Advanced Technology Academy

Elementary, Middle and High School
District: Advanced Technology Academy
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School Code: 63194

Technology Plan July 2009 - June 2012

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Http://www.atafordpas.org/extras/EducationalTechnologPlan.pdf

Table of Contents

Advanced Technology Academy
Featuring the
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Next Generation Learning

Introductory Material

Mission

To provide students with high-quality interdisciplinary learning experiences that challenge them academically and develop their problem-solving, critical thinking, and communication skills. By building strong local partnerships with businesses and higher education, Advanced Technology Academy and our Ford Partnership for Advanced Studies Business Education Advisory Council encourage and prepare students for success in college and professional careers in fields such as business, engineering, and technology

Introduction

School District Profile

Founded in 1999, Advanced Technology Academy is a public school academy chartered by Lake Superior State University. ATA opened its doors as a high school for grades 11 and 12 in the fall of 1999. The Academy resided at Lawrence Technological University in Southfield. There were 57 students at ATA during its first year. As ATA expanded to include grades 9 and 10, it relocated to the former St. Alphonsus' campus in Dearborn to support its growing enrollment in 2004. For the 2005 – 2006 school year, ATA added grades Kindergarten through 8th to provide a continuous educational program. Currently, there are over 1,000 students enrolled at ATA. The Academy added a MSRP Pre-School Program for 2008 – 2009 and expects to expand that to include an additional section for the 2009 – 2010 school year.

The Academy purchased the former Davenport University campus located at 4800 and 4801 Oakman Boulevard in Dearborn in the spring of 2008. Given the comprehensive existing infrastructure of the campus, the Academy was able to relocate grades 6th through 12 to this new location for the 2008 – 2009 school year. The Pre-School through grade 5 will be housed on this campus for the 2009 – 2010 school year.

In May 2006, ATA's high school received full accreditation by the North Central Association Commission on Accreditation and School Improvement (NCA). Currently, ATA is completing the necessary steps for the K-8 grades to become NCA accredited. The Academy met standards set by the Michigan Department of Education (MDE) for the federal requirements of No Child Left Behind (NCLB) for Adequate Yearly Progress (AYP) for 2006 – 2007 school year and all AYP student participation and academic proficiency requirements for 2007 – 2008. Due to a reporting error, ATA did not meet the graduation rate requirement for 2007 - 2008; despite the fact the Academy's graduation did exceed state requirements. In December 2008, the Academy received the Bronze Award from U.S. News and World Report for having a leading high school curriculum.

The principals in the district include Cynthia Andersen (High School); Jim Lundie (Middle School); and Michelle Pazur (Elementary School). In addition to this leadership, the district employs over 60 full-time teachers. To provide a continuum of services to students, the Academy offers the following support from the following staff and/or departments: two dean of students, four security officers, two counselors, a social worker, Special Education department, contracted services for psychological and speech & language services, paraprofessionals for at-risk students, custodial staff, clerical support, IT department, and food service staff.

School Building

Advanced Technology Academy occupied two campuses for the school year 2008 – 2009, as a result of purchasing the Davenport University campus. This was due to the purchase of a new school building at 4801 Oakman Blvd. in Dearborn, Michigan. The middle school and high school reside at the new location while the elementary school is housed at 7265 Calhoun Street, also located in Dearborn.

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Faculty 2008-2009

Administrative Staff

Chief Admin. Officer and Deputy CAO	2 Administrators
Chief Fiscal Officer	1 Administrator
Assistant Director/Registrar	1 Administrator
Director of Development	1 Administrator
Chief Academic Officer	1 Administrator
School Improvement Director	1 Administrator
Title 1 Director	1 Administrator
Information Technology Director	1 Administrator

School Staff

High School	25 Teachers	1 Principal 1 Vice Principal	1 Dean of Students
Middle School	14 Teachers	1 Principal 1 Vice Principal	1 Dean of Students
Elementary School	18 Teachers	1 Principal 1 Vice Principal	1 Dean of Students

Support Staff

Special Education	5 Teachers
Paraprofessionals and Supplementary Staff	45 Support Staff
IT Support	1 IT Specialist

* The Vice Principal is the same person for all three schools.
* The elementary and middle schools share a Dean of Students.

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Next Generation Learning

Student Statistics

Student Enrollment 2008 – 2009	1,112 students
Average Daily Attendance	92% 9 -12
Average Class Size	22 students per class K – 12
Professional Staff to Student Ratio	22 students per teacher K – 12
Economically Disadvantaged Students	75% K - 12

Student Demographics

Percentage of ATA Students by Feeder Zip Codes for 2007 - 2008[1]

Feeder City by Zip Code	Percentage
Detroit – Total 29 Zip Codes Of the 29 Zip Codes, those with feeder percentages ≤ 5%: 48228 – 45% 48227 – 15% 48204 – 13% 48210 – 5%	96%
Dearborn (48124, 48126)	1%
Westland (48185, 48186)	1%
Dearborn Heights (48127)	< 1%
Eastpointe / East Detroit (48201)	< 1%
Southfield (48075)	< 1%
Taylor / Southgate (48180, 48195)	< 1%
Farmington Hills (48335)	< 1%
Troy (48099)	<1%
Romulus (48174)	<1%
Belleville (48111)	<1%
Inkster (48141)	< 1%
Lincoln Park (48146)	< 1%
Ypsilanti (48197)	< 1%

Demographic & Socio-Economic Comparisons for ATA Location zip code & ATA Feeder Zip Codes[2]

[1] ATA data based on Enrollment Data January 10, 2008.

Characteristic	**48126** Advanced Technology Academy 7265 Calhoun, Dearborn, MI	**48227** Detroit, MI	**48228** Detroit, MI	**48204** Detroit, MI
Ethnicity[3]	White 84.2%	2.1%	23.5%	1.3%
	Black or African-American 1.4%	96.1%	69.7%	97.0%
	Hispanic or Latino 3.1%	0.6%	3.3%	0.6%
	Native American 0.3%	0.2%	0.3%	0.2%
Median Household Income (1999)	$31,159	$31,760	$31, 787	$25,449
Average Individual Adjusted Gross Income (2004)[4]	$41,389	$28,392	$27,804	$24,361
Percent Families Living Below Poverty	22.7%	24.3%	19.6%	25.5%

The percentage of economically disadvantaged students at the Academy has increased over the past three years. Economically disadvantaged status is measured by whether or not a student meets the criteria for receiving free and/or reduced lunch. For the 2007 – 2008 school year, approximately 75% of the enrolled students were eligible for free and/or reduced lunch. This is an increase of 37% from the 2005 – 2006 school year.

[2] Ethnicity, Median Household Income, and Families Living Below Poverty data is from the U.S. Census Bureau American FactFinder from the Census 2000 Demographic Profile.
[3] Ethnicity categories based on Census reporting categories. Only the categories where ATA had a represented student were highlighted in this table.
[4] Average Adjusted Gross Income calculated by individual tax returns for the tax year 2004 that were filed in 2005.

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Ford Partnership for Advanced Studies

Next Generation Learning

ATA Enrollment by Sub-Groups K – 5

Enrollment By School Year Grades K – 5	Gender		Ethnicity				Special Education
	Female	Male	African-American	Hispanic	American Indian	White	
2007 – 2008	51%	49%	99%	< 1%	0%	< 1%	18
2006 – 2007	54%	46%	99%	0%	0%	1%	23
2005 – 2006	50%	50%	97%	1%	< 1%	1%	8

ATA Enrollment by Sub-Groups Grades 6 - 8

Enrollment By School Year Grades 6 – 8	Gender		Ethnicity				Special Education
	Female	Male	African-American	Hispanic	American Indian	White	
2007 – 2008	50%	50%	98%	0%	0%	2%	25
2006 – 2007	49%	51%	97%	2%	0%	< 1%	18
2005 – 2006	50%	50%	98%	1%	0%	1%	4

ATA Enrollment by Sub-Groups Grades 9 - 12

Enrollment By School Year Grades 9 - 12	Gender		Ethnicity				Special Education
	Female	Male	African-American	Hispanic	American Indian	White	
2007 – 2008	59%	41%	98%	1%	0%	< 1%	18
2006 – 2007	59%	41%	97%	1%	0%	2%	17
2005 – 2006	60%	40%	95%	2%	0%	3%	8

Sub-Group Demographic Analysis

Enrollment at the Academy has increased over the past four years. ATA anticipates that this trend will continue for the 2009 – 2010. The racial / ethnicity make-up of the student body has remained predominately African-American. The percentage of economically disadvantaged students has continued to increase over the last three years. The academy's percentage of economically disadvantaged students closely mirror that of Detroit City Schools (80% for 2006 – 2007) and it is much higher than that of Dearborn Public Schools (55% for 2006 – 2007).[5]

The number of students, with an open Individualized Education Plan (IEP), who receive services through the Academy's Special Education department, has increased over the last four academic years. As of January 2009, ATA had 75 students with IEPs an increase of over 30% from the previous year. Students who are receiving speech and language services are not included in the Special Education numbers. The majority of these students are in the lower elementary grades.

[5] Source SRSD from Michigan Department of Education website: www.michigan.gov/mde

Vision & Goals

Technology Plan Stakeholders

The Academy created its 2009 Technology Plan by convening district wide meetings during the 2008 – 2009 school year. The majority of those attending the meetings include members of ATA's School Improvement Team & Curriculum Committee, and the North Central Accreditation (NCA) teams. These members were instrumental in the development and review of this plan. In addition, the Academy reviewed drafts and final copy of the plan with its Parent School Improvement Committee

Hannah Jorgensen, Chairperson	Director of Development
Liz Rizza	Director of Information Technology
Barry Hawthorne	Executive Director/Chief Administrative Officer
Robert Wittmann	Chief Financial Officer
Mary Barry - Cybulski	Chief Academic Officer
Kaye LaGreca	School Improvement Director & Math Specialist
Karl Khoury	Title 1 Director
Luann Felske	Special Education Director
Jan Dana	English Specialist
Cindy Andersen	High School Principal
Jim Lundie	Middle School Principal
Michelle Pazur	Elementary School Principal
Stephen Burgor	Elementary Technology Instructor
Katherine Lohman	Elementary School Teacher
Nicholas Steinmetz	Elementary School Teacher
Charlene Thomas	Elementary School Teacher
Erik Mylenek	Middle School and Technology Teacher
Justin Toth	Middle School Technology Teacher
Lucinda Lawerence	Middle School Teacher
Margaret Gerczak	Middle School Teacher
Lakina Mosely	Gym Teacher – Middle and High School
Sharon Bowman	High School Teacher – English
Andrea Koppy	High School Teacher - Mathematics
Mike Morton	High School Teacher – Social Studies
James Nelson	High School Teacher – Science

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Next Generation Learning

Vision

As described in the overall mission of the Advanced Technology Academy, the purpose of education is to prepare students to be productive and successful members of a global society. The Academy believes that technology is a valuable resource to enhance learning, stimulate the academic environment and aide in developing challenging curriculum that is student-centered and focused on inquiry, interdisciplinary, and project-based learning. In integrating technology into the curriculum and its delivery while aligning practices and methods with industry standards builds a strong foundation and essential career skills necessary for today's economy.

