

School District of Denmark Information Technology Literacy Plan

June 30, 2009 - June 30, 2012

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Board Approval Date: April 20, 2009
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Executive Summary

In the School District of Denmark, our Professional Learning Community will be technologically literate life-long learners who are able to interact successfully in a technological environment to achieve their personal, educational and workplace goals by skillfully using information and communication technology tools to access, retrieve, and use information school-wide, community-wide, nationally, and internationally.

District stakeholders on the Information Technology Committee met to review district TAGLIT (Taking A Good Look at Instructional Technology) Data and review relevant educational research to create this plan.

Research shows that it takes 32 hours over three years for a teacher to feel prepared to teach with technology.¹ The district will offer increased professional development on effective integration of information and technology skills through the district PDT (Professional Development Time) Model.

The district will continually look for ways to improve efficiency and cost effective methods of implementing information and technology.

- The district has moved away from stand-alone printers to centralized network printers.
- The district has adopted a new software adoption process.
- The district will continually study the needs of students and staff for access to information and technology resources.
- The district has improved the network infrastructure to increase bandwidth and speed of the network.
- The district has worked on developing local assessments of the district ITCL (Information Technology Communication Literacy) Standards and benchmarks.
- The district has provided more LCD projectors to meet standards and allow students to become more involved in project-based learning.

Currently the district has two certified library media specialists. Research shows that "School library media centers can contribute to improved student achievement by providing instructional materials aligned to the curriculum; by collaborating with teachers, administrators and parents; and by extending their hours of operation beyond the school day."²

The current Library Media Program in Denmark:

¹ Taking the Total Cost of Ownership to the Classroom, [A School Administrator's Guide To Planning for the Total Cost of New Technology](http://www.classroomtco.org/tco2class.pdf) Consortium of School Networking, July 2001
<http://www.classroomtco.org/tco2class.pdf>

² Close Up: NCLB- Improving Literacy through School Libraries.: NCLB The Achiever, September 15,2004, Vol. 3, No. 13.

- Provides accessible reading materials for a wide range of interests on a wide range of topics
- Supports reading across the curriculum
- Provides access to computers and other information technologies for all students, especially for those who do not have home access
- Teams with teachers whenever possible to teach information technology skills in projects tied to the curriculum
- Serves on building leadership teams, curriculum committees, and in other leadership functions
- Communicates regularly with parents and the community about the library program and participates in public relations efforts of the district

Providing certified library media staff is key in maintaining the quality of these programs. In addition, the district will explore ways to have more flexible scheduling at the elementary school to increase time for collaboration with teachers on projects, possibly holding grade level instructional sessions for teachers on how to use the media center. The district will also share resources and information with the community.

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Introduction

Research that Supports This Plan

The digital age is no longer in the future; rather, it is here and now. Students and staff members alike are faced with interacting with technology in a variety of ways. Providing the appropriate learning opportunities for them that require applications that focus on problem solving and increase student learning through inquiry-based, constructivist approaches are necessary if technology is to become a learning tool rather than just a productivity tool. It is within this framework that the Information Technology Plan was revised to better reflect current and future practices that link the technology department to the library/media centers and ultimately to students and achievement.

A recent report by The Partnership for 21st Century Skills (2008) entitled, *21st Century Skills, Education & Competitiveness*, provides three reasons why technology is important to our nation's economy:

- **Reason # 1:** Fundamental Changes in the Economy, Jobs and Business- *"Over the last several decades, the industrial economy based on manufacturing has shifted to a service economy driven by information, knowledge and innovation" (p. 2).*
- **Reason # 2:** New, Different Skill Demands- *"Advanced economies, innovative industries and firms, and high-growth jobs require more educated workers with the ability to respond flexibly to complex problems, communicate effectively, manage information, work in teams and produce new knowledge" (p. 6)*
- **Reason # 3:** Two Achievement Gaps- *"For the past decade, the United States has focused nationally on closing achievement gaps between the lowest- and highest performing students- a legitimate and useful agenda, but one that skirts the competitive demand for advanced skills" (p. 8).*

Students and staff members alike are faced with interacting with technology in a variety of ways. Providing the appropriate learning opportunities for them that require applications that focus on problem solving and increase student learning through inquiry-based, constructivist approaches are necessary if technology is to become a learning tool rather than just a productivity tool.

In constructivist teaching pedagogy, the roles of teachers and students change. Teachers facilitate learning environments in which students construct deep meaning through solving problems by building on prior knowledge structures. The following table shows the differences between transmission and constructivist teaching styles.

Table 1

	Transmission Pedagogy	Constructivist Pedagogy
Classroom Activity	Teacher-Centered Didactic	Student-Centered Interactive
Teacher Role	Fact Teller Always Expert	Collaborator Sometimes Learner
Student Role	Listener Always Learner	Collaborator Sometimes Expert
Instructional Emphasis	Facts Memorization	Relationships Inquiry & Invention
Concept of Knowledge	Accumulation of Facts	Relationships Inquiry & Invention
Demonstration of Success	Quantity	Quality
Assessment	Multiple-Choice Items	Portfolios and Performances
Technology Use	Drill and Practice	Communication, Collaboration, Information Access, Expression

Sandholtz, Ringstaff, & Dwyer (1997)

21st Century Learning experiences require 21st Century Tools. Tools such as wikis, blogs and podcasts, also called “collaborationware” allow users to “deepen levels of learners' engagement and collaboration within digital learning environments” (Kamel Boulos, Maramba, & Wheeler, 2006).

In an increasing global society, students will need to be able to collaborate with people they have never met before. “If students are to be successfully prepared for the demands of higher education and the increasingly competitive work environment, they must have access to the right coursework. As students move through secondary school, they must be provided with greater rigor in their core classes; that is, the basic courses needed for graduation. But students also must have access to courses beyond the basic core, courses that push them even harder intellectually, deepening their knowledge and understanding in key content areas and helping them to hone high level research and thinking skills. In short, students need access to advanced coursework” (US Department of Education, 2007). Providing options for advanced coursework using technology can be one way to provide these opportunities.

These Wisconsin Information Technology Literacy Standards connect and inter-relate current perspectives in information literacy, media literacy, and technology literacy into a unified conceptual framework (Instruction, 1998). In order to effectively integrate these standards into core curriculum there need to be strong working connections between library media specialists, regular education teaching staff and the technology department.

A recent study on Wisconsin Library Media Centers shows the importance of a strong library media program on student achievement.

- Key Finding #1: Schools with full-time certified library media specialists and full-time library aides have higher performance on the WKCE.
- Key Finding #2: Schools where the library media specialist spends more time on instructionally-related student and teacher activities have higher WKCE scores.
- Key Finding #3: Teachers who aligned WMAS for Information and Technology Literacy to their lessons found school library media programs more helpful to student performance.
- Key Finding #4: Schools with greater library media program resources for collections and technology have higher performance on the WKCE.
- Key Finding #5: Library media specialists help students acquire unique skills not taught in the classroom and information and technology skills essential for students in the 21st century (Smith, 2006).

This research provides the basis by which this Information Technology Plan was revised to better reflect current and future practices that linked the technology department to the library/media centers and ultimately to students and achievement.

References:

US Department of Education (2007). *Innovations in Education: Connecting Students to Advanced Courses Online*. Retrieved December 28, 2008, from http://www.ed.gov/admins/lead/academic/advanced/report_pg7.html#7

Wisconsin Department of Public Education (1998). *Wisconsin Model Academic Standards*.

