standard. All school administrators graduating in 2004 will meet the Information Age Standards for School Administrators.

➢ Michigan schools will have a framework for professional development and best practices. As new technologies are introduced, there will be a standard method of dissemination and training.

➢ A limited number of professional development programs are endorsed and adopted by the Michigan Department of Education, no later than July 2002.

➢ By the 2003-2004 school year, no less than ten percent of education budgets, including a substantial portion for Information Age practices and technology literacy, will be dedicated to professional development for teachers and administrators.

➢ By the 2003-2004 school year, every school building will have a minimum of one full-time support person to assist with technical assistance, technology integration, and teacher support. As educators become more proficient, this position could be transitioned to other areas of instruction or to stay current with new educational technologies.

➢ By 2003-2004, random surveys of classrooms will be conducted to ensure that students are learning through an Information Age learning process.

➢ By 2005, every teacher and school administrator will understand the importance of educational technology in the classroom, the options available, and the expectations for performance.

CONTENT STANDARDS AND ASSESSMENT

INTRODUCTION

In addition to mastering the body of knowledge contained in the current Michigan Curriculum Framework, each child should possess the learning, decision-making, problem solving, and technology literacy skills essential to success in the new economy and to participating in our system of self-government and constitutional rights. To ensure that schools are providing students such skills, all students will be assessed using instruments that measure students' proficiency in connection with the knowledge and skills necessary for success in the Information Age. Similarly, schools and districts will also be assessed in connection with their efforts in providing opportunities for their students to obtain such knowledge and skills.

POLICY

Based on the foregoing, adoption of the following policy is imperative:

> **State and local academic standards and benchmarks, and assessments of schools, administrators, teachers, and students, must reflect the knowledge and skills necessary for success in the Information Age.**

KEY RECOMMENDATIONS

As the policymaker responsible for developing student content standards and providing the framework for educational accountability, the State Board of Education will undertake the following initiatives:

> Adopt new Learning, Problem Solving, and Decision-Making Content Standards as a part of the Model Core Academic Curriculum in December 2001. The recommended new content standards are in Appendix V.

> Approve performance benchmarks for the Learning, Problem Solving, and Decision-Making Content Standards no later than June 2002.

➢ Supplement the current Michigan Technology Content Standards with those portions (if any) of the National Educational Technology Standards for Students drafted by the International Society for Technology in Education that are not addressed in other content standards no later than June 2002.

➢ In December, 2001, revise the Accreditation Standards (or their successors) as follows:

♦ Add to Curricula and Staff requirements:

▪ All educators will be provided continuing professional development opportunities related to the Learning, Problem Solving, and Decision-Making Content Standards and the 7th Standard.

♦ Add to School Plan and Facilities requirements:

▪ The school possesses sufficient information technology to provide each student the opportunity to meet the Learning, Problem Solving, and Decision-Making Content Standards and to provide each educator with the opportunity to meet the 7th Standard and related professional development requirements.

♦ The School Improvement Plan requirement should be revised to read as follows:

▪ School improvement plans will address ensuring that all students have the ability to meet the Michigan Curriculum Framework, including the Learning, Problem Solving, and Decision-Making Content Standards, and providing each teacher and administrator professional development to meet the 7th Standard and Technology Standards for Administrators and related professional development requirements.

♦ Add to the Student Performance requirements:

▪ Each student will have an individual learning plan by which his or her academic performance and growth will be measured and tracked.

Implementation of these recommendations require actions from the Governor and Legislature, Department of Education, Department of Treasury, Michigan Department of Career Development, Center for Educational Performance and Information (CEPI), school boards, superintendents, principals, teachers, and teacher unions. Roles for each are defined in Appendix VI .

Measurable Outcomes of Success

➢ By 2004, more than 75% of students will meet the Learning, Decision-Making, Problem Solving, Technology Content Standards, and Career and Employability. The percentage of success will ratchet up every year thereafter, even as the sophistication and difficulty of the assessment tool rises.

➢ By 2004, every school will be successfully accredited as providing the intended Learning, Decision-Making, and Problem Solving; Technology; and Career and Employability skills to its students.

TRANSCENDING THE FOUR WALLS

INTRODUCTION

Although much progress has been made in recent years, many public schools still do not provide a broad range of educational opportunities for students and educators outside of the traditional class structure, day, or school calendar. Schools should be considered learning communities, and students, families, and educators (especially those attending chronically underperforming schools) should have the opportunity to transcend the four walls of the school building by accessing a number of public education options and choices that meet their needs, including long distance and virtual learning as well as learning opportunities that will be available on a 24/7/365 basis.

POLICY

Based on the foregoing, adoption of the following policy is imperative:

> ➢ **Schools will Transcend their Four Walls and Districts --**
> **Distance Learning and other Learning Resources**
> **Should Be Integrated Into the Learning Community.**

KEY RECOMMENDATIONS

Because the State Board of Education sets State level policies regarding appropriate learning practices, and the Michigan Department of Education sets regulations regarding those policies, these two policymakers are critical to this recommendation. Equally important, however, are intermediate school districts and regional education service agencies because these regional entities have the resources and opportunities to provide the necessary infrastructure to constituent districts and schools, especially chronically underperforming schools, to allow educators, families, and students to transcend the four walls. By offering a host of virtual learning programs, the Michigan Virtual High School will also be an invaluable policymaker for this recommendation.

THE STATE BOARD OF EDUCATION

➢ Adopt the proposed *Guidance on Virtual Learning - Educational Alternatives* pupil accounting rules as State Board policy, no later than December, 2001. The recommended policy is set forth in Appendix VII.

➢ Encourage virtual and long distance learning opportunities for all students by advocating for the implementation of the recommendations set forth below by key and other policymakers.

MICHIGAN DEPARTMENT OF EDUCATION

➢ Upon adoption of the *Guidance on Virtual Learning – Educational Alternatives* policy by the State Board, adopt and implement that policy as accounting guidelines as soon as possible.

➢ Collaboratively work with the Michigan Virtual High School to provide expanded access to age-appropriate on-line remediation tools, including tutorial services for at-risk students with different learning styles, with emphasis in the areas of math, science, reading, and writing, especially in connection with chronically underperforming schools.

INTERMEDIATE SCHOOL DISTRICTS/ REGIONAL EDUCATION SERVICE AGENCIES

➢ Acquire and coordinate an essential information technology infrastructure and provide technical resources to and for constituent chronically underperforming schools and others.

➢ Create and administer virtual classes, on-line materials, and virtual content for constituent chronically underperforming schools and others; join with others to create clearinghouses and collaborative programs for chronically underperforming schools and others.

➢ Encourage businesses and nonprofit organizations, such as Apple Computer, Cisco Systems, Compuware, IBM, Junior Achievement, Americorp, Milken Family Foundation, local and State governmental agencies, to create additional educational opportunities and make available other services to students and families.

MICHIGAN VIRTUAL HIGH SCHOOL

➢ Provide expanded quality on-line learning experiences for students that are highly interactive, collaborative, and promote just-in-time learning opportunities, targeted at chronically underperforming schools and others.

➢ Develop and make available on-line test preparation tools, including a MEAP review product, targeted at chronically underperforming schools and others.

OTHER POLICYMAKERS

Implementation of these recommendations will also require actions from the Governor and Legislature, school boards, superintendents, principals, foundations, businesses, and other community stakeholders. Roles for each are defined in Appendix VIII.

Measurable Outcomes of Success

➢ No later than the 2003-2004 school year, all students in chronically underperforming schools will have the opportunity to access distance learning to the extent beneficial to fulfill their educational needs.

➢ No later than the 2003-2004 school year, all students in chronically underperforming schools will have the ability to access educational resources at any time and on any day, either from home, at their school, or at community resource centers such as libraries, local colleges, universities, and museums.

➢ No later than the 2003-2004 school year, each chronically underperforming school will have at least one business or nonprofit organization engaged in the learning community to provide educational programs, technical assistance, or information technology.

VIRTUAL DISTRICTS

INTRODUCTION

By enabling new ways to collaborate, Information Age processes and technologies allow schools and districts to communicate with counterparts across the State and to connect their resources as partners in a virtual district. Each partner will benefit through the collective capabilities of all the collaborators and the reduction of their individual limitations so that all students in the virtual district have access to enhanced teaching and learning.