District Technology Mission Statement

To ensure that all learners will adapt to the challenges of the 21st Century through the access and utilization of technology in gathering and using information and resources, effectively communicating, and making responsible decisions as global citizens.

District Technology Vision Statement

The goal of the Advanced Technology Academy is to become the top producer of the most technologically advanced students in the state of Michigan. To accomplish this goal, ATA will strive to provide every student with a comprehensive education and prepare all students to function effectively in the society in which they live. Therefore, the Academy believes all students must develop competencies in using and applying a broad range of technologies to support lifelong learning in a global marketplace.

Goals

To meet and/or exceed the Educational Technology Standards & Expectations defined by the Michigan Department of Education and the International Standards for Technology in Education.

To improve academic achievement and learning through the use of technology.

To provide parents and the community with technology resources which promote involvement in the Academy and its students.

To develop and deliver training and support to instructional staff that ensures the most effective integration of technology into the classroom.

To continue to support and maintain an infrastructure that can support the current and growing needs of the Academy and it's users.

To maintain a quality of service that is transparent in its operation providing the needed support and resources to the Academy's teachers, students, and technology.

To create assessments that measure technology utilization and literacy of both the Academy's students and their instructors to develop best practices and improved instruction.

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Ford Partnership for Advanced Studies

Next Generation Learning

Objectives

Curriculum

Advanced Technology Academy will:

- infuse technology as an instructional tool across all content area curriculum in all grade levels;
- provide students with the opportunities to acquire the technological knowledge and skills necessary to compete in a global economy, the 21st Century and beyond;
- provide students with the materials and guidance to exercise appropriate rights and responsibilities of good cyber citizenship; and
- provide students with opportunities to use and build teamwork skills using technological tools.

Professional Development

Advanced Technology Academy will:

- close the digital divide for faculty by increasing access to content area and/or grade level appropriate technology through increased and continuous professional development opportunities; and
- support co-teaching amongst the faculty by providing the necessary time and technological tools.

Faculty Support

- provide equal opportunity for all faculty members to access content area and/or grade level appropriate technology;
- provide instructional management tools to enhance student learning, assessment and communication with parents; and
- respond in a timely fashion to faculty technology concerns and needs.

Infrastructure, Hardware, Technical Support and Software

Advanced Technology Academy will:

- provide on –site technical support that will assist ATA faculty with IT problems in a quick and responsive manner;
- hire an instructional technologist that will work with teachers to implement and train them on leading instructional programs.
- maintain and infrastructure that will support the needs of the Academy
- provide and support the resources needed for instruction in both hardware and software components.

Monitoring and Evaluation

Advanced Technology Academy District Level Administration will:

- assess 3rd through 10th grade students three times per year using the Performance Series on-line assessment program in English Language Arts, Mathematics and Science;
- require that it principals and teachers review student test results from the Performance Series assessments and make appropriate changes in the instructional delivery in courses, after-school programs, and individual push-in programs
- ensure that teachers make students' progress on assignments and assessments; attendance data, and behavior data available to parents via the on-line SchoolMaster GradeBook PASS system;
- have its principals review course curriculum maps and conduct classroom observations to ensure that the integration of content level and/or grade level appropriate technologies are being implemented into every class;
- survey parents, students, teachers regarding the impact and effectiveness of all newly piloted technologies; and
- meet with principals and teachers quarterly to review the on-going professional development needs on the newly piloted technologies.

I. Curriculum

Curriculum Integration

The Advanced Technology Academy will prepare all of its students for the 21st Century workforce by aligning the Academy's curriculum and instructional strategies with technological tools. This technology plan is based upon the best-researched technological practices, contributions from community, faculty and student input, and on-site visits to other schools that are utilizing some of the technological tools that the Academy is considering purchasing. The technology plan was created via a collaborative effort that was conducted utilizing Alfresco, an open source collaboration tool.

Technological Tools and Programs

The Advanced Technology Academy has an outstanding student/computer ratio. It has about one computer per student; 700 computers: 1,000 students. We have a computer lab in the elementary and middle school, and at least two computer labs per grade in the high school. Each lab has 18 – 30 computers. Every teacher in the elementary, middle and high school has their own computer station equipped with a computer and printer/scanner. Every classroom at the Academy's Oakman campus is also equipped with a Voice Over IP telephone, digital projector, screen, and speaker set. Some of the classrooms at the Oakman campus have Interactive whiteboards (Smart-boards). Every classroom located at the Calhoun campus (which housed the elementary school for the 2008 – 2009 school year and previous years) has a computer, printer/scanner, large screen, and speakers located within them. The Pre K – 5 share a digital projector among each grade level.

In the past the Academy's primary focus regarding technological literacy has been to ensure that every student is proficient in Microsoft Office Suites skills: Word, PowerPoint, Excel, and Access by utilizing Microsoft Office Suite 2003. The elementary school utilizes an additional software package for Office Applications, Tom Syders's, Scholastic Keys: which includes an age appropriate interface for children learning to use Microsoft Word, Excel, and PowerPoint. The Scholastic Keys program also comes with content specific lesson plans and exercises that provide practical application of classroom lessons and learning objectives to technology.

In the upper grades the Academy encourages students to specialize in a career track: engineering/technology, business and health care. ATA utilizes a web – based program called KeyTrain (a WorkKeys/ACT curriculum provider) as an instructional technology tool to introduce career paths while simultaneously reinforcing mathematics and English/language arts skills. The end goal of KeyTrain is to provide ATA students with a National Career Readiness Certificate; a nationally recognized portable work credential certified by ACT. KeyTrain is currently used by 4 – 12 grade students. Over the next few years we will implement it into the Pre K – 12 curriculums.

Advanced Technology Academy utilizes a variety of different instructional software programs including Geometer's Sketchpad, Fathom, and ProEngineer to name a few. The Academy's most valuable tool is its Student Information System; Tylers Technologies SchoolMaster system. SchoolMaster includes modules that record student specific information including general profile, demographic, benefit status, health and guidance records, attendance, and mark history. An additional application to SchoolMaster is its Parental Access Support System that provides parents with the ability to view real time students' attendance, guidance and grades from any Internet accessible computer.

The Academy conducts internal measures of student achievement with Scantron Performance Series; a web-based assessment system. Students' assessments with this system are performed three times a year, and provide the Academy with instant data and analysis to base decisions for entire content areas pertinent to the student scores.

Michigan Library created Michigan eLibrary (MeL). MeL is a free library resource that is comprised of three programs: MelDatabase, MelCat and MelMichigana. ATA students currently use MelDatabase and MelMichigana as research tools. MelDatabase is comprised of full text articles (magazines and newspapers). ATA students use the MelMichigana for exploring Michigan heritage, photos, diaries, and local history databases and records. MelCat is a free library book exchange program in which users can borrow library books from other participating libraries. ATA students currently do not use MelCat because we currently do not have a fully functional library due to our recent move.

In order to make learning more valuable to the Academy's students' teachers enrich their lesson plans with videos from Discovery Education - United Streaming. United Streaming is a web-based collection of movies and videos that pertain to all content areas and grade levels.

Vision 6, a student computer monitoring system, has been installed in every single computer classroom. Vision 6 is a program that teachers use to control and monitor students computer and on-line access.

Future Technology Plans

Beginning in 2009 the Academy will expand its technological tools so that all teachers can enhance their instruction. Video conferencing labs will be used by teachers to conduct conferences with lecturers, authors, employees, and/or state and local representatives. The video conferencing lab will be open for all teachers to use. During the 2010 August in-service the teachers that decided to the use the lab during the 2009 school year will train the teachers that did not utilize the lab. As new teachers are brought in, they will be trained on new technologies by teachers that have successfully utilized it the previous year. As the teachers use of the lab equipment increases more video conferencing equipment will be purchased.

In the next three years, Advanced Technology Academy students will be encouraged to enhance their 21st century skills by becoming global citizens. The Academy will achieve by having its students engage in creatively producing digital movies, podcasts, mind maps, wikis, and blogs. Students and teachers will utilize these tools to create original works and generate new ideas, products, and processes. Students will utilize mind-mapping programs such as Kidspiration and Spinscape to solve authentic problems, express ideas, collaborate, brainstorm, and visualize their ideas. Since the equipment for some of these activities is expensive we will purchase the equipment for the programs in small quantities and then expand the Academy's purchase every year until we have enough equipment for every computer lab.

Blogs, Emails, wikis, WebQuests, and ePortfolios all provide students the opportunity to interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media. By creating individual WebPages or contributing their thoughts to a wiki and/or blog students will be able to communicate effectively with a variety of audiences. They are also able to communicate with various people around the world thus learning about different cultures.

Every student will have more exposure to online/virtual courses throughout their educational experiences. SchoolBlogger and ePals are two programs that were created by Miles Gilburne (a former AOL executive) and his wife Nina Zolt to enhance children's use of computers so that they can become part of the global "learning social network." These programs allow students to blog and email safely by incorporating built in email content and language keyword filters to ensure appropriateness of email messages. The programs encourage students to speak with other students from around the world by incorporating instant language translators into the program.

Currently, it is difficult for students and teachers to access their work from home. Over the next three years the Academy will develop a remote access program in which students and staff will be able to virtually obtain their school/work files. The Academy will also invest in collaborative learning programs that will provide student and teachers with virtual space in which they can store their work and collaborate on projects.

Student's comprehension of products and processes will be enhanced by using Encyclopedia Britannica and ProQuest's simulated programs. By utilizing these programs students can engage in simulated activities such as dissecting frogs for their biology course. There are also elements within each of these programs that will provide students with the ability to identify trends and forecast possibilities.