Kamel Boulos, M., Maramba, I., & Wheeler, S. (2006). Wikis, blogs and podcasts: a new generation of Web-based tools for virtual collaborative clinical practice and education. Retrieved September 8, 2008, from <http://www.biomedcentral.com/1472-6920/6/41/>

The Partnership for 21st Century Skills (2008). *21st century skills, education & competitiveness: A resource and policy guide*. The Partnership for 21st Century Skills.

Smith, E. (2006). *Student learning through Wisconsin school library media centers*

District Information & Technology Vision Statement

In the School District of Denmark, our Professional Learning Community will be technologically literate life-long learners who are able to interact successfully in a technological environment to achieve their personal, educational and workplace goals by skillfully using information and communication technology tools to access, retrieve, and use information school-wide, community-wide, nationally and internationally.

District Information & Technology Mission Statement

Integration of the Information and Technology Literacy standards throughout the curriculum will enhance independent learning by preparing today's learners to gather, evaluate and process information to make informed decisions in a knowledge-based digital society. Teachers, library/media specialists and technology specialists will function as a coordinated unit to make curriculum linkages for the development of 21st Century Skills for all learners.

Background

The School District of Denmark serves all or portions of the Village of Denmark; the Towns of Eaton, Glenmore, Ledgeview, Morrison and New Franken in Brown County; the Town of Franklin in Kewaunee County; and the Village of Maribel and the Towns of Cooperstown and Gibson in Manitowoc County. It encompasses approximately 165 square miles and is situated along Interstate Highway 43. Many of the residents work in the Green Bay metro area.

The district is comprised of six schools including a charter school, which is located on the second floor of the middle school. Approximately 1,574 students and 200 staff members utilize technology in a variety of ways to enhance everyone's performance as part of the District Team.

It is made up of six schools:

- Denmark Early Childhood Center
- Denmark Elementary School
- Denmark Middle School
- Denmark High School
- Denmark Empowerment Charter School
- Northeast WI Online Charter School

Student Demographics:

Number of Students	% of Students White	% of Students African American	% of Students Hispanic	% of Students Asian	% of Students Native American	% of Students Receiving F/R Lunch
1,574	94.8%	0.5%	1.8%	1.7%	1.2%	11.1%

**2007-2008 data*

History of Technology:

Approximately fifteen years ago, the district started to invest in technology.

Prior to 1998, the middle school and elementary school had computers in the classrooms, some network printers, and selected locations had dial-up Internet connections.

In 1998, the district renovated the high school. At the same time, the district got Internet and Email access. The district hired an Educational Support Coordinator to assist with the new technology.

In the past five years, the district has worked on continually streamlining technology processes and making them more cost effective.

- The district purchased PowerSchool as its student management system.
- The district started to change from workstations connecting to hubs to dedicated switch ports.
- The district purchased Eclipse, a curriculum mapping software.
- The district moved to Voice Over IP for its phone system.
- The district cut the IT staffing by $\frac{3}{4}$ of a position.
- The district has improved and increased its commitment to anti-virus/anti-spam software.
- The district has done a good job of upgrading the infrastructure to meet increasing user demands.
- Access has steadily improved especially with the addition of laptop computers.
- Zen Works has been added which allows IT staff to manage and work on computers remotely.
- E-SPED, an Internet system that allows special education staff to do their IEP's, has been added.
- Plato
- GW-Extranet
- GW-Archive
- AlertNow
- Aristotle
- Parent Access to PowerSchool

- Lunch Monies Program On-Line
- Moodle
- Gaggle
- Customized Local Filtering of Websites
- Net-Op (Teacher Access to Student Computer Monitors)
- Use of SmartBoards
- Technology University
- Summer Academy
- Big 6
- Learn 360
- Neos and Alpha-Smarts

History of the Library Media Program:

The district has had a library media program since its conception. Over the history of the program, the district has shown a strong commitment to the library media program and has strived to provide information resources to its constituents.

When the middle school was built, the library facility was a vast improvement over the existing facility. At that time, the sixth grade was moved to the middle school. The elementary school library shared their collection with the middle school based on their curricular needs.

In 1998, the high school administrator, the library media specialist, and the director of the Brown County Library worked to create a combined library as part of the new high school building plan. District students/staff, as well as community members, now have access to inter-library loans.

Research also shows that strong library media programs with appropriate staffing guidelines improve student achievement.³ Currently the district has two certified library media specialists; one library media specialist works at the high school and one works at the elementary school. The middle school has a certified teacher who oversees the program.

The elementary program has always included grades K-5. More recently, early childhood was added to their schedule. In addition, kindergarten students walk to the high school library once per month for story time with the Brown County Library clerks and for book checkout. The elementary library media specialist meets with students on a weekly basis. The elementary school PTO has contributed significant funds toward a new library media center at the Early Childhood Center, and to both the elementary school Book Room and Parent Place.

All district library media specialists and media center staff personnel have been trained in the Big 6 Research/Problem-Solving Model through an EETT Grant.

The elementary and middle school libraries use Follett to Lexile new materials. Their current catalog can be run through a system analysis to maintain current materials and to help evaluate and guide future purchases.

³ Ratzner, Mary Student Achievement and School Libraries: Empirical Evidence from 15 State Studies 1992-2004 (AASL) <http://www.crbsls.org/slasa.student-achievement.html>
Denmark Information & Technology Literacy Plan

Planning Process:

The District took the TAGLIT (*Taking a Good Look at Instructional Technology*) online survey to use as needs assessment data to help in the planning process in November 2008. One hundred percent of teachers and one hundred percent of eighth grade students took the survey.

The District had a variety of stakeholders participate in the planning process. The following individuals served on the planning committee:

Tony Klaubauf	Superintendent
Dave Harper	Early Childhood Center Principal; Director of Curriculum
Joan Langenberg	Technology Network Coordinator
Theresa Olsen	Technology Educational Support Coordinator
Denise Flickinger	High School Library Media Specialist
Katie Dowling	Middle School Media Center Coordinator (Certified Teacher)
Diane Randerson	Elementary School Library Media Specialist

The committee reviewed TAGLIT data, relevant education research, and worked on developing the mission and vision for the plan, and action plans based on identified needs.

Community Resources and Adult Literacy Providers:

The Denmark Branch of the Brown County Library System is housed in the High School Library Media Center. This collaboration model has successfully met the needs of both the school community and area patrons. Staff members from both institutions work together to better serve their constituents.

Partners in Collaborative Efforts:

As part of the Bay Area Consortium, which has received EETT (Enhancing Education Through Technology) funding, the district has effectively collaborated with area school districts in implementing both staff development programs and using information and technology to support the Big 6 research model. The four districts (Seymour, Pulaski, Green Bay and Denmark) have maximized time and talents through this partnership.

The district is actively involved in the Greater Green Bay Area Chamber of Commerce Partners in Education program. Partnerships are often developed through this program since the Chamber serves as a primary resource link to area school districts. Additionally, by having the Brown County Library housed in the high school library, additional community resources can be easily identified for working with both students

and staff. The district also informs teachers about staff development opportunities that are offered through CESA #7 and area districts.

Computers in the high school are available to the general public during the day while high school classes are in session and during the evening hours in which the Brown County Library operates. In addition, wireless Internet access is now available. The Brown County Sheriff's Department utilizes this service. Parents and community members are invited to presentations that students create using multimedia resources, such as DESK News (Denmark Elementary School Kids) at the elementary school. This practice helps to create an awareness of how technology is used in the classroom.