POLICY

Based on the foregoing, adoption of the following policy is imperative:

> **Chronically underperforming schools and districts will form collaborative partnerships creating virtual districts by which all partners share best practices and resources.**

KEY RECOMMENDATIONS

By establishing policies and standards by which virtual districts will be formed, the State Board of Education will be a key policy maker under this recommendation. The Michigan Department of Education, by establishing and administering a State level program fostering virtual districts, will join the State Board as a critical policymaker. The Legislature and Governor, by enacting enabling legislation, will play an indispensable role in developing and implementing the recommendation. Local boards of education, superintendents, and principals will all be critical to ensuring participation of chronically underachieving and other schools.

THE STATE BOARD OF EDUCATION

➢ By March 2002, approve standards for Virtual District collaborations between and among districts.

➢ By March 2002, approve a policy framework for recognition and incentives to encourage the formation of Virtual District collaborations.

➢ By March 2002, approve a policy framework for assessing Virtual District collaborations to ensure achievement of the standards.

MICHIGAN DEPARTMENT OF EDUCATION

➢ By May 2002, based on State Board of Education standards and policy frameworks, develop clear guidelines and measurable standards by which Virtual District collaborations will operate and be assessed.

➢ By May 2002, based on State Board of Education standards and policy frameworks, develop a concrete program of recognition and incentives for Virtual Districts, including funding for professional development, curriculum and instruction, and acquisition of Information Age tools. Such recognition and incentives will be awarded to districts and schools willing to form or join Virtual Districts, and may be increased based upon the success of their collaboration in meeting the standards. A sample of possible incentives is set forth in Appendix IX.

➢ Work with businesses and foundations to define a jointly funded pilot program for initial Virtual Districts by September 2002.

THE LEGISLATURE AND THE GOVERNOR

➢ Approve by June 2002 the program of recognition and incentives, including financial rewards to school districts and schools that form or join a Virtual District in accordance with the standards set by the State Board.

➢ Provide clear funding directions to the MDE by September 2002 that includes an appropriation for Virtual District collaborations.

SCHOOL BOARDS, SUPERINTENDENTS, AND PRINCIPALS

- ➢ Review the value to the district or underperforming school of forming or joining a Virtual District and engage in a Virtual District if valuable.

- ➢ Approve the allocation/reallocation of school resources in support of its collaboration in a Virtual District.

- ➢ Based on the superintendent's recommendation, identify one local board member who will become a visible champion of the Virtual District within the local district.

- ➢ Monitor how the local district is benefiting from the Virtual District, including gains in student achievement, improved teacher and administrator satisfaction, and performance and cost savings.

- ➢ Establish the funding needed to support the Virtual District, working with a collaborating district's school board and local community leaders. Establish a coordinated effort, and a clear point of leadership for the Virtual District, to emphasize the importance of this effort to the community and to ensure success.

OTHER POLICYMAKERS

Implementation of these recommendations will also require actions from foundations, businesses, and other community stakeholders. Roles for each are defined in Appendix X.

Measurable Outcomes of Success

➢ By the 2003-2004 school year, twenty-five percent of underperforming schools create or join a Virtual District in partnership with at least one other school that may or may not be underperforming. The Virtual District collaboration will involve at least three of the following:

♦ Collaborative curriculum development and lesson plans, enabled and supported by electronic tools and media.

♦ Joint professional development for administrators and teachers, planned, developed, and, when appropriate, delivered through electronic media and communications.

♦ Principal, teacher, and parent electronic forums, newsletters and information sharing.

♦ Joint classroom activities using electronic tools for collaboration and planning among virtual district learner teams.

♦ Joint acquisition and shared use of special high-end resources.

♦ Co-creation and implementation of virtual learning as defined by the recommendations of Transcending the Four Walls.

♦ Redesign of school administrative processes to take full advantage of powerful electronic tools, including scheduling, accounting, and student management applications, shared across a virtual district.

➢ Twenty-five percent of the Virtual District collaborations expand in their second year by adding partners and/or undertaking additional shared activities.

SUMMARY

The sweeping transformational power of the Information Age holds great promise for improving academic achievement of Michigan schools, especially for those schools that are chronically underperforming. Although much progress has been made, fundamental change must accelerate and broaden, if all our young people are to be equipped to excel in the 21st Century.

These fundamental changes are recommended by a Task Force purposefully comprised of non-traditional participants to bring fresh experiences and views. These include Ameritech Technology Academy, Merit Network, Michigan Association for Computer Users in Learning (MACUL), Cyber-state.org, Michigan Chamber of Commerce, Michigan Virtual University, Western Michigan University, as well as current teachers and administrators and current and former members of the State Board of Education. To reach the needed results for Michigan, we recommend that:

> ➢ All educators and administrators will be prepared to use Information Age tools and learning techniques and processes.

> ➢ State and local academic standards, benchmarks, and assessments will reflect the knowledge and skills necessary for success in the Information Age.

> ➢ Schools will transcend their four walls and districts - distance learning and other learning resources will be integrated into the learning community.

> ➢ Chronically underperforming schools and districts will form collaborative partnerships creating virtual districts by which all partners share best practices and resources.

These changes in education cannot be done and should not be attempted by educators alone. They require cooperation and support between and among educators, parents, students, business and industry, public and private agencies, and all citizens.

Our final recommendation is that the State Board of Education and Department of Education work with both traditional and non-traditional stakeholders and policymakers to adopt and support these recommendations and help them become reality in chronically underperforming schools and all other schools in Michigan. By helping all residents, educators, and students understand and embrace the Information Age in education, Michigan will once again be the national and world leader in educational excellence.

These recommendations constitute a complete package and framework for fundamental reform that State and local educators and leaders can use to embrace the Information Age. The recommendations will benefit all learners and educators, particularly those who have been trapped in underperforming schools. We recognize that some may view the recommendations as overly ambitious or untimely. Indeed, we acknowledge that we call for an aggressive program, requiring extensive changes in K-12 education, on both a State and local level, at a most difficult time. However, with a growing underclass of children all but assigned to failure, the cost of failing to act now is simply too great. In our age, all workers must excel, all community members must be engaged, and all citizens must be knowledgeable participants. The inability to meet that challenge places our economy, society, and republic at great risk. In short, this reform package is one which we must wholeheartedly embrace, if we mean to make a reality our most fervent wish – that all Michigan's children be equipped to excel in the global economy and become engaged, vitally critical participants in our experiment of self-government and constitutional liberty. To proceed with the reforms will be difficult, to ignore them could prove fatal.

HISTORICAL OVERVIEW OF THE STATE BOARD OF EDUCATION AND EDUCATION REFORM

Article VIII, Section 3 of the 1963 Michigan Constitution vests in the State Board of Education "leadership and general supervision" over K-12 public education and "general planning and coordination for all public education, including higher education." It also requires the State Board to inform the Legislature of funding requirements for public education.

Using its constitutional authority, the State Board has long played a key role in developing education policy in Michigan. For example, the State Board played a key role in 1969-70 in creating the Michigan Education Assessment Program (MEAP) and in 1971 in having Michigan become the first state in the nation to require special education for children with disabilities. The State Board was also prominent in shaping the debate on Michigan's school finance system from the mid-1980s until the reforms of Proposal A were approved by voters in 1993. The State Board also established and updates standards and curriculum guidelines in many areas of study.

In 1986-87, the State Board initiated policies to support four-year-olds at risk of academic failure, an effort strongly supported with consistently increased funding by the Legislature. Improved academic achievement ensued, leading the State Board, in 1999, to recommend funding to meet the needs of children from birth, in part because research shows that brain development in the first three years of life greatly impacts learning. State Board policies also played a major role in development of P.A. 25 of 1990, Michigan's education reform legislation. This legislation established the basis for the accountability and standards systems currently in place, including state academic standards and benchmarks, core curriculum outcomes, continuous progress school improvement plans, professional development, school accreditation, and an annual education report to the public.

In 1991, the State Board identified core curriculum outcomes in world studies, technological competencies, physical and health education, mathematics and science, life management, language arts, cultural and aesthetic awareness, career and employability skills and the arts. In 1993, the Legislature designated reading, writing, mathematics, science, government, American history, geography, and economics as the "Academic Core Curriculum," with MEAP the assessment tool. In accordance with this legislation, the State Board revised academic standards and provided benchmarks for local districts in forming the local curriculum and curriculum frameworks as instructional guides for teachers. These actions define a body of knowledge and skills to be learned and able to be applied by Michigan students regardless of where they live.