By utilizing Encyclopedia Britannica, ProQuest and MeL web-based search engines students are provided with resources to access that incorporate web sites that have the relevance and rigor for conducting research. Students currently use web browsers like Google and Yahoo to conduct their research. Google and Yahoo provide students with a vast array or resources to pull from; most of which are not steeped in well-researched and editorialized databases. By employing all of these web site students are able to research authentic problems and create relevant and significant questions. By writing/creating research papers and projects (which can be done collaboratively) students will be able to plan and manage their projects and reach a solution that achieves their end goal.

ATA strongly believes in extending and providing instruction to its students at all times throughout the school year. In order to accomplish this goal it is going to utilize a computerized reading and MEAP/MME preparation program. Study Island is a computer based instructional tool that utilizes Michigan standards to prepare its students for the MEAP and MME exams. Study Island also has a GED component. The GED component will be utilized to extend educational support to parents that are interested in obtaining their GED. The Academy is currently researching the best reading and writing program that will enhance students' proficiencies.

The Academy will also invest in technological tools for its special education program. The special education department will use Hooked on Phonics to enhance its students' reading proficiencies. The special education department will also use a dictation program and reading pens. The dictation program will types what the students say onto the computer The reading pens will be used by our dyslexic students so that they can have words read aloud to them as the reading pen scans them in the text.

Utilizing interactive white boards in their classrooms will enhance teachers' instructional delivery. The interactive whiteboards will enhance student stimulation by making lessons interactive. They will also store teacher real time notes as they lecture throughout their class period.

A common problem that teachers have is that when they are absent their classroom deteriorates with a substitute teacher. In order to resolve this problem teachers will create screen casts of their lessons. Screen casts are recordings of whatever is happening on your screen (images, slide shows, text, videos) with your own commentary or music added. The screen casts will act as a virtual version of them walking their students through their classes while a substitute is in the classroom.

In order to ensure that the technologies included in this plan are implemented effectively, professional development and routine observation of teachers and their uses of technology within the classroom must be conducted. In order to deploy the new technology programs the Academy will only deploy a few at a time, so that the teachers do not become overwhelmed. The district also has to follow through with the students and make sure that they are comfortable with the deployment and sustainability of these programs. Surveys will be conducted to monitor the students' progress with its use of technology. The district will provide its students, faculty, and administrators with any and all support that is necessary. Our instructional technologist will also visit classrooms and assist teachers in the deployment of lesson plans that utilize the technologies

Student Achievement

ISTE and METS Standards

The Academy maintains its focus in the development of technology integration into its curriculum and instruction by taking the necessary strides to meet and exceed ISTE and Michigan Technology Standards. ATA does this by providing students with the skills necessary to succeed in any career path. Every year, the Academy surveys its teaching staff for all grades in order to identify benefits and deficiencies of implemented instructional technologies. In the 2008 – 2009 survey the Academy identified a need for additional exposure to global applications such as: email, web communities, and distance learning. The Academy has also identified the need to further develop concepts and instruction related to technology operation. Professional development of the Academy's instructional staff is needed to equip staff with the knowledge and tools to facilitate better implementation of these items into all content areas and curriculum.

The Academy's students are instructed on how to become informed digital and global citizens by practicing safe, legal and responsible uses of technology. Students are taught about Internet bullying, harassment, copyright laws, and other forms of technology misuse: immoral vs. moral and illegal vs. legal. These concepts are delivered to students through lecture and class discussion, and practical applications of ethical uses of technology. Students also have to sign an Acceptable Use Policy provided by the school district and IT department before they are given their username and password with which to access the school computers. A student is not granted access to the school computers until their parent/guardian signs off on the Acceptable Use Policy.

According to the 2008 – 2009 technology survey results the elementary school students appear to be further behind the middle and high school in their use of technology. This is due in large part because of their limited access and use of technology both at home and at school. The deficiency that has the most implications on their educational experience is that they do not graduate from elementary school with proficient keyboarding skills. In order to improve elementary student keyboarding proficiencies the elementary school will receive a mobile laptop lab with computers that have smaller keyboards for practicing their keyboarding skills. They will also utilize Mavis Beacon as their keyboarding software program. Throughout the next three years the amount of mobile laptop labs will expand as the need arises.

Elementary students do not currently access an email account nor are they encouraged to surf the web. Therefore they have not thoroughly explored ethical issues dealing with the Internet and e-mail. Over the next few years, students will be instructed to access and utilize email by operating ePals as their primary e-mail system. Through the utilization of this program teachers will discuss ethical uses of e-mails with their students. Students will also learn how to e-mail attachments, network file share, and save information on flash drives.

With the access to virtual tools such as email and blogs elementary students have to become knowledgeable digital citizens. In order to become digital citizens their teachers must discuss the following topics with them: the importance of copyright law, how to cite electronic sources, how to identify the appropriate kinds of information that is shared in public chat rooms, precautions that should be taken while on the internet, and the accuracy, relevance, and appropriateness and bias of electronic information sources.

According to our 2008 MEAP scores ATA elementary students must increase their reading and writing proficiency. An educational technology tool that will be used to enhance these skills is called Pixie 2. Pixie 2 is a program that combines student writing with their art pictures, original illustrations, and narration. This program allows teachers to share ideas through podcasts, print manipulative, and online story creation.

Currently, we do not have a fully developed library. Therefore, we do not have a library catalog system, electronic dictionary or encyclopedia system; students do not know how to independently use these existing databases to locate, sort, and interpret information on an assigned topic. ATA is in the process of developing our library and we will be purchasing Follett's Dynasty program as our library cataloging software. Beginning in the 2009 – 2010 school year students will have access to a web-based library catalog system, encyclopedia and dictionary. With the implementation of these tools students will have individual access from school and home to the virtual databases. They will also be instructed on how to research and proofread/edit they're writing using the virtual dictionary and encyclopedia. In the next three years, students will become proficient in accessing and utilizing databases as their access to the tools increase.

Over the next three years, elementary students will become more informed about accessing technology outside of the classroom. They will learn about the use and importance of technology in regards to collaboration and lifelong learning. Students will be able understand the various types of assistive technologies that exist and their implications on disabled people. They will also know that technology is important in just about everything that we do. They will understand the implications that technology has on government. They will also know the history of technology and the way that it has changed students' lives at home and at school. The Academy will enhance its availability to technology among elementary school students by providing them with access to various types of technological tools, such as: scanners, digital projectors, cameras, and video projectors. These tools will be shared among all of the elementary teachers. They will be stored in the media center where faculty will check out and return the technologies to the Media Center Specialist.

ATA's middle school students utilize technology much more extensively then the elementary school. The middle school currently has one computer lab per grade level in which the current events/newspaper course and Ford Partnership for Advanced Studies (Ford PAS) Awareness are taught. Ford PAS Awareness is a course that prepares eighth grade students for high school by educating them about the core concepts that are presented through the Ford PAS high school curriculum. Ford PAS provides students with content knowledge and skills necessary for future success in areas such as business, economics, engineering, and technology. The curriculum also emphasizes teamwork, communication, and project and inquiry based learning.

According to the survey, the main deficiencies found in the middle school are in two areas: Basic Operations and Concepts, and Technology Communication Tools. In the next three years, the middle school students will be proficient in:

- the identification of appropriate file formats for a variety of applications,
- the use of programs that have built in applications for converting file formats using a variety of telecommunication tools (e.g., e-mail, discussion groups, IM, chat rooms, blogs, video conferencing, and web conferencing)

and

- other online resources to collaborate interactively with peers, experts, and other audiences.

By employing ePals and SchoolBlog throughout our school curriculum students will gain a much more extensive understanding of file sharing, saving files electronically and electronically collaborating with one another. Throughout the next three years staff members will begin to implement video conferencing and web – based conferencing.

In 2009 – 2010 the middle school curriculum will emphasize STEM (science, technology, engineering and mathematics). The traditional and STEM curriculum will be supported by integrating more web – based programming and technological tools. The Academy will integrate resource tools such as Encyclopedia Britannica, ProQuest's literature and science curriculum, educational and simulated games, podcasts, and digital story telling into its curriculum to enhance this endeavor. Since the Academy is focused on careers eighth grade teachers will utilize Career Forward (a free program provided by Michigan Department of Education) to instruct its students about the various types of careers and the importance of career skills.

The Academy's high school deeply infuses technology into its curriculum. Ford Partnership for Advanced Studies (Ford PAS) is at the heart of its curriculum. Throughout the Ford PAS modules students learn a variety of technological skill sets. They learn Microsoft Office skills such as: Microsoft Word, PowerPoint, Excel, and Access to produce a finished product. Students proofread and edit a document using an application's spelling and grammar check functions. They compare, evaluate, and select appropriate search engines and web browsers to locate information. They use a variety of technology resources (educational software, simulations, and models) for problem solving and independent learning. They construct a web site and learn how to develop a document or file for inclusion into a website/webpage. They also use a variety of applications to plan, create and edit a multimedia product. Students learn to adhere to the fair use of copyrighting guidelines.

High school teachers utilize several collaboration tools to enhance instruction and communication with their students. Teachers in the high school use collaborative teaching tools such as Zoho for collaborative file sharing. They also create their own web sites to post student assignments and resources. Currently, the web sites are built utilizing several different programs and they are not attached to ATA's main web site. Over the next three years, the Academy will integrate all of the teachers' web sites by using the same program and placing all teacher web sites onto the school's web-site. Some high school classrooms have smart boards, however very few teachers know how to utilize them.

There are several courses that deeply infuse technology into its curriculum. The engineering course uses Pro Engineer to create 3 D projects. The math department uses TI 83 calculators and a web-based graphing program. The journalism course uses Publisher to write and publish a monthly newsletter.

Since the high school curriculum is immersed in technology, there are only a few deficiencies that the high school has pertaining to the ISTE and METS technology standards. The standards that the high school is deficient in are:

- being able to asses and solve hardware and software problems by using online help or other user documentation and support,
- designing and implementing a personal learning plan that includes technology to support his/her lifelong learning goals,
- being exposed to real-life experiences associated with technology – related careers, planning and implementing a collaborative project using telecommunication tools (e.g., groupware, interactive web sites, videoconferencing),

and

- formulating and using evaluation criteria (authority, accuracy, relevancy, timeliness) for information located on the Internet to present research findings.