The local business association (DCBA) is also a resource that can be tapped when needs are identified. These activities are conducted on an as needed basis.

The district has recently joined the Eastern Wisconsin Instructional Technology Consortium (EWITC). The EWITC Coordinator for this area is a member of the School District of Denmark staff.

Needs Assessment/Current Status

Identification of Underserved Populations:

While NCLB (No Child Left Behind) focuses only on reading and math, the district's goal is to educate the whole child; consequently, resources also reflect the other content areas including specialty areas.

The special education staff uses E-SPED, an Internet-based software application, to do all of their IEP's.

PLATO is used by students for remediation and for credit recovery. Students participating in homebound instruction also use PLATO.

The district also uses NWEA Map Testing in Grades 5-8 to help identify student progress and needs.

The district uses Fast ForWord as a reading intervention program in Grades 2-5. In addition, the district uses the SRI (Scholastic Reading Inventory) in Grades 2-5. Kindergarten and Grade 1 use Star Early Literacy. The middle school and high school use the SRI for a small number of students.

The district is continuing to categorize their library collections by Lexile levels.

The Northeast Wisconsin Online Charter School is available to any student in the school. It is most often used by students taking Advanced Placement courses and any students who have unique needs that cannot be met by a particular term's schedule.

Monitoring, Evaluation and Revision Analysis and Assessment of Progress Toward Previous Plan's Goals

Educator Proficiency Action Plan:

Goal: Student achievement will improve through effective integration of the information technology standards into the curriculum

Objectives: By June 2009, teachers will show increased proficiency in integrating information technology benchmarks into the curriculum.

Action:	Indicator of Success	Status
Data retreat group will identify professional development needs and planning professional development opportunities	Professional development needs identified.	Completed/Ongoing
Offer at least one PDT day a year where teachers rotate or have breakout sessions (<i>i.e. printers/copiers, PowerGrade for new staff</i>)	PDT day agenda	Completed/Ongoing (Tech. University)
Add time for collaboration between library media specialists and teachers during PDT days	Increased collaboration between library media specialists and teachers	Ongoing
Encourage teachers to participate in CESA #7 training events	Increased participation in offerings	Ongoing

Effective Teaching & Learning Practices Action Plan

Goal: Student achievement will improve through effective integration of the information technology standards into the curriculum

Objectives: By June 2009, the district will have an assessment strategy in place to measure student achievement on information technology literacy skills

Action	Indicator of Success	Status
Identify main benchmarks of what we want students to know and be able to do at each grade level through curriculum mapping process	Grade level benchmarks identified	Completed
Communicate expected ICTL for their grade level to teachers and provide professional development	Teachers are informed of ICTL benchmarks for their grade level, Revised Matrix	Completed
Curriculum maps should be incorporate ICTL Standards using Eclipse.	ICTL benchmarks are aligned to core curriculum	Ongoing
Create assessments related to ICTL benchmarks developed by teachers	Common assessments developed, implemented and reviewed	Ongoing
Provide staff development opportunities that encourage teacher examples, sharing at their levels	PDT agendas, teacher and student technology proficiency	Completed/Ongoing at all Grade Levels

Study flexible scheduling options at the elementary school	Increased collaboration between library media specialists and teachers	Continual Process
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Access to Information Resources & Learning Tools Action Plan

Goal: The District will continually look for ways to improve efficiency and cost effective methods of implementing information and technology

Objectives: By June 2009, 100% of the district will be using centralized printing

Action	Indicator of Success	Status
Move to centralized printing: <ul style="list-style-type: none"> • NEP cost proposal to printing task force, three other companies will do proposals • Committee may explore selling existing supplies on e-bay or phase in • Committee will look at existing equipment and decide how implementation will happen 	Centralized printing implemented	Completed

Goal: The District will provide the resources necessary to effectively integrate information technology into the curriculum

Objectives: By June 2009, the number of LCD Projectors in each building will increase.

Action	Indicator of Success	Status
Purchase mobile LCD projectors cart to use with computer availability	More LCD's purchased for instruction	Completed
Purchase more digital still and video cameras at each school to help meet standards	Buildings have enough access to meet information technology benchmarks	Ongoing

Goal: The District will continually look for ways to improve efficiency and cost effective methods of implementing information and technology

Objectives: By June 2009, the district will have adopted and implemented a new software adoption process

Action	Indicator of Success	Status
Streamline the software adoption process	New process adopted	Completed
Communicate and educate staff on the process for adopting software in the district	Process communicated to staff	Ongoing
Explore resources such as United Streaming	United Streaming studied	Completed
Update software inventory in every building	Building software inventories	Completed/Ongoing
Identify experts in software in the district. Have them provide breakout sessions at PDT breakout day	PDT Day	Completed/Ongoing

Goal: The District will provide the resources necessary to effectively integrate information technology into the curriculum

Objectives: The District will continually study the needs of students and staff for access to information and technology resources

Action	Indicator of Success	Status
Staff members will request information technology needs	Staff members information technology needs met	Completed Annually/ Ongoing
Survey students/teachers to find out actual needs	Survey completed	Completed
Continue to monitor student needs for access for students (K-12) opportunities	Student needs continue to be studied	Ongoing

Goal: The District will provide the resources necessary to effectively integrate information technology into the curriculum

Objectives: By June 2006, bandwidth and speed on the network will increase

Action	Indicator of Success	Status
Increase bandwidth	Improve speed and connectivity	Completed (Increased to 10MB)
Replace elementary computers	Elementary computers updated	Completed
Continue network rotation	Student and staff research and access needs are met	(4-Yr. Rotation)

Support Systems & Leadership Action Plan

Goal: The District will share resources and information with the community

Objectives: By June 2009, processes will be in place to share information and resources with community members

Action	Indicator of Success	Status
Evaluate progress on plan and make necessary revisions to procedures annually	Plan reviewed and revised annually	Ongoing
Report to the school board on progress/changes to the plan	Annual board report	Completed
Disseminate plan on district web site	Plan available on district website	Completed
Offer district computer labs for adult retraining	Adult classes offered	Completed/Ongoing
Share new information technology implementations at board meetings	Improved communication among staff	Ongoing

Analysis of Student Proficiency

The following charts show student proficiency on information technology skills measured on the TAGLIT online survey. Data indicates that the district is in the **PROGRESSING** stage of using information technology, meaning that the schools are making some effort and showing some progress with this aspect of using technology for teaching and learning.

The following chart shows student proficiency measured on the online TAGLIT survey.