With regard to the focus of this Task Force Report, the State Board has long recognized the promise of the Information Age in public education. Beginning in 1984-85, the Board and the Michigan Department of Education (MDE), by competitive and discretionary grants, encouraged the use of technology for classroom instruction. A survey of technology capabilities in Michigan at that time revealed vast discrepancies in

knowledge, access, and use of technology in schools. In 1987, the State Board created its first technology plan, followed with updated plans in 1992 and 1997, when the State Board recognized Technology Plans needed more frequent updating and upgrading. The State Board adopted a comprehensive plan containing twenty-one recommendations developed by the State Superintendent's Educational Technology Advisory Group (ETAG) in 1998. That plan, and its December 2000 update, strongly influenced the thinking and some of the recommendations from this Task Force.

In spite of all school improvement efforts of the State Board and others, experience has shown that students in some buildings, districts, and communities consistently fall far short of state standards. The State Board, in focusing on schools where need for improvement is greatest, created five Task Forces (on teachers, principals, the Information Age, early childhood literacy, and school-community connection) to define strategies to assure that ALL Michigan children are well prepared for their future.

Information Age Practices and Technology in Michigan Schools

Michigan State Board of Education

Task Force on
Embracing The Information Age

November 15, 2001

INTRODUCTION

This report provides information on the status of the use of Information Age learning practices and technology in Michigan schools. As such it provides a context for the findings and recommendations of the State Board of Education Task Force on Embracing the Information Age. This report provides data on the use of Information Age practices and technology in Michigan schools, organizations, and agencies providing services pertaining to Information Age practices and technology for Michigan school and related resources.

CONTENTS

DATA ON THE USE OF INFORMATION AGE PRACTICES AND TECHNOLOGY IN MICHIGAN SCHOOLS

The context for the recommendations pertaining to the advancement of Information Age practices and technology in Michigan schools is the current deployment and use of information technology. Accordingly, the following tables provide a description of computer access in Michigan schools. All of the data in these and related tables were derived from a study collected in January 2001 by Harris Interactive and reported in "Technology Counts 01" in *Education Week on the Web.* The study was done through phone interviews. The interviews averaged 16 minutes a call, and were conducted by Harris' telephone-research centers in Youngstown, Ohio, and Rochester, N.Y. Additional information on the survey can be found at: http://www.edweek.org/sreports/tc01/

Table One: **Students per Instructional Computer**

	Michigan	U.S.
Total MI/ U.S.	5.1	4.9
High Poverty Schools	7.0	5.3
Low Poverty Schools	5.0	4.7
High Minority Schools	7.5	5.5
Low Minority Schools	4.9	4.6

Table One shows that Michigan schools were close to the United States median but just slightly below the median with regard to the number of computers per students as compared with the entire nation. In Michigan, there was one instructional computer for every 5.1 students while in the United States there was one computer for every 4.9 students. Similarly, Michigan schools were close to the United States median for low poverty and low minority schools, but Michigan schools had less access to computers for high poverty and high minority schools than was generally the case for schools in the United States as indicated by the United States median for students per instructional computer.

Table Two – **Students per Multimedia Computer**

	Michigan	U.S.
Total State or U.S.	7.7	7.9
High Poverty	11.2	8.8
Low Poverty	7.4	8.0
High Minority	10.5	9.4
Low Minority	7.5	7.9

Table Two presents the data for multimedia computers (i.e., computers with capacity for audio and video display). The situation in Michigan as compared to the United States was similar to the data for instructional computers. In Michigan, as elsewhere, the ratio of computers to pupils is higher (i.e. fewer computers per students) since such computers are newer and more costly. The differences revealed in Table One pertaining to high minority and low income schools are also replicated with multimedia computers as well.

Table Three – **Students per Internet Accessible Computer**

	Michigan	U.S.
Total State or U.S.	8.7	7.9
High Poverty	12.9	10.4
Low Poverty	8.4	7.7
High Minority	14.7	10.5
Low Minority	8.3	7.6

Table Four – **Percentage of Schools with Internet Access**

	Michigan	U.S.
Total State or U.S.	93%	94%
High Poverty	90%	92%
Low Poverty	94%	96%
High Minority	88%	91%
Low Minority	94%	95%

Tables Three and Four indicate the availability of access to the Internet in Michigan schools. Once again, Michigan students in general are near the United States median with regard to computers that are connected to the Internet. The disparity between high minority and low-income students, however, also reappears in these data.

While the percentages for schools connected to the Internet in Michigan, as in other states, appears to be high, it should be noted that schools that have even only one computer that is connected to the Internet are counted as a connected school in reporting the percentage of schools connected. Accordingly, the number of useful Internet connections for instructional purposes for students is almost certainly lower.

Michigan students have less access to instructional computers and to the Internet than do students in surrounding states. With regard to the number of students per instructional computers, states surrounding Michigan have a more favorable student to computer ratios: Ohio – 4.4, Indiana – 3.7, Wisconsin – 3.7, Illinois — 4.9. (Michigan 5.1) Also, these states have a more favorable ratio of students per Internet connected computers: Ohio – 4.9, Indiana – 6.8, Wisconsin – 6.7, Illinois – 7.8. (Michigan – 8.7)

Table Five – **Percentage of Schools Where the Majority of Teachers are "Beginners" in Using Computers**

	Michigan	U.S.
Total State or U.S.	31%	28%
High Poverty	35%	36%
Low Poverty	29%	25%
High Minority	32%	34%
Low Minority	30%	26%

Table Six - **Use of Computers**

	Michigan	U.S.
Percentage of 4th grade teachers who use a computer at least once or twice a week to teach language arts	25%	26%
Percentage of 4th grade students who use a computer at least once or twice a week for schoolwork	32%	29%
Percentage of schools where at least fifty percent of teachers use the Internet for instruction	56%	63%
Percentage of schools where at least fifty percent of teachers have a school based Internet account	75%	77%

Tables Five and Six present the data for use of computers. These data provide impressionist information on the use of computers in schools. They suggest that more and more teachers in the United States and in Michigan have obtained at least basic computer literacy. Yet, in Michigan as throughout the United States, there is still much work to be done in order to fully leverage the use of computers as an integral element in instruction.

To the extent that Michigan aspires to be a leading state with regard to the access of information technology for Michigan students, these data are not reassuring. On all of the indicators in the above tables Michigan schools are in the middle rather than among the top echelon of states. The data also suggest concerns in Michigan with regard to the "digital divide" or disparity of resources for affluent and majority population in contrast to the less affluent and minority population in Michigan.

MAJOR ORGANIZATIONS, AGENCIES, AND PROJECTS PERTAINING TO THE IMPROVEMENT OF THE USE OF INFORMATION AGE PRACTICES AND TECHNOLOGY IN MICHIGAN SCHOOLS

I. MICHIGAN DEPARTMENT OF EDUCATION

The Michigan Department of Education (MDE) has responsibility for a number of programs and activities pertaining to Information Age practices and technology in Michigan schools. One of these tasks is the development of the State of Michigan Technology Plan. At present, MDE, in contrast to most of the other states, does not have a director of educational technology. Typically, the development of the state technology plan falls under the aegis of the office of the state educational technology director. The development of Michigan's educational technology plan was coordinated by the Office of Budget, Contracts, and Grants.

The State Technology Plan is the official statement of the goals and practices necessary to reach the goals for the State of Michigan. The State Technology Plan currently in effect was put into place in 2000 and is an update of the 1998 Plan. This plan can be found at: http://www.mde.state.mi.us/tplan/final2000.pdf

The following are other initiatives of the MDE.

Technology Literacy Challenge Fund (TLCF)

Through the five cycles of the Technology Literacy Challenge Fund grant program, MDE has targeted funds to districts with low technology to support their efforts in improving the level of equitable access to technology-delivered learning opportunities as well as to build infrastructure. Local districts identified that over $17 million in TLCF awards went toward the purchase of equipment in the 1998-2000 timeframe. Each year of the program included funding for projects at the ISD level designed to improve the level of access by the special education population.