In order to increase high school proficiencies in technology the Academy will implement several new programs. In order to teach students how to solve common computer problems the IT department will conduct a series of modeled lectures that will be held within the high school computer labs. The IT department will design and implement the lecture series (a 3 course series). This program will be piloted in the engineering program next year and will expand over the next three years. In 2009, the sophomore literature course will pilot eReaders as part of its curriculum. The eReaders will provide students with a means to access books with a technological tool while simultaneously enhancing instruction. If the pilot proves to be effective the eReaders will be implemented into more curricular areas.

In 2009, the high school will implement a career center into the 11th grade curriculum. This center will be located in the library. It will be a resource center in which all students will maintain an ePortfolio to keep track of their personal career and technology goals. This program will be piloted with the junior class after they pursue their chosen career path. The main source for the ePortfolio's will be MyDreamExplorer, a free virtual instructional program provided by Michigan Department of Education. The Media Center Specialist and the Instructional Technology Director will oversee the career center. This center will also be used as a location in which students will be exposed to real – life technological careers through observing lectures given by employees of technology companies. In 2010 and 2011 students will be exposed to technical careers by visiting local technologically driven companies and job shadowing their employees for a day. Over the next three years the program will extend into the lower high school grades.

In order to fulfill the "formulating and using evaluation criteria (authority, accuracy, relevancy, timeliness) for information located on the Internet to present research findings" METS standard high school student will utilize Encyclopedia Britannica, Proquest, and web browsers like Google and Yahoo. Students will be able to compare articles and databases from each resource and evaluate them in regards to their accuracy, authority, relevancy, and timeliness. Although, the high school students will utilize these tools to accomplish the METS standard Encyclopedia Britannica and Proquest will be employed by all students in Pre K – 12 grades.

Advanced Technology Academy
Featuring the
Ford Partnership for Advanced Studies

Next Generation Learning

Technology Integration Timeline

Existing Implementations

SchoolMaster: Student Information System
Implementation: Staff is trained during In-Services at the beginning of each school year.
Use: Teaching Staff is required to use SchoolMaster and can be accessed from any Academy Computer station.

KeyTrain/WorkKeys: ACT
Implementation: Development Director meets with specific teachers who will utilize the KeyTrain and WorkKeys programs.
Use: In Elementary, Middle and High School Computer Labs for Grades 4th thru 9th.

Scantron Educational Professional Series
Implementation: Paraprofessionals are trained to administer tests during staff In-Services at the beginning of each school year.
Use: In the Library Computer Center. May be accessed from any classroom or computer lab.

Michigan eLibrary Suite (Not including MelCat)
Implementation: Staff is trained during In-Services at the beginning of each school year.
Use: In the Library Computer Center. May be accessed from any classroom or computer lab.

Discovery Education - United Streaming
Implementation: Staff is trained during In-Services at the beginning of each school year.
Use: Available to all staff from any computer with Internet access.

TI-83 Calculators and Program
Implementation: Staff is trained during In-Services at the beginning of each school year.
Use: Mathematics Classes for Grades 9th thru 12th.

ProEngineer
Implementation: Program is used in engineering class only - unless we have new staff we do not need to in-service
Use: Engineering Classes Only.

New Web-based, software and hardware programs to be Implemented

Technology	**Microsoft Office 2007**	**Microsoft Office 2007**	**Microsoft Office 2007**	**Microsoft Office 2007**
Implementation Process	All teacher in-service August 2009 and continuous in-service throughout the year	New teacher: August In-service Returning Teacher: Offer new teacher support when needed	New teacher: August In-service Returning Teacher: Offer new teacher support when needed	New teacher: August In-service Returning Teacher: Offer new teacher support when needed
Technology is used:	In every classroom by every teacher	In every classroom by every teacher	In every classroom by every teacher	In every classroom by every teacher
Technology	**Epals and SchoolBlog**	**Epals and SchoolBlog**	**Epals and SchoolBlog**	**Epals and SchoolBlog**
Implementation Process	All teachers introduced and trained on new email and blog system for students - students will learn it in their technology courses	New teachers will be introduced to email and blog system during August in - service. New students learn email system in computer courses.	New teachers will be introduced to email and blog system during August in - service. New students learn email system in computer courses.	New teachers will be introduced to email and blog system during August in - service. New students learn email system in computer courses.
Technology is used:	Due to its web-based programming it can be accessed anywhere in the school and at home.	Due to its web-based programming it can be accessed anywhere in the school and at home.	Due to its web-based programming it can be accessed anywhere in the school and at home.	Due to its web-based programming it can be accessed anywhere in the school and at home.
Technology:	**Encyclopedia Britannica**	**Encyclopedia Britannica**	**Encyclopedia Britannica**	**Encyclopedia Britannica**
Implementation Process:	All teachers introduced and trained on new email and blog system for students - students will learn it in their technology courses	New teachers will be introduced to email and blog system during August in - service. New students learn email system in computer courses.	New teachers will be introduced to email and blog system during August in - service. New students learn email system in computer courses.	New teachers will be introduced to email and blog system during August in - service. New students learn email system in computer courses.
Technology is used:	Due to its web-based programming it can be accessed anywhere in the school and at home.	Due to its web-based programming it can be accessed anywhere in the school and at home.	Due to its web-based programming it can be accessed anywhere in the school and at home.	Due to its web-based programming it can be accessed anywhere in the school and at home.
Technology:	**Proquest eLibrary and eLibrary: Literature**	**Proquest eLibrary and eLibrary: Literature**	**Proquest eLibrary and eLibrary: Literature**	**Proquest eLibrary and eLibrary: Literature**

Implementation Process:	All teachers introduced and trained on new email and blog system for students - students will learn it in their technology courses	All teachers introduced and trained on new email and blog system for students - students will learn it in their technology courses	All teachers introduced and trained on new email and blog system for students - students will learn it in their technology courses	All teachers introduced and trained on new email and blog system for students - students will learn it in their technology courses
Technology is used:	Due to its web-based programming it can be accessed anywhere in the school and at home.	Due to its web-based programming it can be accessed anywhere in the school and at home.	Due to its web-based programming it can be accessed anywhere in the school and at home.	Due to its web-based programming it can be accessed anywhere in the school and at home.
Technology:	**Spinscape**	**Spinscape**	**Spinscape**	**Spinscape**
Implementation Process:	Middle and high school staff will be in-serviced during August in-service	New staff will be in-serviced during August in-service	New staff will be in-serviced during August in-service	New staff will be in-serviced during August in-service
Technology is used:	Due to its web-based programming it can be accessed anywhere in the school and at home.	Due to its web-based programming it can be accessed anywhere in the school and at home.	Due to its web-based programming it can be accessed anywhere in the school and at home.	Due to its web-based programming it can be accessed anywhere in the school and at home.
Technology	**Kidspiration**	**Kidspiration**	**Kidspiration**	**Kidspiration**
Implementation Process	Elementary staff will be in-service during August in-service	New staff will be in-serviced during August in-service	New staff will be in-serviced during August in-service	New staff will be in-serviced during August in-service
Technology is used:	Only in elementary school computer lab	Only in elementary school computer lab	Only in elementary school computer lab	Only in elementary school computer lab
Technology:	**EPortfolio**	**EPortfolio**	**EPortfolio**	**EPortfolio**
Implementation Process:	Sophomore students will begin to create ePortfolio as soon as they choose their career track - Media Center Specialist has to know how to use ePortfolio they will oversee their creation	Sophomore student will begin to create ePortfolio, junior students will continue to work on theirs - No training necessary unless previous years Media Center Specialist quits	Sophomore student will begin to create ePortfolio, junior and senior students will continue to work on theirs - No training necessary unless previous years Media Center Specialist quits	Sophomore student will begin to create ePortfolio, junior and senior students will continue to work on theirs - No training necessary unless previous years Media Center Specialist quits
Technology is used:	In the library	In the library	In the library	In the library
Technology:	**Study Island: MEAP, MME and GED Preparation Program**	**Study Island: MEAP, MME and GED Preparation Program**	**Study Island: MEAP, MME and GED Preparation Program**	**Study Island: MEAP, MME and GED Preparation Program**

Implementation Process:	Students will use the MEAP/MME program to support instruction after school and during the summer. Parents will be able to prepare for the GED by using this web-based program.	Students will use the MEAP/MME program to support instruction after school and during the summer. Parents will be able to prepare for the GED by using this web-based program.	Students will use the MEAP/MME program to support instruction after school and during the summer. Parents will be able to prepare for the GED by using this web-based program.	Students will use the MEAP/MME program to support instruction after school and during the summer. Parents will be able to prepare for the GED by using this web-based program.
Technology is used:	After school tutoring rooms and parent resource center.	After school tutoring rooms and parent resource center.	After school tutoring rooms and parent resource center.	After school tutoring rooms and parent resource center.
Technology:	**Pixie 2**	**Pixie 2**	**Pixie 2**	**Pixie 2**
Implementation Process:	Elementary school teachers will learn how to use software during August in-service.	New teachers will learn how to use software during August in-service.	New teachers will learn how to use software during August in-service.	New teachers will learn how to use software during August in-service.
Technology:	**Reading Program**	**Reading Program**	**Reading Program**	**Reading Program**
Implementation Process:	Company representative will train elementary staff on computerized program.	Teachers that already know how to use program will train new teachers.	Teachers that already know how to use program will train new teachers.	Teachers that already know how to use program will train new teachers.
Technology is used:	Mobile computer lab	Mobile computer lab	Mobile computer lab	Mobile computer lab
Technology:	**Follett Dynasty - Library book catalog software plus 2 scanners**	**Follett Dynasty - Library book catalog software plus 2 scanners**	**Follett Dynasty - Library book catalog software plus 2 scanners**	**Follett Dynasty - Library book catalog software plus 2 scanners**
Implementation Process:	Librarians will be trained by Follett Representative	Librarians will be trained by Follett Representative	Librarians will be trained by Follett Representative	Librarians will be trained by Follett Representative
Technology is used:	In the library	In the library	In the library	In the library
Technology:	**Edline.com**	**Edline.com**	**Edline.com**	**Edline.com**
Implementation Process:	August in-service	New Teachers: August in-service Returning Staff: Review During August in - service	New Teachers: August in-service Returning Staff: Review During August in - service	New Teachers: August in-service Returning Staff: Review During August in - service
Technology is used:	By every teacher in every classroom	By every teacher in every classroom	By every teacher in every classroom	By every teacher in every classroom