Students' Technology Skills

- 1 – I don't know how to do this
- 2 – I can do this, but sometimes I need help
- 3 – I can do this by myself
- 4 – I can teach others how to do this

3a.1 Students' Tech Skills – Basic Tools

How far along are you in learning to... (responses given as percent)	n	1	2	3	4	Score
use a word processor to create documents?	86	3	19	35	29	3.05
use a spreadsheet to enter and calculate numbers?	86	7	30	32	17	2.69
use a spreadsheet to create graphs?	86	8	23	43	12	2.69
use a database to enter information?	86	17	41	25	3	2.16
use a database to search for and sort information and create reports?	86	14	28	35	9	2.45
Section Average Score						2.61

3a.2 Students' Tech Skills – Multimedia Tools

How far along are you in learning to...(responses given as percent)	n	1	2	3	4	Score
use drawing or painting software to create pictures?	86	8	10	43	25	2.99
use a video camera to make a video?	86	8	32	28	18	2.65
use video editing software to edit a video?	86	39	28	15	4	1.81
use a digital camera and/or scanner to get pictures into a computer?	86	14	25	28	19	2.60
use image-editing software to enhance pictures?	86	24	34	19	9	2.15
use presentation software to create a presentation?	86	4	9	42	31	3.16
use multimedia software to create a product?	86	47	29	8	2	1.59
Section Average Score						2.42

3a.3 Students' Tech Skills – Communication Tools

How far along are you in learning to...(responses given as percent)	n	1	2	3	4	Score
use email to send and receive messages?	86	11	8	36	31	101
use online discussions to gather information?	86	16	23	28	19	2.58
use a web authoring tool to create a web page?	86	53	15	11	7	1.67
Section Average Score						2.42

3a.4 Students' Tech Skills – Research/Problem-Solving Tools

How far along are you in learning to... (responses given as percent)	n	1	2	3	4	Score
use CD-ROMs to gather information?	86	20	27	26	13	2.37
use online reference software to gather information?	86	26	23	21	16	2.31
use a search engine to find information on the World Wide Web?	86	4	9	32	41	3.28
narrow World Wide Web searches using Boolean operators?	86	69	11	4	2	1.29
use graphing calculators to solve mathematical problems?	86	15	32	37	2	2.30
use probes to collect and study information?	86	43	33	6	4	1.66
use graphic organizer and/or s) stems thinking software to solve problems?	86	17	38	22	9	2.27
Section Average Score						2.21

Identification of Underserved Populations Concerning Information and Technology Literacy, Access and/or EquityA

Assistive technology options are considered as part of the IEP process. The special education staff has broad knowledge of how different software applications can be used to make accommodations for students. Accommodations include options such as the use of Dragon Naturally Speaking, AlphaSmarts, and, voice output devices and large print texts. Technologies currently used by all students offer a greater range of accommodations for students with assistive needs requiring less need for specialized programs.

The Elementary School utilizes Fast ForWord in their building to help improve literacy. Plato is used at all other building levels. The Fast ForWord program has been used to provide programming for selected students as Response To Intervention programming

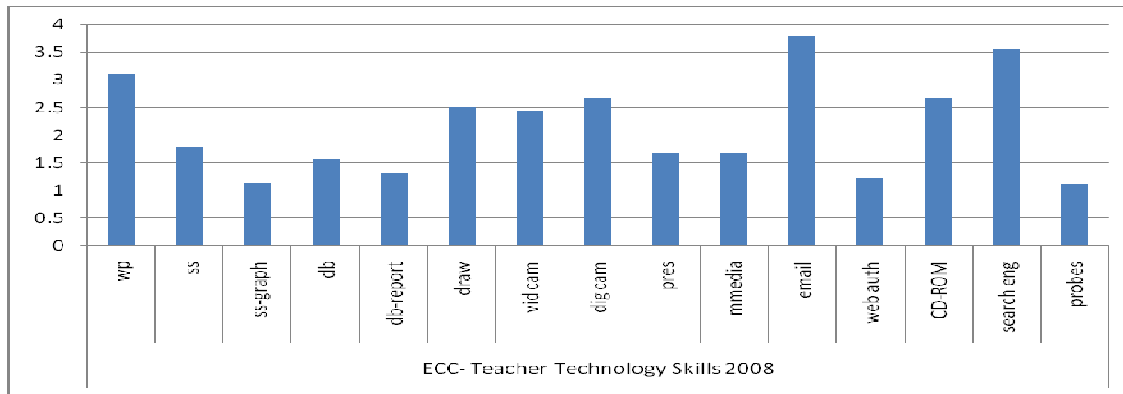
Analysis of Educator Proficiency

The district is currently involved in an EETT (Enhancing Education Through Technology) Grant through a consortium. The grant focuses on using technology strategies to support the Big 6 research model.

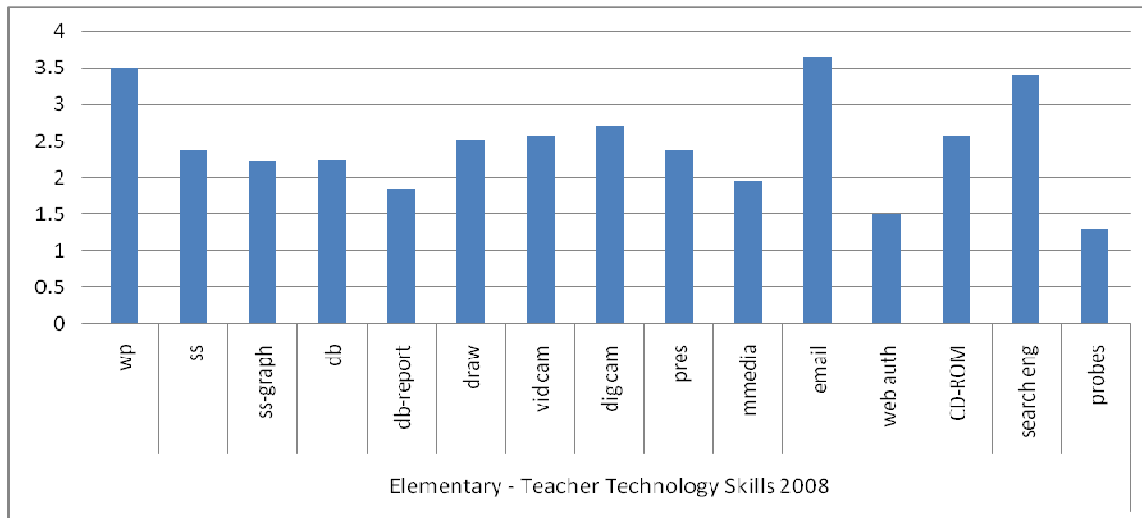
TAGLIT data indicates there is range in teacher technology proficiency levels. Teacher comments on the TAGLIT online survey indicate that teachers would like professional development opportunities tied to integration of information technology into the curriculum.

The following charts show teacher proficiency levels in different technology skills by school as reported on the TAGLIT online survey:

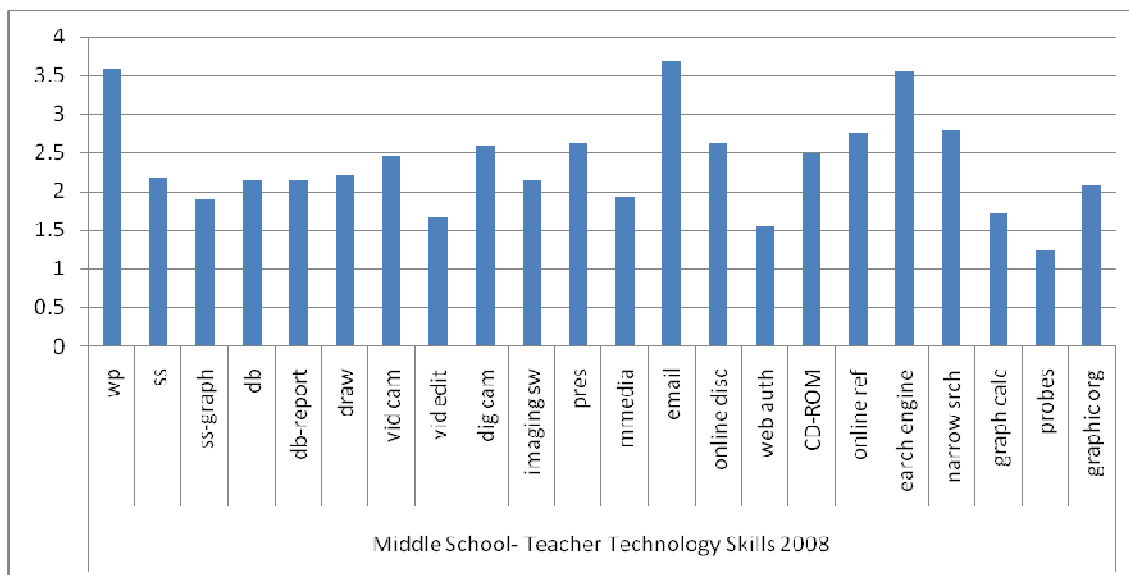
Denmark Early Childhood Center



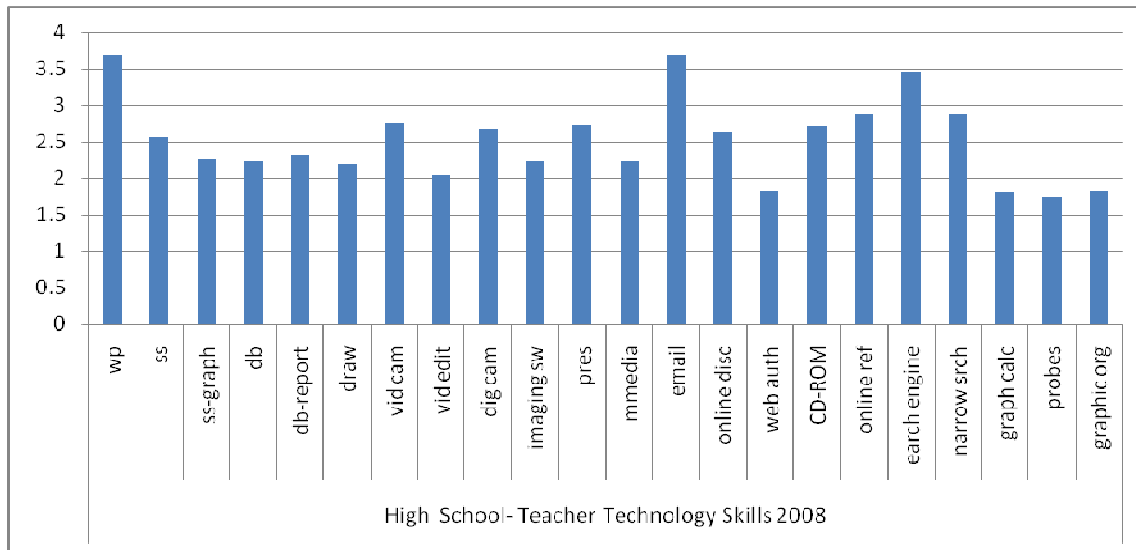
Denmark Elementary School



Denmark Middle School



Denmark High School



Analysis of Effective Teaching & Learning Practices

The district has adopted its own set of ITL benchmarks for grades K-10 (included in Appendix A). Keyboarding is taught in all content areas. In the middle school all 6th grade students take a Keyboarding class; 7th grade students take a Computer Applications class; and 8th grade students take a Technology Literacy & Careers class.

The district is currently working on integrating the ITL benchmarks as part of their curriculum mapping process.

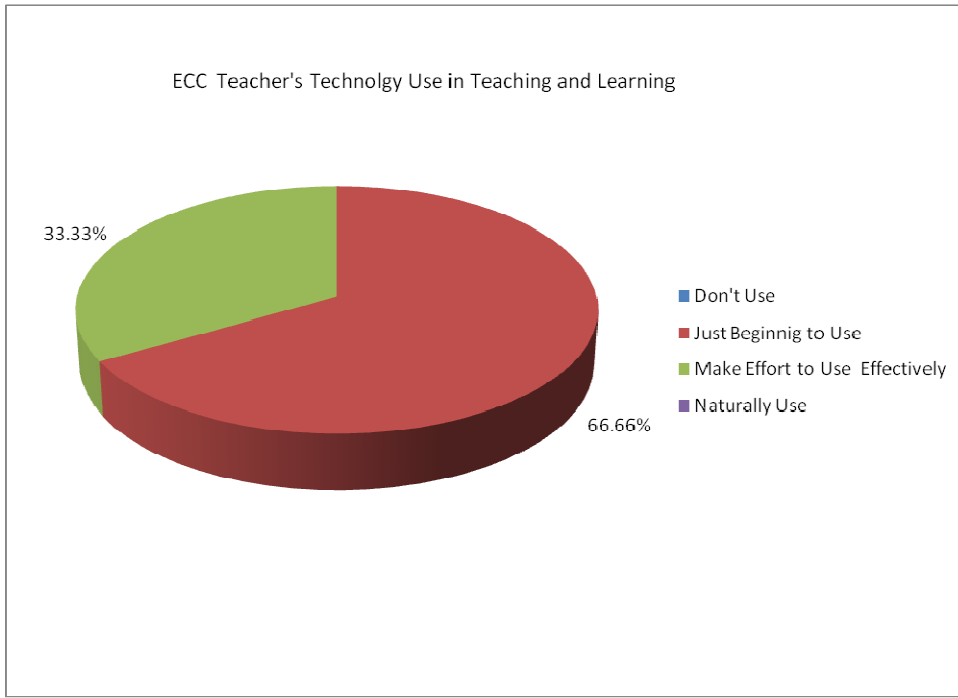
The High School Business courses include the Wisconsin ITL Standards as part of their curriculum maps.

Currently the district does not have a process in place for measuring progress on the benchmarks.

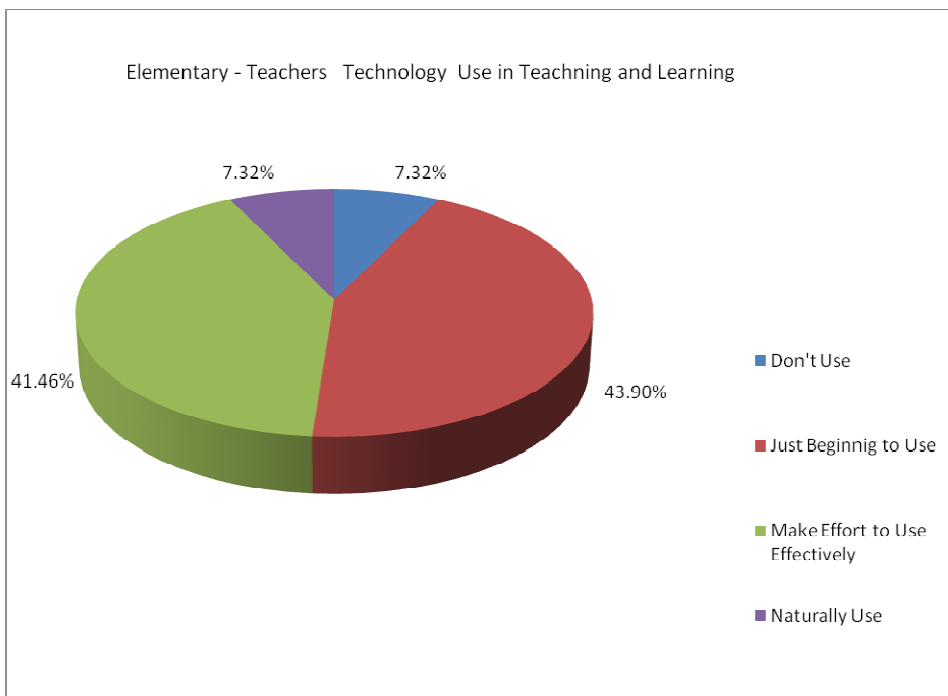
TAGLIT data indicates that video-editing software, hardware and teacher training in this area are needed to meet all of the standards.