Instructional Technologies Across the Curriculum (ITAC)

This program was developed under the direction of the MDE to support the Michigan Curriculum Framework (MCF) by serving as a guide for K-12 teachers in integrating technology into the curriculum. The publishing of the National Education Technology Standards for Students (NETS-S) by the International Society for Technology in Education (ISTE) identifies student technology competencies as well as providing support for educators in using technology as a tool to improve student learning. The current goal is to revise the ITAC document to align with the NETS-S document. Educational technology resources provided to Michigan teachers in their efforts to integrate technology into the curriculum include the Michigan Teacher Network (MTN), a clearinghouse of core content curriculum materials, and Best Practices in Using Technology, a CD-ROM containing model lesson plans.

Technology Standards for Teacher Preparation

In addition to the NETS-S, MDE is examining the impact of the ISTE NETS for Teachers on the state's "seventh standard" that guides teacher preparation programs in Michigan. Putting aside whether the work of the State Board's Task Force is to be implemented, a task force of educators has begun to review the current seventh standard to ensure the standard is appropriately aligned with the revised national standard while meeting state objectives. This is a cooperative effort involving higher education, K-12 practitioners, and the Consortium for Outstanding Achievement in Teaching with Technology (COATT). While the State currently has no standards for practicing teachers, the NETS-T is being considered as a guiding framework for examining best practices in professional development through TLCF. This activity is being coordinated by the MDE Office of Professional Preparation Services.

Professional Development of Teachers

Support for professional development for teachers on integrating technology into the teaching and learning process comes from several fronts. MDE's direct efforts and cooperative projects include the following:

- Directing TLCF local grant recipients to target 20-40% of grant dollars towards professional development activities; supporting regional grants for professional development during Cycles 2, 3 and 4; supporting the Michigan Technology Implementation Project in Cycle 4 that provided over thirty workshops during the Summer of 2001 through the Sustained Learning Regions focusing on integrating technology into the curriculum.

- Participation in the Ameritech Technology Academy (ATA) project, a building-based approach designed to train 500 building teams to lead professional development programs in their schools. The ATA creates a system for filtering training on the school building level, and touches schools on a grassroots level by training 4-person teams to be trainers of others in their buildings.

- Sponsoring statewide educational technology conference sessions targeted for district technology coordinators through Western Michigan University and the Michigan Association of Computer Users in Learning (MACUL).

- Collaboration with the Michigan Virtual University on statewide professional development initiatives to address the needs of the teachers that received laptop computers through the Teacher Technology Initiative (TTI) approved by the Governor and Legislature. Further collaboration is taking place on the Gates Grant award to Michigan for the purpose of providing training in the area of administrative leadership, with a focus on utilizing technology to increase student achievement.

Technology Planning

Statewide support for technology planning over the last two years was implemented to assist districts in improving the technology planning process in conjunction with the school improvement process. A partnership with Gratiot-Isabella ISD and funding from the TLCF program resulted in the development of the MDE Technology Planning Website, statewide in-service for ISD plan reviewers, and technical assistance tools for technology planning. This website can be found at:
 http://www.mde.state.mi.us/tplan/final2000.pdf

II.   MERIT NETWORK

Merit is the non-profit organization that was established by the state supported universities in Michigan to provide networking services. Merit played a major role in implementing connection of Michigan schools to the Internet in the 1990s, including facilitating projects across Michigan under the provision of a settlement with Ameritech which was known as the "sharable earnings settlement." Merit is the Internet service provider for approximately 75% of the K-12 schools in Michigan.

Merit's dial-in service now totals about 14,200 lines and reaches essentially every location in Michigan with phone access to the Internet. Merit provides a unique infrastructure network for the university, library, and school personnel who use Merit as their internet service provider.

Merit develops and promotes advanced Internet services for research and education. Merit's regional network in Michigan connects universities, community colleges, K-12 schools, libraries, state agencies, and cultural organizations. Through these organizations, Merit serves more than one million people in Michigan every day.

Merit's Center to Support Technology in Education develops educational and support programs aimed at assisting and promoting the infusion of learning technologies into educational institutions, with a focus on K-12 schools. The Center draws on the education, technology and networking experience within Merit staff and member institutions to develop innovative information projects.

From an earlier focus on small staff development seminars in schools and libraries, the Center today is developing resources and projects that provide advanced support to Michigan educators and students. These projects are primarily supported through foundation awards or grants obtained by Merit in partnership with Michigan schools and libraries.

Among the specific services provided by Merit are the following:

- Michigan Teacher Network. (http://mtn.merit.edu) The network is an online clearinghouse of over 5,000 resources for educators, with primary emphasis on educational resources for teachers that are linked to the Michigan Curriculum Standards and Benchmarks. The network also contains resources for administrators, and technology support staff. Popular Michigan-centric features include the job listing section, and listings of educational organizations and education-related events. Michigan Teacher Network has seen tremendous growth in use, and now is experiencing nearly 10,000 hits per day.

- Teach for Tomorrow. (http://tft.merit.edu) This professional development program assists teachers in gaining skills and integrating Internet-related technology into their curriculum. Trained local facilitators mentor groups of teachers using a set of online materials. Merit's Teach for Tomorrow has trained almost 750 facilitators who have in turn provided training via the Teach for Tomorrow materials and methodology for over 7,000 teachers. Another 5,000 teachers have used the materials without the benefit of facilitators, from outside Michigan.

- Technology Staffing Guidelines. (http://techguide.merit.edu) This resource contains information and guidelines on determining the appropriate level of technology support for a school district.

III.   MICHIGAN VIRTUAL UNIVERSITY (http:/mivu.org)

Michigan Virtual University (MVU) is a private, non-profit corporation established by the State of Michigan. MVU provides e-learning opportunities to Michigan's workforce — current and future — spawning a new model of lifelong learning. MVU does not independently grant degrees or certificates but serves as a central access point for courses and services and a channel for Michigan's schools, colleges and universities to make their online offerings more widely available.

The following are MVU initiatives specifically focused on Michigan K-12 schools:

Information Technology Training Initiative

School and college students, teachers and staff — regardless of position — can improve their information technology (IT) skills free through 2003. The IT Training Initiative provides Michigan non-profit schools and colleges with nearly 1,000 self-paced, start-anytime short courses that can help individuals improve learning skills, teaching skills and work skills. Teachers and faculty can even use these courses as base content for new courses or as tutorials.

The courses cover a broad range of IT and management topics, including:

- PC basics, Internet navigation, word processing, spreadsheets, databases, e-mail and desktop publishing.
- Programming languages, client/server development tools, relational databases, intranet development and mainframe issues.
- Certification learning paths (e.g. Microsoft, Oracle, Cisco, Novell)
- Management, communications and professional development.

MVU Teaching Community

From best practices to the latest trends, MVU is a resource for educators to keep pace with today's education technology. MVU provides online instructor programs (hundreds of educators have already participated), content development tools and access to MVU developed instructional design quality standards. Through MVU's agreement with the MDE, teachers can submit MVU certificates of completion to accredited CEU sponsors for continuing education credit. Recently, MVU was the lead organization in coordinating the Teacher Technology Initiative, in which more than 91,000 teachers participated.

IV. MICHIGAN VIRTUAL HIGH SCHOOL

The Michigan Virtual High School (http://www.mivhs.org) is an online resource for rural, urban and suburban high schools providing courses that students wouldn't otherwise have access to — all taught by certified Michigan teachers. MVHS is administered by MVU. MVHS offers:

- Course variety. Students can select from such basic courses as algebra, English, environmental science, computer basics and foreign languages.

- Advanced Placement. Before MVU linked up with Michigan State University and Apex Learning, Inc. (started by Microsoft co-founder Paul Allen), more than 40 percent of Michigan high school students did not have access to AP courses at their local schools. Today, this partnership makes AP courses available statewide. In the 2000-01 school year, 867 students used MVU scholarships for AP courses, 450 teachers enrolled for the teacher tools and 8,000 students used the exam review course provided free by MVU.

- Oracle Internet Academies. 150 Michigan high school students and their teachers are obtaining specialized database training through this MVHS-sponsored program.

V. GATES LEADERSHIP GRANT

The Bill and Melinda Gates Foundation awarded a $6 million grant for professional development among Michigan superintendents and building principals in the effective use of technology to improve student learning and organizational efficiency. The goal is to reach at least 80 percent of these school administrators over the next three years. The grant proposal was submitted by MVU in collaboration with the Michigan Association for Secondary School Principals, Michigan Elementary & Middle School Principals Association, Michigan Association for School Administrators, MDE, Michigan Association for Computer Users in Learning, and Michigan State University. The new program builds upon the Teacher Technology Initiative.