Teacher lessons using technological tools				
Technology:	Podcasts	Podcasts	Podcasts	Podcasts
Implementation Process:	Teachers will learn how to implement podcasts into lesson plans during August in-service. Educational technologist will support instruction when teachers implement podcasts into their lessons.	New teachers will be in-serviced during August in-service on how to implement podcasts into their lesson plans. Educational technologist will support instruction when teachers implement podcasts into their lessons. Teachers comfortable in this technology will support their fellow faculty members.	New teachers will be in-serviced during August in-service on how to implement podcasts into their lesson plans. Educational technologist will support instruction when teachers implement podcasts into their lessons. Teachers comfortable in this technology will support their fellow faculty members.	New teachers will be in-serviced during August in-service on how to implement podcasts into their lesson plans. Educational technologist will support instruction when teachers implement podcasts into their lessons. Teachers comfortable in this technology will support their fellow faculty members.
Technology is used:	Enough equipment for two computer labs in each school will be purchased. This equipment will be shared by the computer teachers and maintained by each school's administrative assistant.	Enough equipment for four computer labs in each school will be purchased. This equipment will be shared by the computer teachers and maintained by each school's administrative assistant.	Enough equipment for half of the computer labs in each school will be purchased. This equipment will be maintained by each school's administrative assistant.	There will be enough equipment for every computer lab.
Technology:	Digital Movies	Digital Movies	Digital Movies	Digital Movies
Implementation Process:	Teachers will learn how to implement podcasts into lesson plans during August in-service. Educational technologist will support instruction when teachers implement podcasts into their lessons.	New teachers will be in-serviced during August in-service on how to implement podcasts into their lesson plans. Educational technologist will support instruction when teachers implement podcasts into their lessons. Teachers comfortable in this technology will support their fellow faculty members.	New teachers will be in-serviced during August in-service on how to implement podcasts into their lesson plans. Educational technologist will support instruction when teachers implement podcasts into their lessons. Teachers comfortable in this technology will support their fellow faculty members.	New teachers will be in-serviced during August in-service on how to implement podcasts into their lesson plans. Educational technologist will support instruction when teachers implement podcasts into their lessons. Teachers comfortable in this technology will support their fellow faculty members.

Technology is used:	Enough equipment for two computer labs in each school will be purchased. This equipment will be shared by the computer teachers and maintained by each school's administrative assistant.	Enough equipment for four computer labs in each school will be purchased. This equipment will be shared by the computer teachers and maintained by each school's administrative assistant.	Enough equipment for half of the computer labs in each school will be purchased. This equipment will be maintained by each school's administrative assistant.	There will be enough equipment for every computer lab.
Technology:		Screen casts	Screen casts	Screen casts
Implementation Process:		Teachers will learn how to create screen casts once they are comfortable with podcasts and digital movies.	New teachers will learn how to create screen casts and the teachers that know how to use the screen casts will help the new teachers. The educational technologist will also assist with this.	New teachers will learn how to create screen casts and the teachers that know how to use the screen casts will help the new teachers. The educational technologist will also assist with this.
Technology is used:		By every teacher as long as they check out the hardware to use to create screen casts.	By every teacher as long as they check out the hardware to use to create screen casts.	By every teacher as long as they check out the hardware to use to create screen casts.
Technology:		Wikis	Wikis	Wikis
Implementation Process:		The educational technologist will instruct teachers on wikis during August in-service. Teachers will also be assisted throughout the school year with implementing the program.	The educational technologist will instruct teachers on wikis during August in-service. Teachers comfortable with wikis will assist other teachers with creating them. The educational technologist will also assist teachers with their creation throughout the school year.	The educational technologist will instruct teachers on wikis during August in-service. Teachers comfortable with wikis will assist other teachers with creating them. The educational technologist will also assist teachers with their creation throughout the school year.
Technology is used:		In the computer labs.	In the computer labs.	In the computer labs.
Technology:		Webcasts	Webcasts	Webcasts

Implementation Process:		The educational technologist will instruct teachers on WebQuests during August in-service. Teachers will also be assisted throughout the school year with implementing the program.	The educational technologist will instruct teachers on WebQuests during August in-service. Teachers comfortable with WebQuests will assist other teachers with creating them. The educational technologist will also assist teachers with their creation throughout the school year.	The educational technologist will instruct teachers on WebQuests during August in-service. Teachers comfortable with WebQuests will assist other teachers with creating them. The educational technologist will also assist teachers with their creation throughout the school year.
Technology is used:				
Technology:	Distance Learning Classroom	Distance Learning Classroom	Distance Learning Classroom	Distance Learning Classroom
Implementation Process:	This program will be piloted by one teacher teaching a subject area. The educational technologist will assist the teacher in the creation of this program.	This program will be taught by two teachers that will be assisted by the piloted teacher.	This program will expand to three content areas and three teachers.	This program will expand to four content areas and four teachers.
Technology is used:	By one teacher wherever they can access the software.	By one teacher wherever they can access the software.	By one teacher wherever they can access the software.	By one teacher wherever they can access the software.
Technology:	Video Conferencing	Video Conferencing	Video Conferencing	Video Conferencing
Implementation Process:	The video conferencing hardware will be piloted by administrators and dual enrollment teachers.	Teachers will check out the video conferencing lab and equipment as the need and desire arises. The educational technologist will assist them in utilizing the educational technology.	Teachers will check out the video conferencing lab and equipment as the need and desire arises. The educational technologist will assist them in utilizing the educational technology.	Teachers will check out the video conferencing lab and equipment as the need and desire arises. The educational technologist will assist them in utilizing the educational technology.
Technology is used:	Video Conferencing Lab	Video Conferencing Lab	Video Conferencing Lab	Video Conferencing Lab
Technology	Elementary school mobile computer labs	Elementary school mobile computer labs	Elementary school mobile computer labs	Elementary school mobile computer labs
Implementation Process:		One mobile computer lab for	Additional mobile labs will be	Additional mobile labs will be

		each school	purchased in place of permanent computer labs	purchased in place of permanent computer labs
Technology is used:	Classrooms share mobile lab. The mobile labs are checked out from the administrative assistants.	Classrooms share mobile lab. The mobile labs are checked out from the administrative assistants.	Every classroom has their own mobile computer lab. If they breakdown the IT department will oversee their care.	Every classroom has their own mobile computer lab. If they breakdown the IT department will oversee their care.
Technology:	Computers	Computers	Computers	Computers
Implementation Process:	3 - 5 student computers in addition to teachers computers placed in 1/3 of middle and high school classrooms (beginning with English and science labs)	3 - 5 student computers in addition to teachers computers placed in 2/3 of middle and high school classrooms (beginning with social studies and Ford PAS)	3 - 5 student computers in addition to teachers computers placed in all of middle and high school classrooms.	3 - 5 student computers in addition to teachers computers placed in all of middle and high school classrooms.
Technology:	Interactive White Boards	Interactive White Boards	Interactive White Boards	Interactive White Boards
Implementation Process:	Two Promethean Board and two Mimio bought for all of the teachers to share and try.	Once teachers choose a favorite interactive white board company the Academy will purchase enough for 1/3 of the school. .	Once teachers choose a favorite interactive white board company the Academy will purchase enough for 2/3 of the school. .	Once teachers choose a favorite interactive white board company the Academy will purchase enough for every classroom of the school.
Technology:	Reading Pens	Reading Pens	Reading Pens	Reading Pens
Implementation Process:	2 pens bought for entire special education department	2 more pens bought for entire school if piloted pens worked		

Technology Delivery

The Advanced Technology Academy has been fulfilling the Michigan Merit Curriculum standard of providing every student with a virtual learning experience for years. All 6 -12th grade students engage in virtual learning experiences by participating in online courses or by engaging in online learning experiences that are incorporated into their lessons. Students in the high school have email accounts and they have participated in online courses. Middle and high school students have conducted research via the Internet, engaged in WebQuests, conducted online simulations, played educational games and created ePortfolios.

In 2006, Michigan became the first state to require students to engage in an on-line learning experience before they graduate. In order to fulfill this requirement the academy launched its first on-line course laboratory (before the state enacted the new law) in 2005. The Academy's program was directed toward students that enrolled in our charter after their ninth grade year and did not take a course at the same time as their peers. Instead of having to take the course with students that were younger then themselves ATA enrolled them into their on-line program. The on-line program was comprised of several students taking different courses simultaneously. Students have used and continue to use on-line courses as a means to achieve credit recovery. The credit recovery programs are paid for by the students, however they are able to use our computer labs to complete their course work.

Upon piloting the online course laboratory the academy first used Michigan Virtual High School (MVHS) as its primary source for accessing courses. After the pilot concluded the academy switched over to Bringham Young Universities (BYU) on - line courses. The academy decided to switch over due to glitches with MVHS and the reduced cost that BYU provided. In 2008 – 2009 the academy suspended its on-line course offerings and decided to offer other virtual experiences to its students. The academy is going to pilot a blended on-line course in 2009. This course will blend face-to-face instructional time with an on-line course format. The program will be piloted as a credit recovery program. The blended course format as opposed to traditional on-line courses will benefit students because they will provide them with direct seat time with their teachers. By providing our own credit recovery program to students' parents can access their child/ren's up to date grades by logging into the Schoolmaster PASS system. This is a feature that the other programs do not provide for their children. In order to access the on-line programs that are not hosted by us the students must log into the system themselves. The academy is looking at various software programs for the delivery of this course. It will either be conducted via blackboard and wimba or for free with moodle (www.moodle.org).

The Academy has exposed students to other on-line learning experiences throughout the years. High school students create and have access to their own email accounts through Google and Yahoo. The middle school technology teacher is in the process of piloting an email account system for his students. Next year all of the Academy's students will have access to an email system through obtaining an ePal account. EPals is the "internets largest global community of connected classrooms" (www.ePals.com). The school will switch over from Google and Yahoo to Epals because the email accounts are more secure for students to access. Through the use of email students and teachers can communicate, collaborate, share information and documents with each other.

In the next three years students will be encouraged to blog about different content material that relates to what they are learning in class. Academy students will use SchoolBlog (an Epals product) as their main blogging tool. SchoolBlog will enhance teachers' lessons by encouraging students to collaborate in a virtual manner. By blogging students that may not feel comfortable speaking in class will be encouraged to share their opinions.