The following charts show how teachers report they are using technology in the classroom on the TAGLIT survey.

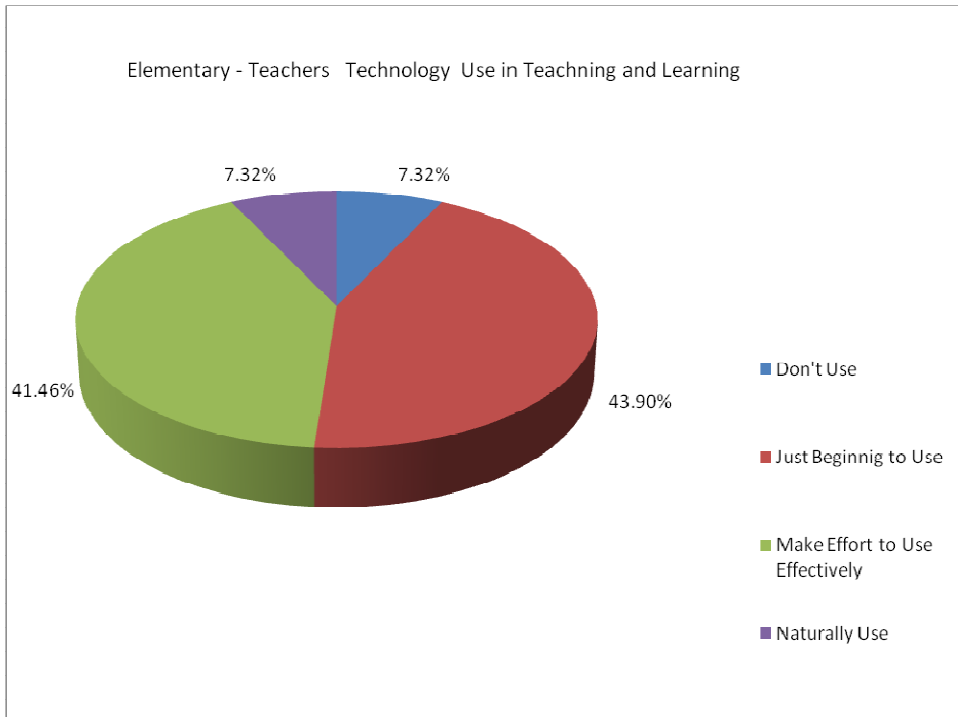
Denmark Early Childhood Center



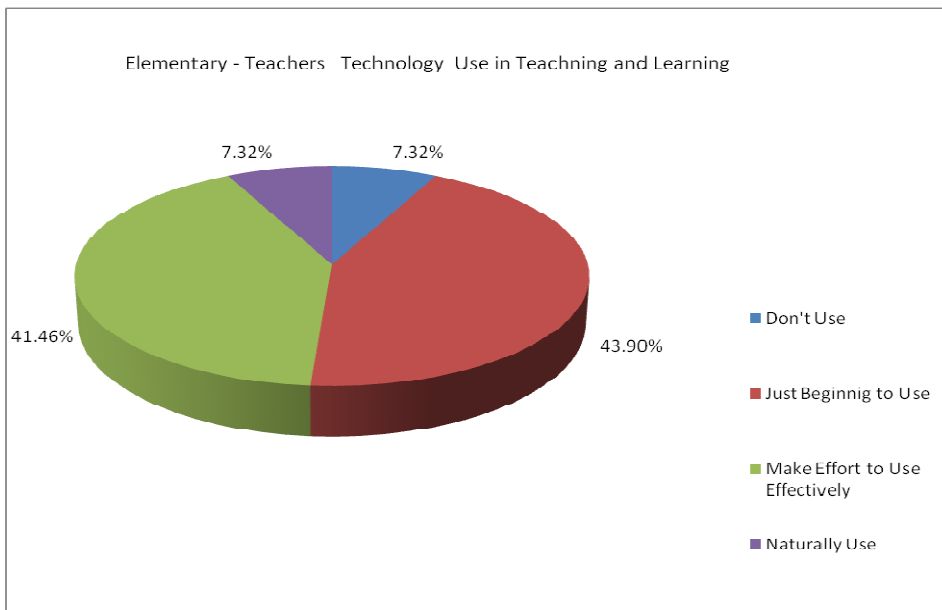
Denmark Elementary School



Denmark Middle School



Denmark High School



Analysis of Access to Information and Technology Resources

All of the main buildings are on the same network and the Early Childhood Center has remote site access. All computers are connected to a dedicated switch instead of hubs. In July 2007 upgrades to the infrastructure increased the Internet bandwidth to 10 MB. The district has eleven servers, has a network rotation cycle, and replaces servers every 4-5 years. The district has made progress and increased its commitment for anti-virus/anti-spam. Servers and work stations continually check for updates as they are available.

The district currently uses GroupWise as its email system. Summer 2009 the district is planning to migrate from GroupWise to Microsoft Outlook for the email system. The district changed its phone system to Voice Over IP the summer of 2005. The district uses PowerSchool as its student management system and PowerSchool and Web Gradebook for student grades. The district has recently implemented Skyward as its financial system. The district uses Eclipse for curriculum mapping. The district implemented NetStorage to allow staff members remote access to their files. The District also added an AlertNow Program which is used for emergency and student attendance notification.

The Education Support Coordinator maintains the district web site at <http://www.denmark.k12.wi.us>.

The Education Support Coordinator works with teachers in creating and developing their own web pages using CMS4Schools. Parents, students and teachers can access PowerSchool through a link located on the district web page.

Currently the district has approximately 605 computers and 90 laptops. In the past, the district purchased its own computers. The district is now leasing computers on a four-year rotation (Approximately 145 computers every year).

An inventory of hardware in the district is included in Appendix B.

The district has the following peripherals:

School	Type of Peripheral	# in District
High School	Digital Cameras	4
	Digital Video Cameras	6
	LCD Projectors	23
Middle School	Digital Cameras	8
	Video Camera	1
	Digital Video Cameras	4
	LCD Projectors	20
Elementary School	Digital Cameras	3
	Digital Video Cameras	3
	LCD Projectors	10
Early Childhood Center	Digital Cameras	1
	Digital Video Cameras	1
	LCD Projectors	2
Denmark Empowerment Charter School	Digital Cameras	1
	Digital Video Cameras	1
	LCD Projectors	2

The district has approximately 50 printers/multi-purpose copy machines. They are a combination of stand-alone and network printers.

An inventory of software is included in Appendix C.

The district has a Technology Network Support Coordinator and a Technology Educational Support Coordinator. The district also has one aide who assists teachers in computer labs at the elementary school. In addition, the library media specialists assist with minor technology support issues. The district contracts support services for a Network Engineer through a company called Tushaus.