VI.   TEACHER TECHNOLOGY INITIATIVE

The goal of the Teacher Technology Initiative (TTI) is to support teaching and learning in Michigan's public schools and public school academies through a significant one-time investment in Michigan's K-12 teachers. To accomplish this, all public school teachers who apply are being provided with a personal computer, software, remote Internet access (dial-up) and Web-based professional development, or other technology tools. MVU was appointed as the administrative agency for this project, and worked collaboratively with various teacher, school, association, and business stakeholder groups to facilitate an effective statewide implementation. As a result, nearly 90,000 Michigan educators have received or will be receiving laptop computers or other technology to improve their technology skills and use of technology in the classroom.

VII.   MICHIGAN INFORMATION NETWORK

The Michigan Information Network has been the point organization in Michigan in securing funds for Michigan schools under the Universal Service Fund "E-Rate" program. The E-Rate (education rate) is a national program designed to make telecommunications services and other technology solutions affordable for all elementary and secondary schools (public and private) and libraries. The program is designed to provide schools and libraries discounts of 20-90% (depending on need) on telecommunications services, Internet Access, and the internal connections or networking equipment needed to connect classrooms to the Internet and other distance learning and resource-sharing opportunities. Schools must meet the statutory definition of an elementary or secondary school found in the Elementary and Secondary Education Act of 1965. They must not be operating a for-profit business and may not have an endowment exceeding $50 million.

Between 1998 and 2000, $187,141,579.00 in funds to provide support for connecting Michigan schools to the Internet has been received though the E-Rate. ($54,494,752 in 2000, $77,068,595 in 1999, $55,578,223 in 1998).

VIII. TEAM

In the spring of 2000, Cyber-state.org entered into an ambitious collaboration focused on addressing the technology needs of Michigan's schools. The new start-up initiative was called TEAM, Technology in Education Alliance for Michigan. TEAM is comprised of educational organizations and IT business innovators. The purpose of TEAM to develop and promote a common vision, greater statewide awareness, strategic initiatives, and public policy that results in more effective use of technology and resources to improve teaching and learning in Michigan. TEAM organizations are currently developing a report that they expect will provide a consensus position on needs and opportunities in Michigan for the use of information technology to improve the learning environment in Michigan schools.

IX. MICHIGAN ASSOCIATION FOR COMPUTER USERS IN LEARNING (MACUL)

The Michigan Association for Computer Users in Learning (MACUL) is a 501 (c) (3) non-profit organization of over 6,000 educators established in 1975. MACUL, an organizational affiliate of the International Society for Technology in Education (ISTE), provides a state association for educators involved with educational technology. MACUL provides for the sharing and exchanging of ideas, techniques, materials and procedures for the use of educational technology through conferences, publications, initiatives and support services.

The following are initiatives of MACUL:

Ameritech Technology Academy

This statewide professional development program trains a core of 2,000 education experts - called Ameritech Technology Scholars - who work with schools to better integrate technology in the curriculum and use technology in a sustained and effective manner. The Academy has a direct impact on enhancing instruction through the use of technology by over 15,000 other educators in Michigan schools over the term of the program. The Academy provides training and year round follow up, a mentor program to sustain the learning experience and link educators for improved support, and a clearinghouse to gather and disseminate the best practices of educational technology.

Program partners in the Ameritech Technology Academy are SBC Ameritech, MACUL, the Michigan Department of Education, the Michigan Virtual University, the Michigan Institute for Educational Management, the Michigan Association of School Administrators, the Michigan Education Association, the Office of Michigan Governor John Engler, and the Office of U.S. Senator Carl Levin.

Annual Statewide Conference

The MACUL conference annual draws nearly 5,000 educators from Michigan, neighboring states and Canada. For three days, attendees learn about best practices in educational technology and have access to an extensive exhibit area highlighting hardware, software and related materials.

MACUL Learning Interchange

The MACUL Learning Interchange provides a comprehensive database of lesson plans and best practices for Michigan educators on the MACUL web site, http://www.macul.org

School Technology Achievement Recognition Award

The School Technology Achievement Recognition (STAR) award program, sponsored by MACUL with funding from SBC Ameritech, recognizes schools and educators who have made exemplary use of educational technology. Last year awards totaling $30,000 were given to exemplary schools in the STAR program.

Student Technology Showcases

Students demonstrate creative technology projects in events held at both the MACUL annual conference and at the Michigan Capitol in Lansing. This year's Student Technology Showcase held at the Capitol raised awareness with over 70 Michigan legislators.

X. OTHER ORGANIZATIONS

Michigan schools are also served by many of the professional organizations that provide services to Michigan schools pertaining to technology. The following list includes many of those organizations and agencies:

- Coalition of Michigan Subject Matter Education Organizations
- Council for Preservice Technology
- Educational Teleconsortium of Michigan
- Learning Institute for Technology Education
- Michigan Association for Administration of Special Education
- Michigan Association for Distance Learning
- Michigan Association for Media in Education
- Michigan Association for Supervision and Curriculum Development
- Michigan Association of Community/Adult Education
- Michigan Association of Intermediate School Administrators
- Michigan Association of Math/Science Centers
- Michigan Science Teachers Association
- Michigan Association of Nonpublic Schools
- Michigan Association of Public School Academies
- Michigan Association of School Administrators
- Michigan Association of School Boards
- Michigan Association of Secondary School Principals
- Michigan Chamber of Commerce
- Michigan Community College Association
- Michigan Congress of Parents, Teachers & Students
- Michigan Council for the Social Studies
- Michigan Council of Teachers of English
- Michigan Council of Teachers of Mathematics
- Michigan Council of Vocational Administrators
- Michigan Education Association
- Michigan Elementary and Middle School Principals Association
- Michigan Federation of Teachers
- Michigan Industrial and Technology Education
- Michigan Library Association
- Michigan Manufacturers Association
- Michigan Reading Association
- Michigan School Business Officials
- Middle Cities Education Association
- Regional Educational Media Center Association of Michigan
- Small Business Association of Michigan
- Tech Corps Michigan

WWW RESOURCES PERTAINING TO CHRONICALLY UNDERPERFORMING SCHOOLS

The issue of improving the academic achievement of chronically underperforming schools is one of the most pressing problems in the United States and Michigan. Although there is no "magic bullet" to solve the problem, significant thinking has emerged about how to provide a good basis for addressing the problem. The following have been selected as providing helpful information and resources:

The National Education Association is working with their state and local affiliates to help improve the low performing schools. Their Website contains a number of resources and source materials to assist in this process. Their Website is:
http://www.nea.org/issues/lowperf/resources.html

The American Federation of Teachers has sponsored efforts to improve low performing schools and has a Website with links to information and resources on this topic. Their Website is:
http://www.aft.org/edissues/rsa/guide/resolution.htm

The U.S. Department of Education provides information about initiatives in the United States to improve poor performing schools.   Their Website is:
http://www.ed.gov/pubs/turning/intervene.html

A Harris poll conducted in March 2001 surveyed public opinion on how to improve under performing schools. Their Website is:
http://www.harrisinteractive.com/harris_poll/index.asp?PID=226

A report from the U.S. Department of Education focuses on this issue. While the section on Federal programs and funding is dated, the report contains much useful information. Their Website is:
www.ed.gov/pubs/turning/

THE NEW 7ᵀᴴ STANDARD

THE VISION OF THE
STATE BOARD OF EDUCATION

All learning organizations in Michigan will acknowledge that technology has and will continue to create an unprecedented rate of change that is pervasive throughout the world. Following the lead of global commerce and industry, schools will recognize that information technology can provide educational opportunities beyond those offered through traditional school models and that the very organization and management processes of educational institutions will be transformed. Stakeholders in the education system will aggressively support the premise that students' ability to find, analyze, and synthesize information is critical, and that information technology will play an increasingly fundamental role in teaching, learning, assessment, and educational management.

Enabled by a technology-rich learning environment, an Information Age education system will be marked by:

1. Equitable access for all learners, regardless of race, economic status or location, to high quality learning experiences tied to State standards **(Information Age education is equitable so all can meet State standards)**.

2. Use of sophisticated data to effectively monitor and manage educational performance and human and financial resources **(Data are used to manage and monitor learning and operations)**.