Students currently research topics using the search engine Internet Explorer and the free web browsers Michigan ELibrary (MeL), Google and Yahoo. MeL is a free program that is provided to Michigan residents, and it is administered by The Library of Michigan. It is a comprehensive program that incorporates content that covers several subject areas, provides residents with eBooks and online resources for all students. It has several interactive online tutorials for children of all ages. It connects the user to several different databases, resource materials and periodicals including SIRS Discover Deluxe. It also has links to free skill improvement programs, homework help, and college prep and life skill programs. The skill improvement programs are broken up into elementary, middle and high school skill improvement programs and they are aligned to state standards. Noodle is also a free research tool that teachers can use to instruct their students to locate databases for their topic, use an extensive knowledge base, and learn to write citations.

Advanced Technology Academy will expand its library of technology tools for online research by purchasing and utilizing Encyclopedia Britannica and ProQuest's Learning Literature and eLibrary Science. Britannica Online offers students a current encyclopedia, Merriam - Webster's Student Dictionary, World Atlas, learning materials and lesson plans aligned to state standards and a learning zone for Pre K - 2 grade emergent readers. ProQuest Learning Literature exposes students to several literature resources such as: full text works, author biographies, literary study guides and literary articles, criticism, reviews and interviews. The ProQuest eLibrary Science provides students with exposure to laser focused science content and tools which include unique videos and manipulative, science news links, information about famous scientists, a day in science history and a clickable science periodic table. Both Encyclopedia Britannica and ProQuest incorporate online simulations into their software.

ATA's high school dually enrolls its students into Davenport courses. Currently, Davenport has agreed to allow ATA to teach 73 credits within its high school curriculum. Davenport has also agreed to allow its students to enroll in its portal on-line resource program; in which students can access to conduct research for their courses. The Davenport portal program will provide ATA students with a college web-based resource library in which to pull materials from.

Recently, teachers have developed an interest in creating and utilizing podcasts. However, we currently do not have the technological tools to support this form of instruction. Due to the increased interest in creating podcasts the academy will purchase a few class sets of microphones and headsets. By incorporating podcasts teachers will be able to make their lessons portable and accessible. This will allow students to listen to past lectures when they are absent or to review past material. Students can also create podcasts to enhance their personal websites or for class projects.

WebQuests are used by some teachers in the middle and high school. They are a very effective and alternative way to present inquiry-based learning to students. By utilizing WebQuests teachers can enhance their students communication, critical thinking, and research skills. In order to increase the amount of teachers that utilize WebQuests ATA will incorporate it into their professional development.

An interactive way to engage students in lessons is by introducing them to technological games. Currently our elementary school teachers utilize www.pbskids.com to instruct their students about different subjects by correlating their lessons to Public Broadcasting Systems television shows such as The Bernstein Bears, Arthur and Barney. A newly discovered simulated gaming system that elementary students can participate in is NetSmartz. This gaming system is free and it instructs students about Internet safety, it also addresses a lot of the ISTE standards for elementary school students. It incorporates movies and activities into its virtual program. Scholastic.com's web-based program The Magic School Bus (www.scholastic.com/magicschoolbus/games/home.htm) is targeted at instructing elementary students about scientific concepts. TEFL games (www.teflgames.com/interactive.html) are an online gaming system that instructs students about English grammar. IBM created Power Up the Game (http://poweruptheGame.org/) a simulation game that instructs middle and high school students about ecological problems, learning about green technologies, and systems that sustain energy. Throughout the game students are able to speak to expert engineer characters which are really engineers working in the field of green technology.

High school students currently do not establish and track their own technological goals. In order to resolve this deficiency students will begin to utilize ePortfolios to keep track of their goals and learning. Helen Barrett an expert on ePortfolios is quoted in a MACUL article by explaining the purpose of ePortfolios as, "the use of electronic technologies that allow the portfolio developer to collect and organize artifacts in many formats (audio, video, graphics, and text)." Throughout students high school experience they will create an ePortfolio by keeping a list of the Michigan Technology Standards or ISTE standards included in it. They will also place evidence of their achievements in accomplishing the standards in the ePortfolio as they complete assignments. Upon graduation students can use their ePortfolio as a career tool in which they display all of their work to potential future employers. Students will be encouraged to utilize the ISTE ePortfolio format located in http://electronicportfolios.org/nets.html to accomplish this end goal.

The academy has had an extensive use of virtual technology tools and its use of them will grow in the next three years. ATA will strive to be on the cutting edge of technology by utilizing the best practiced on-line learning experiences. Beginning in the 2009 school year the academy will hire a technological instructor to assist teachers in incorporating technological tools into their curriculum. This instructor will provide ATA staff with professional development as well as ingrain technology into the curriculum by participating in actual classrooms and assisting teachers with their implementation of technology.

Parental Communications & Community Relations

The Advanced Technology Academy is a designated Title 1 school, with 75% of our students qualifying for free and reduced lunch. Many of our students do not have personal computers with Internet access that they can access from home. Therefore, the Academy makes available open computer lab time after school and/or on the weekends. Currently, middle and high school teachers stay after school on a routine and rotating basis. This encourages their students to utilize the open computer labs while simultaneously providing students with free tutoring services.

For the 2009 – 2010 school year, the Academy plans to open a parent computer lab at the District building to provide parents with free computer access. The lab will be equipped with parental access to some components of the Academy's school student management software Schoolmaster PASS system. This will allow parents to access their child/ren's attendance and behavior records and up to date grades. Parents will be able to access their child/ren's meal plan by accessing MealMagic on the Academy web site. MealMagic is the Academy's virtual meal program in which parents can see what their children are eating, the nutritional value of the meal, how much money their children are spending on their meals, and the money that their child/ren has available in their account for purchasing meals.

The computer lab designated for parents will provide parents and guardians with computerized access to raise their own skill levels. Parents will be able to log into the web-based GED program. They will use GED Study Island web –based program to test and raise their skill proficiencies. However, they must take the GED exam at an accredited location. They will also be able to raise their career skill levels through utilizing KeyTrain. KeyTrain is a WorkKeys curriculum powered by ACT in which parents can receive a portable national work credential called the National Career Readiness Certificate. This portable work credential will certify that our parents are career ready and that their skill levels match up to the thousands of jobs that ACT has job profiled.

The Academy communicates with its parents via several different formats: web-site postings, flyers, and mail, email, and telephone calls. In order to disseminate and ensure that all of our students have received our technology plan, the students are given a welcome packet, which has the Academy technology procedures and policies included in it. Both parents and students must sign a form stating that they are aware of our technology procedures/policies and that they have read our technology plan. Students are not given access into the Academy's computer system until the IT Department receives the form from the student. Once the IT Department receives the form they provide the student with a username and login code to access their files.

In creating this technology plan, a group of parents met with the School Improvement Director and Development Director to provide some feedback in regards to the Academy's current use of technology, planning strategies, implementation, and ongoing assessment of the technology plan. They informed them that they were very concerned about their children's current use of PowerPoint and their keyboarding skills. They stated that they would like to see more emphasis placed upon these skills. They would also like to have a format in which parents can communicate with one another virtually. For example, parents said they like to have a parental blogging system or virtual meeting place in which they can discuss behavior and motivation issues for their children. In regards to the virtual meeting place for parents, the Academy is in the process of creating a new website and a parent blog will be included as part of the new web site. The parental meetings are continuous and will occur throughout the school year. All parents are encouraged to bring any concerns they may have to our parent involvement sessions, which occur every other month.

A cornerstone of the Academy is the Business Educational Advisory Council (BEAC), which is a conglomerate of local business leaders that volunteer at our school and provide us with input in regards to the growth and development of our school. The BEAC members along with our school board members contributed to the creation of our technology plan. A leading technology that was introduced to us through the planning for this technology plan was the use of a mind mapping and collaborative sharing web-based program called Spinscape. This is a program that the school will be purchasing for its middle and high school students to utilize. It is more sophisticated then Kidspiration in that it allows students to incorporate web-based articles and virtually collaborate with one another.

The Academy strongly believes in working with parents and local community members on a continuous basis to build our schools vision and become a leading educational facility. It encourages input from parents and local community members by holding meetings throughout the school year. The Academy received a lot of wonderful input in the creation of this plan and will work to implement and ensure that our parent and community members concerns are addressed.

Collaboration

The Academy has a lot of pride in its community and its faculty members take the time to volunteer in the Dearborn community. The elementary school staff and students participate in an annual clean the neighborhoods event in which they parade around the school's surrounding neighborhood to clean its streets. Several of the Academy's administrators volunteer their time working with the Dearborn community and its local Optimist club chapter. The Optimist Club is dedicated to "Bringing out the Best in Kids." Barry Hawthorne, and R.J. Dubitsky, ATA's chief administrators, is the President and Vice President of the Dearborn Optimist Club.

Although, ATA faculty members are dedicated in taking pride in the Dearborn community. The Academy has challenges in bridging the gap between Dearborn and its community of ATA parents, most of which are not Dearborn residents. Currently, the only connection that has been established between ATA parents and the Dearborn community is that Dearborn's local libraries have opened their doors to our students. Dearborn's libraries are committed to serving its students regardless of the city they come from; as long as they can show evidence that they are enrolled in a school located in Dearborn. Over the next three years, the Academy will take strides to make stronger connections between Dearborn and ATA's community. It will do so by providing parents with information about adult education courses, GED testing, adult literacy programs, and other resources in Dearborn.

The Academy will opening a Adult Resource/Computer Center, located in the district building, for parents to access technology and information about adult literacy programs in Dearborn and Detroit. Dearborn offers its programs to both Dearborn residents and non-residents. Dearborn's adult education programs include GED testing, business education courses, computer classes, construction and real estate training, and enrichment courses. The Dominician Literacy Center, located in Detroit, has a literacy program for adults to learn how to read, write, solve math problems and use computers. ATA will provide its parents with information about this center and it will encourage its teachers to volunteer two hours a week at the facility. The Adult Resource/Computer Center will also have relevant information to connect parents with its local Michigan Works and One Stop Centers. These local facilities provide adults with free job search analysis, career assessments, job search workshops, GED preparation, resume assistance, training opportunities, and weekly networking opportunities.