Access to Library Media Resources

The district houses the Denmark branch of the Brown County Public Library in the high school. The public library and high school library collections are combined for access by the community and district students. A contract between the school district and the Brown County Public Library is renewed every five years. It states in the contract that a certified library media specialist is to be hired by the district for the combined libraries. Two Brown County library clerks share a full-time position. The clerks take care of a weekly children's story time, monthly visits from district kindergarten students, and supervise the library when it is open after school hours. A full-time library clerk is employed by the school district. Duties include library media tasks as well as computer lab supervision and scheduling. Having a clerk in the library allows the library media specialist the accessibility to work with teachers and students in classrooms throughout the school day.

Currently, the K-5 library media specialist works on a fixed schedule with the ability to have flexible scheduling to meet the needs of the students.

The elementary school library facility is in need of upgrading. More space is needed to accommodate the 500 students it serves. There are five computers in the media center reference area that students can use for Internet research. Teachers send students to the library individually to work on projects.

The district has two certified library media specialists and certified teacher at the middle school. The elementary school library media specialist oversees the facilities in both the elementary school and the early childhood center, with the help of a para-professional. While the district understands the importance of staffing libraries with certified media specialists so that support of teachers in the integration of information skills into the curriculum continues, adjustments to staffing due to budget constraints may be necessary.

The district subscribes to a variety of online databases including Contemporary Authors, EbscoHost and other resources provided by BadgerLink through CESA #7. The WISCAT regional library catalog is also available to library patrons.

The goal of the library is to maintain an up-to-date collection of materials to support the curriculum and instructional programs as well as the broad range of interests and reading levels of the students. The School District of Denmark uses Common School Funds to maintain and update the library media center collections and to purchase new materials. Starting in the 2009-10 school year, designated Common School Funds will be allocated to cover a portion of the costs for district-wide online databases for student use.

A collection analysis of individual schools is being completed by the Follett TitleWise system during the end of the 2008-09 school year. The district library media specialists spent time analyzing the data for the high school, middle school, and elementary school and discussed how it would impact collection development in the future.

All school reference collections are current and adequate. The media center specialist at each building will continue to update collections as funds are available. The district is currently working on adding Lexile scores to books in the collections.

Analysis of Support Systems & Leadership

The district has a District Technology Committee. The committee is made up of the technology department members, library media specialists, building principals, the superintendent, the director of curriculum, a special education teacher, one teacher from each building, and a technology para-professional. This committee makes decisions related to implementing technology. The committee reviews technology requests and helps decide what the district should purchase.

Implementation Action Plans

Target Area: Educator Proficiency
Effective Teaching and Learning Practices

Needs: In order for students to survive and thrive in a global society, they need to graduate with 21st Century Skills.

Goal: To implement 21st Century Skills and Information & Communication Technology Literacy in Units and/or Daily Lesson Design.

Objective: By June 2011, units that integrate 21st Century Skills will be implemented

Actions:	Persons Responsible:	Timeline:	Resources Needed:	Indicators of Success:
1. Provide staff development on what 21 st Century Skills actually are.	Curriculum Coordinator Tech. Staff Dist. Admin. Teaching Staff	Beginning of 2009-10 School Year	District Staff Outside Agencies Credit Options through EWITC and/or Ed Tech Grant	Staff Dev. Provided
2. Provide staff development on how to utilize 21 st Century Skills in units/lessons.	District Staff Tech. Staff Outside Agencies Teaching Staff	January 2010	District Staff Outside Agencies PDT Days Ten-Minute Tech. Tips at Staff Mtgs. Credit Options through EWITC and/or Ed Tech Grant	Staff Dev. Provided
3. Create units and lessons designed to incorporate 21 st Century Skills into literacy instruction.	Curriculum Coordinator Tech. Staff Bldg. Principals Teaching Staff	2010-11 School Year	Curriculum Coordinator Tech. Staff Bldg. Principals Release Time PDT Days Summer Work Teacher Personal Growth Plans Credit Options through EWITC and/or EdTech Grant	Documented Lessons and Units in Curriculum
4. Sharing/demonstrations of actual lessons incorporating 21 st Century Skills at building staff meetings	Teaching Staff Bldg. Principals Tech. Staff	2011-12 School Year	Staff Meetings PDT Days Accessible Technology	Staff Meeting and/or PDT Day Agendas

Target Area: Educator Proficiency

Needs: Currently, some members of the educational staff are exploring the use of Web 2.0 tools for instructional purposes, however use is not yet widespread across the district.

Goal: The District will work to increase awareness and use of Web 2.0 tools to improve professional staff's ability to help students prepare for increasingly complex life and work environments in the 21st Century.

Objective: By June 2011, all educational staff will utilize Web 2.0 tools as a teaching and learning resource to improve learning.

Action:	Persons Responsible:	Timeline:	Resources Needed:	Indicators of Success:
5. Educate staff on the various types of Web 2.0 tools.	Tech. Staff Teaching Staff	Jan. 2009 and Ongoing	Tech. Staff Outside Agencies	Staff survey will indicate an increased understanding of Web 2.0 tools
6. Provide staff development training on how to solve real-life problems using Web 2.0 skills.	Tech. Staff Teaching Staff	Jan. 2009 and Ongoing	Ten-Minute Tech. Tips Sessions Tech. University Credit Options Teachers share their success stories at staff meetings.	Staff survey will indicate an increased understanding of Web 2.0 tools
7. Provide time for teachers to share their successful implementation of Web 2.0 tools.	Teaching Staff Tech. Staff Administration	Jan. 2009 and Ongoing	Staff Meetings PDT Day	Utilization of Web 2.0 tools on a continuing basis

Target Area: Access to Information & Technology Tools
Support Systems and Leadership

Need: Staff needs an easy way to share information via individual websites with students and parents

Goal: The district will provide current information to students, parents, and the community electronically.

Objective: By the end of the 2011-12 school year, 80% of district teachers and administrators will have developed a web page with the intent of utilizing the webpage as an interactive instructional tool.

Actions:	Persons Responsible:	Timeline:	Resources Needed:	Indicators of Success:
8. Purchase CMS4Schools	Administration	2008-09 Budget	District Funds	Completed
9. Provide training time for teachers on the use of CMS4Schools	Tech. Staff CMS4Schools Rep. Teaching Staff Administration	Jan. 2009	PDT Day designed to demonstrate to teachers that web pages are valuable.	Staff participation in training
10. Provide work time for teachers to create their web pages	Teaching Staff Tech. Staff Administration	Jan. 2009 and Ongoing	Prep Time PDT Days Summer Work	Web pages created by 80% of teachers
11. Provide time for teachers to share the successful implementation of CMS4Schools	Teaching Staff Tech. Staff Administration	Jan. 2010 and Ongoing	Staff Meetings PDT Days	By the end of 2012, 80% of teachers will have met this goal.
12. Teachers will ensure that their web page information is kept current.	Teaching Staff	Ongoing	Prep Time	Accurate and current web pages

Target Area: Access to Information & Technology Tools

Needs: In order for students to graduate with 21st Century Skills they need 21st Century Learning Environments that include 21st Century tools

Goal: The District will provide the resources necessary to effectively integrate information technology into the curriculum.

Objective: By June 2012, wireless options in the district will have increased

By June 2012 all essential classrooms will be equipped with a ceiling-mounted LCD wireless projectors.