3. Powerful instructional models that engage learners through rich multi-media content, the Internet, and other interactive resources that also assure all children learn to read, to use mathematics, and to socialize with their peers **(Students learn media-rich content but also learn to read, compute, and get along with others (not cocooned)).**

4. High-level teaching practices, supported by specialized curriculum-related technologies, that promote media literacy and enhance students' abilities to find, analyze, and use information from many sources **(Superior teaching, supported by technologies, leads to media literacy and analysis (learn to separate wheat from chaff))**.

5. Individualized student learning through information technologies that lead to personal or small group learning on an on-call 24/7/365 basis **(Learn any time, from anywhere, independently or with others)**.

6. Greater student responsibility for learning through self-directed activities supplied by multiple providers and based on individual needs, interests, and preferences **(Students assume responsibility for their learning and can learn from a variety of sources)**.

7. A student-learning focus that replaces traditional age and grade-based groupings with grouping by learning mastery and maturity levels and that also replaces single subject classes within prescribed time limits with interdisciplinary learning environments **(Demise of wooden subject-based, time, and place-based education).**

8. Innovative tools and services that expand and improve communication and collaboration between and among educators, parents, students, and communities and help guide decision-making, instruction, assessment, and educational choice **(Everybody needs to know what is going on for responsible decision-making to occur)**.

9. The transformation of the organization and management of all education institutions to increase flexibility and openness to ongoing change **(All education institutions will change and continue to change)**.

10. Modernized teacher preparation programs that both use and encourage innovative use of technology in delivering instruction, preparing future teachers to experiment with new and innovative digital instruments, and interactive digital content as it develops **(New technology-based instructional preparation and continuous updating is vital for all educators).**

11. Teacher and administrator professional development that reflects lessons learned from the private sector, including highly specialized updating in content or technology "just-in-time learning", often delivered via technology **(All in education adopt efficiencies learned from the private sector)**.

Based on the foregoing Vision of the State Board of Education, the following are standards for Michigan teachers and administrators (referred to together as "educators"):

I. **INFORMATION AGE LEARNING AND TECHNOLOGY OPERATIONS AND CONCEPTS.**

Educators demonstrate a sound understanding of Information Age learning processes and technology operations and concepts. Educators:

A. demonstrate a firm understanding of, and ability to use the concepts embedded in, (1) the Information Age Vision of the State Board of Education's set forth above, (2) Information Age learning processes, knowledge, skills, and understanding as described in the Michigan Model Core Curriculum, especially the Learning, Problem Solving and Decision-Making Content Standards, and (3) technology literacy for students.

B. continual growth in Information Age knowledge and skills to prepare Michigan students to excel in the Information Age and stay abreast of current and emerging technologies and the rapid and dramatically changing context of the Information Age.

II.   PLANNING AND DESIGNING LEARNING ENVIRONMENTS AND EXPERIENCES.

Educators plan and design effective learning environments and experiences supported by technology. Educators:

A. design developmentally appropriate learning opportunities that apply technology-enhanced instructional strategies to support the diverse needs of learners.

B. apply current research on teaching and learning with technology when planning learning environments and experiences.

C. identify and locate information technology resources and evaluate them for accuracy and suitability.

D. plan for the management of technology resources within the context of learning activities.

E. plan strategies to manage student learning in a technology-enhanced environment.

F. plan and design strategies to determine, assess, and meet the individual needs of each student.

III.   TEACHING, LEARNING, AND THE CURRICULUM.

Educators implement curriculum plans that include methods and strategies for applying technology to maximize student learning. Educators:

A. facilitate technology-enhanced experiences that address content standards and student technology standards.

B. use technology to support learner-centered strategies that address the diverse needs of all students.

C. apply technology to develop students' higher order skills and creativity by, among other things, teaching the Michigan Model Core Curriculum, especially the Learning, Problem Solving and Decision-Making Content Standards.

D. manage student learning activities in a technology-enhanced environment.

E. actively use information technology to provide students with the opportunity to excel in the knowledge and skills identified in the Michigan Model Core Curriculum, especially the Learning, Problem Solving and Decision-Making Content Standards.

F. work collaboratively with each student and each student's family to develop, maintain, and follow an individual learning plan for each student.

G. work to individualize learning for students and meet the individual needs of each student, regardless of age and grade.

IV. ASSESSMENT AND EVALUATION.

Educators apply technology to facilitate a variety of effective assessment and evaluation strategies. Educators:

A. apply technology in assessing student learning of subject matter, including the Michigan Model Core Curriculum, especially the Learning, Problem-Solving and Decision-Making Content Standards, using a variety of assessment techniques.

B. use technology resources to collect and analyze data, interpret results, and communicate findings to improve instructional practice and maximize student learning.

C. apply multiple methods of evaluation to determine students' appropriate use of technology resources for learning, communication, and productivity, and periodically use information technology to assess the individual proficiencies, strengths, and challenges of each student. Use such information to design and maintain the individual learning plan of each student.

V. PRODUCTIVITY AND PROFESSIONAL PRACTICE.

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Educators use technology to enhance their productivity and professional practice. Educators:

A. use technology resources to engage in ongoing professional development and lifelong learning.

B. continually evaluate and reflect on professional practice to make informed decisions regarding the use of technology in support of student learning.

C. apply technology to increase productivity.

D. use technology to communicate and collaborate with peers, parents, and the larger community in order to nurture student learning.

VI.   SOCIAL, ETHICAL, LEGAL, AND HUMAN ISSUES.

Educators understand the transformation of American society and the world into the Information Age and the enhanced expectations of the professional educators in relation to that transformation. Educators understand the unique role of America in the world, both historically and currently, including its critical role in ushering in the Information Age. Educators understand the social, ethical, legal, and human issues involved in the Information Age and surrounding the use of information technology in PK-12 schools and apply those principles in practice. Educators:

A. model and teach legal and ethical practices related to embracing the Information Age and technology use.

B. apply Information Age learning techniques and technology resources to enable and empower learners with diverse backgrounds, characteristics, and abilities.

C. identify and use Information Age learning techniques and technology resources that affirm diversity and American principles of the rule of law, equality, self-government, and constitutional rights.

D. promote the safe and healthy use of technology resources.

E. facilitate equitable access to Information Age learning techniques and technology resources for all students.

EDUCATOR PREPARATION AND DEVELOPMENT RECOMMENDATIONS FOR ADDITIONAL POLICYMAKERS

THE LEGISLATURE AND THE GOVERNOR

➢ Adopt statutory revisions providing the MDE with the flexibility (including boosting exam fees) needed to implement the appropriate assessment processes for teacher preparation in relation to the new 7th Standard and educator professional development in relation to the new 7th Standard and the Information Age Standards for School Administrators.

➢ Establish a professional development challenge fund (in the State Aid fund or from other funds) geared towards the new 7th Standard and the Information Age Standards for School Administrators for chronically underperforming schools that (i) have a plan that meets State and federal requirements, (ii) have or will obtain matching funds, and (iii) demonstrate real savings from having participated in the Universal Service Fund (USF) that have been reinvested into additional technology, upgrades, training, related expenses, or have a viable plan to obtain such savings and undertake such reinvestment. The challenge fund should support teachers, principals, and other administrators.

➢ Continue and expand the Technology Literacy Challenge Fund (TLCF) (implemented in 1997, which included the four pillars of the National Plan for Technology in Education), with a special emphasis on chronically underachieving schools.

➢ Following the model of the Golden Apple Award, the Michigan Merit Awards, and others, develop a program that rewards chronically underperforming schools with cash awards and other incentives for exceeding the new 7th Standard or the Information Age Standards for School Administrators on a school-wide basis.

MICHIGAN DEPARTMENT OF EDUCATION

➢ No later than June 2002, develop a tool kit, including models of individualized learning plans, which link the new content standards, learning methods, and assessment initiatives, and vignettes for early elementary, elementary, middle, and high school use of the plans.

- ➢ Communicate the expectations of the new 7th Standard to teacher and administrator preparation institutions. Conduct mini, highly targeted on-site reviews of each teacher preparation institution from September 2002 through August 2003 to determine if they are actually preparing students for the current and new 7th Standard, and determine corrective measures for each preparation institution not meeting the enhanced standards within one year.

- ➢ Communicate the expectations of the Information Age Standards for School Administrators to educator preparation institutions, and by July 2002, develop guidelines for programs that meet such standards.

- ➢ Promptly review programs to enable educators to enroll for new 7th Standard-related professional development programs no later than September 2002.