The Academy will encourage parents to sign up for adult literacy and training courses using computers in the Academy's future Adult Resource/Computer Center. ATA will work in collaboration with Dearborn by preparing interested parents for the GED exam by providing them with open computer lab time in which they will be able to prepare for their GED by using Study Island to prepare for the exam. The Academy has also teamed up with Davenport to offer the Academy's parents college courses at night on ATA's campus. The courses and tuition will be paid by the parents but the Academy will provide a safe and close location in which the parents can enroll in Davenport University courses.

In the next three years the Academy will develop a close knit community of ATA parents that are informed about the available resources in the Dearborn community. The Academy will also expose parents to the adult literacy and education programs by including a link on our website to local community programs. The newly constructed website will be deployed during the 2009 – 2010 school year.

II. Professional Development

Overview

Throughout the next three years, the Academy will inspire student learning and creativity, communication and collaboration, critical thinking, problem solving and decision making by facilitating training sessions with teachers who will in turn incorporate technology into their lesson plans. A key factor in ensuring that all staff members utilize technology is to provide on-going and consistent professional development. The professional development will be continuous throughout the school year and may include courses for teachers on Saturdays. As the Academy develops teachers that are comfortable with the software they will become gurus of that software and in turn will assist teachers that are not as comfortable working with the software. At the beginning of every school year technology will be incorporated into our two-week teacher in-service training.

The Advanced Technology Academy begins every school year with the first two weeks dedicated to professional development. During these two weeks, new and returning staff members are introduced and/or reintroduced to the Academy, its curriculum, and its technological tools such as: SchoolMaster (school management system) and SchoolMaster PASS (its virtual component), ED Scantron Performance Series (student assessment system), KeyTrain (career preparation web-based program powered by ACT), Michigan eLibrary system, Vision 6 (on-line student monitoring system), and United Streaming (ATA's media library). Teachers that want a refresher on any of these programs are invited to attend the training sessions. The entire staff is also trained on new technological tools during these two-week sessions. According to the staff surveys on technology instruction teachers would like to receive more professional development time throughout the year focused on technological instruction.

During the 2009 – 2010 August in-service several new technological tools will be introduced to the staff. The technological tools that will be introduced to the staff will include Encyclopedia Britannica, ProQuest Learning: Literature and eLibrary Science, a sample of interactive technology/white boards, teacher web-site building, mind mapping software, ePals and SchoolBlog, digital story boards, and podcasts. The sessions will be conducted by our instructional technologist. Teachers will be introduced to the technological tools by having them modeled and then utilizing or creating a product with the tool. This format will be duplicated throughout the school year to provide teachers with the level of comfort that they require in order to implement the program into their lesson plans.

Since technology is continuously changing the Academy's Instructional Technologist will attend professional development sessions to learn about the most current forms of technology and technology instruction. After attending conferences and training sessions the Instructional Technologist will return to the Academy and train fellow employees. Some of the conferences will be conducted via Michigan Association of Computer User Learners (MACUL). All faculty, principals, instructional technologists and administrators will also be encouraged to attend free professional development courses via LearnPort (a series of free web-based professional development sessions produced by Michigan Department of Education).

The Media Center Specialist will be in-serviced over the 2009 – 2010 summer to utilize Follett's web-based library book cataloging system. She/he will utilize this program to get the Academy's library system up and running. During the August in-service the Media Center Specialist will learn how to utilize the KeyTrain, Encyclopedia Britannica, and ProQuest systems. She/he will also learn how to create and instruct students in creating an ePortfolio. The ePortfolios will be piloted in the 2009 school year with the junior class and then as the years progress the tenth, and ninth graders will learn how to create ePortfolios.

It is imperative that the Academy's principals and administrators model the technological tools by utilizing them during staff and parent meetings. Throughout the year the Academy's principals and administrators will conduct meeting with their teachers by modeling and utilizing the Academy's technological tools. By observing their principals modeled best technological practices teachers will grow more comfortable with the technological tools and utilize them themselves.

The principals will stress the importance of the tools and software/hardware by requiring that all of the Academy's teachers incorporate technology into their weekly lesson plans. If a teacher does not incorporate technology into their weekly lesson plans the educational technologist will be informed of this and they will visit that teacher on a weekly basis to assist the teacher with the implementation of technology. In order to prepare our students for 21st Century skills it is critical that the Academy's administrators ensure that their faculty teach by integrating technology into their lessons and that every student is introduced to the various uses of technology.

It is imperative that ATA faculty is provided with time to share their wealth of knowledge regarding technology and instructional practices with their fellow employees. There are currently some technology champions at ATA that try various technological tools and discuss them with their fellow teachers. Beginning in the 2009 – 2010 school year principals will set aside time during their weekly meetings for teachers to demonstrate a technological tool to one another. Every teacher will be expected to share with their fellow faculty members at least one technological tool throughout the school year. By doing this teachers model best practices for one another and they form a collaborative learning community among themselves.

Throughout the 2008 – 2009 school year teachers were asked to assess their current uses of technology within the classroom. The assessment was conducted by the administration giving every teacher the ISTE and METS standards and then asking them to evaluate their schools current use of technology according to the standards. This made the teachers aware of the standards and informed them that they are required to teach standards that do not pertain directly to their core content area; such as ethical uses of technology. By the conclusion of the activity all of the teachers knew how their school ranked according to the ISTE and METS standards. The assessment is a practice that was utilized to create the technology plan and it is a method that will be used annually to inform faculty about their technology status. As the teachers begin to grow more comfortable with technology every student will grow more technologically literate according to ISTE and METS standards.

Supporting Resources

It is imperative that the Academy analyzes its use of technology on an annual and continuous basis so that it ensures successful and effective uses of technology across its curriculum. The primary method that the Academy implements to analyze its student and staff use of technology is through surveys. At the conclusion of every school year ATA students and faculty members will be given a survey that is used to determine areas in which more professional development is needed. This survey focuses on technology integration in each of the schools. It also asks faculty to explain the professional development method that they feel the most comfortable with: print resources, webinars, or face-to-face interaction. The Academy bases their professional development delivery method off of the survey. Since new programs are implemented at the beginning of the school year the Academy's training sessions for the August two week in-service is based upon the surveys results.

Contracts for newly acquired technology that the Academy will purchase will include professional development sessions. Some of technological tools include free training sessions. Regardless, of whether professional development is included for free or not all of the Academy's teachers and administrators will be trained on the tools. The training can either be conducted via webinars or in person.

The educational technologist that ATA is going to hire will train teachers how to use their interactive white boards, develop wikis, blogs, websites, create mind maps and digital story boards. He/she will introduce teachers to free educational tools that will enhance the teachers specific content area such as virtual games and simulation programs. He/she will assist teachers in creating screen casts for their classes when they have planned absences.

During the two week in-service at the beginning of the year ATA's Technology Director hands out a copy of the staff technology contract. She discusses various technology topics with the staff, gives them a quick reference guide, and has all of the staff commit to the district technology procedures and policies by having them sign an Acceptable Use contract. Teachers that are interested in a particular technology are encouraged to attend LearnPort courses or Wayne RESA and/or MACUL workshops. The participant will be required to return from a workshop and train other staff members about the tools that they learned. The participant then becomes the guru of the technological tool that they learned about and will be encouraged to assist other teachers that are also interested in utilizing the technology.

Advanced Technology Academy's website currently has its policies and procedures posted. It also has a link to the district policies, manuals, School Improvement plan, newsletter, and technology plan. The Academy will launch a new website in 2009 in which their will be a link to tutorials that teachers can access if they need any assistance. Teachers will be able to access our web-based programs from the main website. The website will provide teachers with a one stop resource for accessing various materials to assist them with Academy and/or technology support. Teachers are also provided with various formats (i.e., emails, telephone calls, and office time) in which they can ask IT or the instructional technologist for assistance and receive it in a timely manner. Teachers should never feel that they are alone and that no one in the Academy will help them. The Academy is a large collaborative learning community in which everyone works together to support one another.

III. Infrastructure, Hardware, Technical Support, and Software

Overview

The Advanced Technology Academy provides a computer with high-speed Internet access for every classroom. Merit Networks provides the Academy with robust service on the same Fiber Ring as Michigan Universities with features such as Internet2, Dedicated Connections and Burstable Connections.

All classrooms and offices are equipped with Cisco VoIP (Voice over Internet) phones for internal and external communications. This system is managed and hosted thru Telnet WorldWide and offers 24-hour support and was made possible through E-Rate.

Internally, the Academy provides several servers that support roles such as user authentication, printing, file sharing, program and application deployment, e-mail, website hosting and more. Both students and teachers have secure space to store files and documents as well a shared space for collaboration. All staff of the Advanced Technology including consultants, board members, and contractors are provided Academy E-Mail addresses as well that are included on the Academy's website with faculty information.

There are several significant Internet resources available for not only teachers and students, but also parents and the community. First and foremost, the Academy's website that is updated regularly contains information on building and school operations, schedules, calendars, staff and faculty as well as new and events. This is accessible to the general public and contains details on communication to the Academy's District Office, individual schools, and specific staff members.

Parents have access to an online student system, SchoolMaster PASS, that can be reached from the main website. The PASS Website allows parents to check up-to-date information on their student, including grades, attendance, schedules and more.

SCHOOLMASTER
Student Information Systems

Discovery Education United Streaming is currently largest high-quality online video library resource, created by Discovery Education supplying video clips, explorations, lesson plans, assessment options and more directly to the classroom at the click of a button. This service was acquired in 2007 and has been a valuable resource in enhancing student learning.

In order to maintain the quality and maximize the benefit of technology in the classroom, the Advanced Technology Academy provides management software school-wide. GenevaLogic Vision 6 gives teachers the ability to do live demonstrations from a single computer and broadcast it to each student machine, work with students as a group or one-on-one, block Internet access, and run applications to name a few. While providing the tools to make learning interactive, it maintains an environment of control and supervision in any environment.

GenevaLogic
A NETOP COMPANY

Many of the services provided by the Academy are both hosted and maintained internally. E-Mail, Content Filtering, Web Hosting, Point of Sale, and Network Security Systems are all on-site services. The Academy's IT Staff continue to provide the infrastructure and support for services that are essential for the Academy's operation, as well as the technology to support learning in the classroom, with the aide of USAC's E-Rate.

Phone and Internet Services, as well as Network Support for Monitoring and Updates are made possible through E-Rate bringing to every classroom a phone and robust Internet speeds for enhanced content. Through SmartSolutions Network Maintenance Agreement network and infrastructure upgrades, changes, and repairs are made manageable.