Action:	Persons Responsible:	Timeline:	Resources Needed:	Indicators of Success:
13. Wireless Options – Develop a plan for implementation of permanent wireless solutions in high usage areas throughout the district	Tech. Staff Administration	Ongoing	Outside consultation with vendors. Wireless equipment as needed. Funded in part by regular technology budget; will need to obtain additional funding.	Successful installation and implementation of wireless solutions.
14. Continue purchase of ceiling-mounted LCD projectors with wireless presenters for district classrooms.	Tech. Comm. Library Media Personnel Administration	Ongoing	Ed Tech Grant Funds District AV Budget Tech. Budget	By 2012, all essential classrooms will be equipped with a ceiling-mounted LCD wireless projectors
15. Continue to upgrade wireless laptop options	Tech. Comm. Library Media Personnel Administration	Ongoing	Tech. Budget Common School Funds	All laptops are operational and being utilized productively.
16. Continue to upgrade printing equipment according to needs.	Tech. Comm. Tech. Staff Administration	Ongoing	Tech. Budget District Budget	Needs of the district are being met in a cost effective manner.
17. Continue to monitor bandwidth usage and increase as needed.	Tech. Staff Administration	Ongoing	Tech. Budget	Staff and students are able to utilize the Internet productively.
18. Investigate emerging technology equipment such as document cameras, flip	Tech. Staff Library Media Personnel Tech. Comm.	Ongoing	Tech. Budget Grants AV Budget	Staff and students will utilize emerging technologies as purchased.

videos, iPod touch, etc.				
19. Investigate storage space solutions	Tech. Staff Administration	Ongoing	Tech. Budget	Storage space solutions will be purchased and implemented as needed.
20. Continue four-year rotation in replacing computers	Tech. Staff Administration Tech. Comm.	Ongoing	Tech. Budget	Will continue four-year rotation in replacing computers.

Target Area: Effective Teaching and Learning Practices

Need: Currently virtual learning opportunities for students in the district are limited.

Goal: Student achievement will be enhanced through an introduction to virtual learning and implementation of 21st Century skills at every building level.

Objective: By June 2012, Virtual learning opportunities for students will have increased

Actions:	Persons Responsible:	Timeline:	Resources Needed:	Indicators of Success:
21. Provide AP On-Line Classes via Northeastern Wisconsin On-Line Charter School	Guidance Instructor Tech. Staff Curriculum Coordinator	Currently and Ongoing	Hardware Tech. Equipment Internet Connectivity	Increased student participation
22. Include interaction with virtual learning experiences in Personal Planning class	Teaching Staff Tech. Staff Administration Curriculum Coordinator	2011-12 School Year	Staff Dev. Curriculum Time Hardware Tech. Equipment Internet Connectivity	All students will be required to complete this class prior to graduation
23. Include interaction with virtual learning experiences in Eighth Grade Business Class	Teaching Staff Tech. Staff Administration Curriculum Coordinator	2011-12 School Year	Staff Dev. Curriculum Time Hardware Tech. Equipment Internet Connectivity	All students will be required to complete this course prior to eighth grade graduation.
24. Explore options in students' early childhood/elementary schools to include virtual learning experiences.	Teaching Staff Tech. Staff Administration Curriculum Coordinator	Ongoing	Staff Dev. Curriculum Time Hardware Tech. Equipment Internet Connectivity	Increased participation in virtual learning experiences.

Target Area: Support Systems and Leadership
Access to Information & Technology Tools

Need: As the web evolves students, staff, and parents need education on safe Internet practices.

Goal: School District of Denmark students will develop the proficiencies necessary to become responsible digital citizens.

Objective: By June 2012, the district will have established a multi-layered approach to Internet Security including education, filtering, and updated policies.

Action:	Persons Responsible:	Timeline:	Resources Needed:	Indicators of Success:
25. Purchase and train personnel on a security monitoring option, such as Aristotle, to allow staff and students broader access to Internet options.	Tech. Staff Tech. Comm. Administration	Jan./Feb. 2009 and Ongoing	Tech. Budget	Program purchased and utilized.
26. Provide staff development on elements of digital citizenship.	Tech. Staff Library Media Personnel Curriculum Coordinator	Jan. 2010 and Ongoing	Outside Speaker PDT Days Staff Meetings	Training Completed
27. Implementation of a curriculum to educate students on the elements of digital citizenship; i.e., etiquette, health & wellness, cyber bullying, social networking, etc.	Tech. Staff All Teaching Staff Library Media Personnel Curriculum Coordinator	Jan. 2010 and Ongoing	Outside Speaker	Curriculum Implemented
28. Update Internet Safety and Web 2.0 Tools policies	Tech. Staff Tech. Comm. Library Media Personnel Administration School Board	June 2009	Time	Board Approval of Revised Policy

Target Area: Support Systems and Leadership

Needs: The district needs efficient means to share resources and interact with community members and outside resources to develop strong school/community relationships.

Goal: The School District of Denmark will share resources and interact with community members and outside resources to develop strong school/community relationships.

Objective: By June 2012, the district will implement systems to help them interact with community members and outside resources to develop strong school/community relationships.

Action:	Persons Responsible:	Timeline:	Resources Needed:	Indicators of Success:
29. Utilize the new AlertNow service to inform students, staff, parents and community members of cancellations, schedule changes, etc.	District Administrator And District Administrative Assistant Tech. Staff	Ongoing	Funding for Annual Renewal	Program utilized for effective communication.
30. Maintain gym and field schedules on the District website for use by the public.	Athletic Director Tech. Staff Community/village personnel	Ongoing	Funding for Annual renewal Training	Program utilized for effective communication.
31. Work with the Brown County Library to offer basic instruction to the public on technology topics of interest.	Tech. Staff Brown County Library Staff	Jan. 2009 and Ongoing	Outside Vendors Tech. Equipment Advertisements	Community participation
32. Provide a page on the District website for the Brown County Library Branch to advertise their activities and events.	Tech. Staff Brown County Library Staff	Jan. 2009 and Ongoing	Tech. Equipment Training Time	Successful implementation of a Brown County Library web page.

Budget Summary

Category	Alignment to Action Plans	2009-10	2010-11	2011-12
EXPENDITURES				
Maintenance Contracts/Travel/Service		\$146,000	\$146,000	\$146,000
Supplies	#19	17,300	17,300	17,300
Non Capital	#29	4,000	4,000	4,000
Non Instructional Software	#8	21,200	21,200	21,200
New Equipment	#14, #15, #18, #21, #22, #23, #24	5,000	5,000	5,000
Replacement Equipment	#20	12,000	12,000	12,000
Professional Development	#1,#2, #3,#5, #6, #7,#10,#11, #26	10,000	10,000	10,000
Infrastructure	#13, #17,#21,#22,#23, #24, #25	70,000	80,000	60,000
REVENUES				
Local Funding		173,725	183,725	213,725
Common School Fund		15,000	15,000	15,000
E-Rate		5,000	5,000	5,000
Title IID	#1,#2,#3	1,775	1,775	1,775
Flow thru		90,000	90,000	40,000

Dissemination to Stakeholders

The District Technology Plan will be reviewed at a public meeting of the Denmark School Board and approved in the spring of 2009. It will also be shared with the school community through building level meetings in the first semester of 2009 and will be placed on the district's web site for public access and review.

Monitoring, Evaluation and Revision

The District Information Technology Committee will serve as the primary panel to review the progress of the plan.

In periodic (bi-monthly) meetings, the technology committee will review goals and actions plans and make adjustments as necessary.

Each spring the team will look at the district plan and make modifications and develop a budget to support the plan.

Adult literacy opportunities will continue to be made available through the Brown County Library and NWTC outreach programs in cooperation with the School District of Denmark as a means of communicating what technology is available in the district and how it is being utilized to support student learning.

Appendices

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