- ➢ Work with schools, intermediate school districts (ISDs), regional educational service agencies (RESAs), and educator preparation institutions to develop plans to provide educators adequate time to dedicate to professional development.

- ➢ Take a lead role with the State Board of Education to lobby the Legislature and others to implement these recommendations.

- ➢ Implement programs and standards adopted by the State Board of Education and the Legislature in targeted ways to boost academic achievement in chronically underperforming schools.

- ➢ Support school buildings and districts in identifying and selecting support personnel in the area of technology and Information Age practices.

EDUCATOR PREPARATION INSTITUTIONS

- ➢ Meet and exceed the new standards identified by the State Board of Education for the new 7th Standard no later than 2003.

- ➢ Meet and exceed the new standards identified by the State Board of Education for the Information Age Standards for Administrators no later than 2003.

- ➢ Provide leadership to K-12 schools in technology integration issues. Serve as the link between student teachers and the field.

- ➢ Prepare student teachers to serve as change agents in K-12 schools to help integrate technology in the classrooms.

SCHOOL BOARDS, SUPERINTENDENTS, AND PRINCIPALS

➢ Work with the MDE on a plan to enable educators to have adequate time to dedicate to professional development. At least 20 percent of professional development time and budgets should be designated to learn about Information Age teaching and learning practices.

➢ Begin to treat information technology like other indispensable equipment and supplies – much like chalkboards, pencils, paper, and lab equipment. Adjust budgets by, among other things, reducing textbook purchases, and use the saved funds to purchase technology and on-line access to more accurate, more stimulating, richer, and more interesting, useful, and interactive content.

➢ Take an active role in the advocacy and development of policies and resulting actions. Take responsibility for meeting expectations; exceed expectations.

➢ Serve as a support network for educators.

➢ Communicate and support training opportunities.

➢ Work with local principals to identify and employ local support personnel in the area of technology for each school building.

➢ Work to identify and employ local support personnel in the area of technology for each school building.

TEACHERS AND TEACHER UNIONS

➢ Take an active role in the development of policies and resulting actions. Take responsibility for meeting expectations and exceed those expectations.

➢ Assist in advocacy for policies in Lansing.

➢ Actively participate in professional development opportunities.

➢ Provide constant constructive feedback to educational leadership on needs and student improvement/best practices.

- ➢ Take advantage of local support personnel in the area of technology at his/her school building.

- ➢ Negotiate to obtain sufficient professional development time, without sacrificing classroom time with kids or unduly driving up costs.

MICHIGAN CURRICULUM FRAMEWORK CONTENT STANDARDS ON LEARNING, PROBLEM SOLVING, AND DECISION-MAKING

OVERVIEW

During the past few decades, nearly all of our institutions have undergone a dramatic transformation into the Information Age. To be successful in this new environment, our students must obtain a set of skills and knowledge that far exceeds the expectations of just a few years ago. The core subject matter knowledge required today, and in the future, is reflected, in part, in the existing Michigan Curriculum Framework Content Standards on Arts Education, Career and Employability Skills, English Language Arts, Mathematics, Science, Social Studies, and Technology. Although knowing the content of these key academic subjects is critical to the education of our students, it is no longer sufficient. Indeed, the pressures of our global economy and the requirements of our participatory democracy now require that each worker and citizen possess a set of higher order intellectual skills related to how to learn, address problems, and make decisions. In addition, these core skills are critical to students in connection with their roles as family members, consumers, and lifelong learners. These core skills required today and in the future are reflected, in part, in the Michigan Curriculum Framework Content Standards on Learning, Problem Solving and Decision-Making. Not unlike the content standards on Career and Employability Skills, these Learning, Problem Solving and Decision-Making Content Standards apply across the entire range of subject matter content and are intended to be integrated into all curricular and extracurricular programs, the counseling program, and the life of the school and community.

Locally developed academic and extracurricular programs embodying these State content standards will ensure that all students have the ability to learn, address problems, and make decisions in an informed, efficient, and productive way that meets the challenges of the global economy and participatory democracy, as well as the challenges they face as family members, consumers, and lifelong learners.

STANDARDS

A student possessing learning, problem solving, and decision-making skills meeting State standards will:

➢ Research, retrieve, and understand information and knowledge from a wide range of primary and secondary sources in various forms and contexts.

➢ Interpret, manipulate, synthesize, and evaluate information and knowledge in an accurate, holistic, critical, and comprehensive fashion.

➢ Organize, present, and communicate information and knowledge in a variety of media in a logical, effective, and comprehensive manner.

➢ Review a question, problem, or issue by identifying and examining, analyzing, and evaluating various considerations, arguments, and perspectives.

➢ Draw and justify conclusions, decisions, and solutions to questions, problems, and issues by, among other things, using reason and evidence, specifying goals and objectives, identifying resources and constraints, generating and assessing alternatives, considering intended and unintended consequences, choosing appropriate alternatives, and evaluating results.

➢ Communicate to others questions, problems, and issues; communicate to others proposed conclusions, decisions, and solutions to such questions and problems; and negotiate among and between others to resolve divergent interests around such questions, problems, and issues.

➢ Read, think, speak, and listen critically in connection with any academic and nonacademic subject in ways that (1) meet universal intellectual standards, including clarity, accuracy, precision, relevance, depth, breadth, and logic, and (2) include valuable intellectual traits, including intellectual humility, intellectual courage, intellectual empathy, intellectual integrity, intellectual perseverance, faith in reason, and fair-mindedness.

➢ Engage in holistic, multi-disciplinary learning.

➢ Engage in learning in an active, exploratory, independent, and inquiry-based self-directed fashion.

➢ Engage in learning in a collaborative, cooperative, and team based fashion with people of diverse backgrounds and abilities and contribute to a group process with ideas, suggestions, and efforts.

➢ Create knowledge by raising and identifying previously unconsidered or unidentified questions, problems, and issues; creating new primary research, data, information, and knowledge; and create new approaches to solving or considering questions, issues, and problems.

➢ Adhere to the highest ethical and legal standards in conducting all of the above.

Measurable Outcomes of Success

➢ By 2004, more than 75% of students will meet the Learning, Decision-Making, Problem Solving, Technology Content Standards, and Career and Employability skills. The percentage of success will ratchet up every year thereafter, even as the sophistication and difficulty of the assessment tool rises.

➢ By 2004, every school will be successfully accredited as providing the intended Learning, Decision-Making, and Problem Solving, Technology, and Career and Employability skills to its students.

CONTENT STANDARDS AND ASSESSMENT RECOMMENDATIONS FOR ADDITIONAL POLICYMAKERS

MICHIGAN DEPARTMENT OF EDUCATION

➢ Develop Benchmarks for the Learning, Problem Solving, and Decision-Making Content Standards developed for SBE consideration no later than May 2002.

➢ Develop recommendations to the SBE to supplement the Michigan Technology Content Standards previously adopted by the SBE with those portions (if any) of the National Educational Technology Standards for Students drafted by the International Society for Technology in Education, not otherwise addressed in other content standards no later than May 2002.

➢ Work with the Department of Treasury to revise portions of the MEAP test (or create a new portion) to address Learning, Problem Solving, and Decision-Making, Technology, and Career and Employability Content Standards and Benchmarks, with increasing sophistication and minimum standards each year, no later than September 2003. The MDE should consider incorporating or modeling, among others, ACT Work Keys and the Basic Information Technology Skills Test.

➢ Work with the Department of Treasury to make MEAP an on-line, real time assessment diagnostic tool for use by educators, parents, and students, no later than September 2003.

➢ Post on-line all School Improvement Plans, Annual Reports, and related data, no later than September 2003.

➢ Develop and implement vigorous communications strategies regarding changes.

MICHIGAN DEPARTMENT OF TREASURY; DEPARTMENT OF CAREER DEVELOPMENT; MERIT BOARD; CEPI; AND RELATED AGENCIES

➢ Work with MDE to revise portions of the MEAP test (or create a new portion) to address the Learning, Problem Solving, and Decision-Making, Technology, and Career and Employability Content Standards and Benchmarks, with increasing sophistication and minimum standards each year no later than September 2003. These Departments and agencies should consider incorporating or modeling, among others, ACT Work Keys and the Basic Information Technology Skills Test.

➢ Work with MDE to make MEAP an on-line, real time assessment diagnostic tool for use by educators, parents, and students no later than September 2003.

THE LEGISLATURE AND THE GOVERNOR

➢ Adopt statutory revisions providing the MDE, the Department of Treasury, and other agencies with the flexibility (including revising the format and time or creating a new portion) needed to implement appropriate revisions of the MEAP to assess the Learning, Problem Solving, and Decision-Making, Technology, and Career and Employability Content Standards.

➢ Amend Section 1278 of the Revised School Code to include Learning, Problem Solving, and Decision-Making, Technology, and Career and Employability Content Standards as a part of the Model Core Academic Curriculum.

➢ Amend Section 1277 of the Revised School Code to provide that school improvement plans will address professional development for teachers and administrators in alignment with the new 7th Standard and the Information Age Standards for School Administrators, content standards, benchmarks, and curricula, and individual learning plans.

➢ Amend Section 1204a of the Revised School Code to provide that annual reports must include the following:

♦ The status of each school's implementation of the recommendations made by the Task Force.

  ♦ Disclosure of each school's technology plan and progress.

♦ The computer – student ratio and general state of information technology equipment, training, and related matters.

SCHOOL BOARDS, SUPERINTENDENTS, AND PRINCIPALS

➤ Align and implement local standards, benchmarks, and curricula to meet the Model Core Academic Curriculum Content Standards and Benchmark revisions (within six months of each such revision.)

➤ Align and implement student and school assessments with State and local standards, benchmarks and curricula.

➤ Revise local assessments to incorporate SBE assessment guidelines no later than June 2002.

TEACHERS AND TEACHER UNIONS

➤ Design and use academic programs and lesson plans to ensure that students learn the knowledge and skills expected of revised local standards, benchmarks, and curricula.

➤ Use assessment guidelines and accreditation standards when developing lesson plans, programs, grants, and other related matters.

Guidance on Virtual Learning – Educational Alternatives

The following guidelines were developed to recognize various virtual learning alternatives and their pupil accounting implications. The descriptions are categorized by type of pupil or situation.

"Traditional" Pupils

There are many virtual learning options available for pupils in a traditional school setting in which most or all of the instruction takes place in the school building itself during the regular school day. Many school districts are offering non-traditional courses, such as classes via the Internet, which may not require regular attendance or the typical amount of "seat time" required of most classes included on a pupil's schedule.

Examples of current practice involving traditional pupils include:

➢ "Distance Learning" opportunities have been available to pupils under cooperative arrangements among districts for years and have not posed a problem for pupil accounting. In these situations, there is two-way communication between the teacher of record and the pupils, via television monitors, even though the teacher is physically remotely located from the pupils. An adult is required to be in the classroom with the pupils.

➢ Computer or Internet courses in which pupils participate <u>during the school day while in attendance in the school building</u> pose no problem for pupil accounting because the pupils are in regular daily attendance.

➢ Courses taken as a part of <u>dual enrollment through a postsecondary institution</u> also pose no problem since "seat time" and the location of the class are not issues in counting dual enrollment classes toward a pupil's membership.

Virtual Classes

Interest is growing in offering options to pupils to take *virtual* classes providing pupils with the **flexibility to participate <u>outside of the regular school day</u> and/or <u>off-site</u>**. The following are the guidelines for generating State aid for that portion of a pupil's schedule that reflects a course which does not require regularly scheduled "seat time" in the school building.

➢ Any course in which a pupil participates must be approved by the local district, the applicable intermediate school district/regional educational service agency, the Michigan Virtual University, the Michigan Virtual High School, an accrediting agency accepted by the Michigan Department of Education, or the Michigan Department of Education, and must **generate credit** toward the pupil's diploma in order to count toward the pupil's membership. All courses approved by such entities will be considered to generate credit toward the pupil's diploma.

- The pupil must be enrolled in the public school district and must also concurrently be enrolled in and attending at least one course offered by the district in which credit is earned and regular attendance is required.

- The **teacher-of-record** must be identified. The teacher-of-record need not be the instructor associated with the virtual course and, therefore, may not necessarily hold a Michigan teacher certification. In the event the teacher-of-record is not a teacher from the applicable school district, an **on-site mentor** must also be assigned to the pupil and the *virtual* course who will be available to the pupil for assistance and to monitor the pupil's progress in the *virtual* course. The on-site mentor need not be physically present during the virtual course. The on-site mentor must be an educator employed, engaged by, or approved by the school district. The on-site mentor would be responsible for reviewing any final exam or project that would indicate the pupil's success in the course. The course and the teacher-of-record will appear on the pupil's class schedule (even if regular attendance is not required).

- **Each course will count as one class** in the pupil's schedule and will generate that portion of an FTE membership that a comparable course offered by the school would generate. This is similar to the pupil accounting for dual enrollment classes.

- Because a pupil's enrollment in the course will generate State aid, the district is required to pay associated **tuition charges** for the course similar to the tuition requirement for dual enrollment, as described in Section 21b of the State School Aid Act. A district may choose to provide more financial support than the minimum described in that section.

The pupil must enroll by and **be in attendance on the appropriate count day** (September or February) or during the 10-day / 30-day period during the class time designated for the course on the pupil's schedule. As with any pupil, actual attendance in at least one course during the school day is necessary to count toward the district or building's 75% attendance requirement.

TRANSCENDING THE FOUR WALLS
RECOMMENDATIONS FOR ADDITIONAL POLICYMAKERS

SCHOOL BOARDS, SUPERINTENDENTS, AND PRINCIPALS

➢ Offer virtual learning opportunities to students, including distance learning, most especially the Michigan Virtual High School.

➢ Encourage the creation of virtual classes and on-line materials and content for third parties to access; join with others to create clearinghouses and collaborative classes.

➢ Require at least all high school students to take no less than one on-line course from the Michigan Virtual High School or other quality distance learning institution as a condition for graduation.

➢ Utilize on-line career planning services and educational development plan (EDP) tools, such as My Dream Explorer,^{TM} to establish an individualized plan for all students.

➢ Make greater use of email and Web-based tools to support and expand school-to-home communications.

THE LEGISLATURE AND THE GOVERNOR

➢ No later than April 2002, replace the word "school" with "learning community" throughout the Revised School Code and State Aid Act, and rename the "Revised School Code" the "Learning Community Framework" and the "State Aid Act" the "Learning Community Support Act."

FOUNDATIONS, BUSINESSES,
AND OTHER COMMUNITY STAKEHOLDERS

- ➢ Engage chronically underperforming schools with information technology, funds, technical training, and volunteers to enable them to successfully access virtual learning opportunities.

- ➢ Engage chronically underperforming schools and others to create additional educational opportunities, and make available other services to students and families.

Sample of Possible Incentives for
Virtual District Participation
(not intended to be binding or an exclusive listing of possible incentives)

➢ Leadership development for superintendents, principals, and school board champions which includes on-going consultation from experts in virtual organization design and support. Bonus for executive leadership in meeting MDE standards.

➢ Funding to allow every local teacher to collaborate in lesson planning and instruction with at least one peer in the Virtual District. This includes allocation for release time and visits to partner's school/classroom.

➢ Seed funding to redesign, automate, and integrate student management systems so that aggregate and individual student data are available for each school participating in the Virtual District. All attendance and performance records are electronically captured, eliminating manual record keeping by teachers, principals, and other school district personnel.

➢ Recognition by MDE for model curriculum developed by Virtual District partners.

➢ Investment in instructional materials and tools so that each classroom in the Virtual District is an information technology rich environment. This includes individual computers and Internet access for students, teachers, and principals, as well as access to an array of instructional software.

➢ Establishment of video classrooms and individual two-way video stations in every school participating in the Virtual District so that students and teachers across the Virtual District can participate in project teams to achieve instructional goals.

➢ Shared technical resource teams to manage information technology in individual schools and districts, including Virtual District application service provision and managed service provision for greater efficiency and cost management of individual school and district technical needs.

➢ State of the art networking system to support high-speed connectivity among all participating schools and offices within the Virtual District.

➢ Annual Virtual District professional conference.

➢ Development of web resources for every school in the Virtual District so that parents and other community members can connect to school resources from home and work.

VIRTUAL DISTRICTS
RECOMMENDATIONS FOR ADDITIONAL POLICYMAKERS

FOUNDATIONS, BUSINESSES,
AND OTHER COMMUNITY STAKEHOLDERS

➢ Engage chronically underperforming schools with information technology, funds, technical training, and volunteers to enable them to take full advantage of Virtual District opportunities.