Smart Solutions
Sharp People / Bright Ideas / Smart Solutions

Additional technology the Academy has made available includes a Two-Way Radio and Emergency Call Box System both in the facility and exterior areas of the campus. Each classroom and Office phone has the ability to communicate with Security and Facility Staff through their phones, for immediate response items. In 2008 a Network Security Camera System was installed on the Oakman Campus to increase security of the facility, its technology, staff and students. It includes two DVR (Digital Video Recorders) and over 100 IP Security Cameras, accessible to Security Personnel, Principals, Administration, and Deans.

Current Technology

Hardware

Users	*1500*
Computers	*700*
Phones	*120*
Cameras	*125*
Network Hardware	*60*
Digital Projectors	*45*
Computer Labs	*16*
Servers	*8*
Interactive Whiteboards	*7*
Document Imagers	*3*
Video Conferencing	*1*

Software

Microsoft Products

Product Pool	License Product Family	License Version	Effective Quantity
Applications	Office Professional	Plus 2007	307
Applications	Office Professional	2003	340
Applications	Office Standard for Macintosh	2008	1
Applications	Project Professional	2003	10
Servers	Exchange Server - Standard	2003	1
Servers	Exchange Server Standard CAL	2003	200
Servers	Windows Server - Device CAL	2008	307
Servers	Windows Server - Standard	2008	2
Servers	Windows Server - Standard	2003 Release 2	3
Servers	Windows Server CAL	2003	230
Systems	Windows	Vista Business	0

Other Current Applications

Description	Licenses
Scholastic Keys for Office 2003/2007	*30*
SchoolMaster SIS, PASS, GradeBook	*District License*
Adobe Creative Suite 2	*2*
Macromedia Studio 8	*3*
GradeKeeper GradeBook	*District License*
Discovery Education – United Streaming	*District License*
Spiceworks	*Open Source*
Cisco Network Assistant	*Open Source*
GIMP – Graphic Editor	*Open Source*
NVU – Web Design	*Open Source*
Adobe Flash, Shockwave, Authorware, Reader	*Open Source*
Alfresco Labs – Content Management	*Open Source*
Biology Interactive Classroom	*Text Book Licensing*
Teacher Works	*Text Book Licensing*
TestGen	*Text Book Licensing*
SCAATAP	*Counseling*
ProDesktop/Pro Engineer 8	*School License*
Chalkboard	*Text Book Licensing*
Perthes World Atlas	*Text Book Licensing*
Marketing Essentials	*Text Book Licensing*
Wild Financial Accounting	*Text Book Licensing*
Mavis Beacon Teaches Typing	*30*
Pearson Prentice Hall	*Text Book Licensing*
ECON Student Works	*Text Book Licensing*
Modern Chemistry	*Text Book Licensing*
Ubuntu - Edubuntu	*Open Source*
EdPerformance	*Site License*
KeyTrain	*Site License*
WorkKeys	*Site License*
Meal Magic	*District Licensing*

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New Technology Needs

Hardware

Interactive Whiteboards
Student Response System
Teacher Monitors
EReaders
Video Conferencing
Mobile Computer Labs
Data Probes/Collection
Digital Camcorders
Digital Cameras
Digital Imagers
Digital Projectors
Accessibility Technology
Televisions
Media Players
Calculators
Physical Education Technology
Computers
Pen Drives
Tablets
Phones
Servers
Networking Hardware
Network Infrastructure Hardware
Wireless Networking Hardware
Printers/Scanners/Copiers
User Devices/Peripherals
Audio/Video Broadcasting Equipment
Presentation Technology
Security Communication Technology
Network Building Access/Security Technology
Identification System Equipment

Software

Student E-Mail
School Website
Collaboration Software
Project Based Learning Tools
Student Interactive Software
Graphic Creation/Design Software
Multimedia Creation/Design Software
STEM Software
Distance Learning Software
Communication Software (Discussion Boards, Blogs)
Remote Access System

Timeline

Upgrade/Replacement

1-2 Years	2-3 Years	3-4 Years	5+ Years
Keyboard/Mice	Camcorder	Computer	Server
USB Devices	Digital Camera	Network Printer	Digital Projector

Hardware upgrade and replacement are contingent on functionality and condition of the hardware during the yearly inventory of technology. Software upgrades are made during summer systems maintenance, and is rigorously tested prior to being rolled out for production. Infrastructure Software Upgrades are done roughly every 3-4 years, or as the primary software producer releases new versions of existing products in use by the Academy. After release, time is given to test products in order to ensure that little to no interoperability, function, or installation/management issues occur in its rollout.

Acquisition

1 Year	**2 Years**	**3 Years**	**4+ Years**
Interactive Whiteboards[1]	Interactive Whiteboards	Interactive Whiteboards	Interactive Whiteboards
Student Response Systems[1]	Student Response Systems	Student Response Systems	Student Response Systems
EReaders[1]	EReaders	EReaders	Mobile Video Conferencing
Tablets[1]	Mobile Computer Labs[1]	Tablets	Mobile Computer Labs
Digital Projectors	Digital Projectors	Digital Imagers	Network Building Access/Security
Servers/Computers/ Phones	Servers/Computers /Phones	Servers/Computers/ Phones	Servers/Computers /Phones
Data Probes Data Collectors	P.E. Technology	Campus Broadcast System	
Accessibility Hardware/Software	Accessibility Hardware/Software	Printers/Scanners/ Copiers	
Digital Cameras /Camcorders	Digital Cameras /Camcorders		
Calculators	Media Players		
Printers/Scanners/ Copiers			

[1] *Technology being implemented as part of a pilot program in order to support new technology implementations, strategies, and to identify additional tasks and/or needs related to it.*

Ensuring Interoperability of Equipment

Employing technology requires seamless and reliable accessibility to any application or service, no matter the system or software provider. Most technology equipment and programs is actually a complex collection of specialized technologies and protocols that must cohesively interact together and are constantly evolving to meet the consumer's needs.

Interoperability is the ability to connect hardware and software elements of both infrastructure and customer premises equipment (CPE), all of which originate from different systems suppliers, to seamlessly work together. Interoperability is a key and crucial consideration for manufacturers because it plays a vital role in whether technology meets the end user's expectations and how quickly technology, products and services are adopted.

The Academy will ensure interoperability of systems and equipment through planning and communication with vendors prior to purchasing and by thorough interoperability testing and validation of new systems, equipment and software. In addition to planning, The Academy employs skilled IT Professionals with the necessary knowledge to setup, install and test new systems through methods that support interoperability of the technology.

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Technical Support

ATA employs two full-time technology integration specialists (total 2.0 FTE) who are trained in state-of-the-art technology support and maintenance for network infrastructure, hardware and software applications. In addition, ATA contracts with SmartSolutions who remotely oversees the operations of our network (including monitoring for security) and is available to provide immediate on-site service as needed.

Technology Integration

Support and assist teachers and staff to ensure that all hardware, software, and network resources can be utilized into the existing curriculum and training to ensure the teachers and staff can become knowledgeable with technology.

Help Desk

Maintain functionality of classroom and office technology that supports the Academy and Instruction including user accessibility, desktop computers, peripherals, instructional software/technology, and user training.

Network Support

Monitor network status, make adjustment, updates and improvements as needed in order to provide the necessary infrastructure to support the Academy's operations and instructional technology. Additional support for the Academy's network comes from SmartSolutions Network Maintenance Agreement.

Server Support

Create and manage user accounts, software rollouts, updates, and user data. Adequate server support allows everyone at the Advanced Technology Academy to have a network login to access the internet, personalized network storage, a variety of application and programs, E-Mail, and much more.

Telecommunication Support

Provide phone access to every classroom; manage extensions, mailboxes, user accounts, and system maintenance. Through E-Rate the Academy has been able to implement a campus wide VoIP Phone System, including 24-hour service and support provided by Telnet WorldWide.

Increased Access

The Academy recognizes the importance of providing its students, parents, and faculty members with access to technology. ATA has proactively taken the necessary steps to achieve providing them with more computer access. Since 75% of ATA's student population is of low socio-economic status most students do not have computer access at home. Therefore, in order to ensure that every student has access to technology the Academy's teachers volunteer their time by working in an open computer lab every day after school for 45 minutes to an hour. During the 2009 – 2010 school year the Title 1 after school tutoring program will provide students with an additional hour of computer lab time, and the Academy will open its doors on the weekends to provide students with computer access through its media center. Students will be encouraged to utilize ATA's computer programs: Study Island MEAP and MME preparation program, KeyTrain, Encyclopedia Britannica, ProQuest, Mavis Beacon, and the Microsoft Office Suite.

The Academy will provide its parents with computer access by having computer stations located within the District Office for them to use. The parents will be encouraged to study for their GED with the Study Island program, increase their career skills with the KeyTrain program, practice keyboarding on Mavis Beacon, and practice their Microsoft Office skills via Microsoft Office Suite. The Instructional Technologist will hold some computerized parent training sessions on weekends. These sessions will be focused primarily upon Microsoft Office Suite skills.

The Academy provides its teachers with easy access to technology by incorporating a teacher's computer station (equipped with Microsoft Office Suite, a speaker set, and printer/scanner), a Voice Over IP telephone and digital projector with a screen into every classroom. In order to provide the Academy's teachers with more access to various forms of technology that they can personally own the Academy will inform its staff about educational discounts that its vendors provide to our school. The teachers will be informed of these discounts during professional development sessions and meetings.

The Academy's goal is to produce technologically literate students by the time they graduate from eighth grade. In order to accomplish this goal it strives to provide students with computer time outside of its regularly scheduled computer labs, encouraging parents to utilize technology so that they can model it for their children, and provide on-going technology instruction to its instructors so that they incorporate technology into their every day lesson plans. It is essential that ATA's faculty and administration utilize technology to enhance instruction and stimulate the minds of its students through modeling best technological practices.

IV. Funding and Budget

Funding for technology is a part of the general operating budget. The school has made a commitment to technology funding and has created a structure that allows for routine replacement of hardware and software on an on-going basis. The development department of The Advanced Technology Academy is continuously seeking funding for the school at large and for technology specifically.

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Annual Technology Budget Projections
2009-2010 thru 2011-2012

Staffing - salaries & benefits	2009-10	2010-11	2011-12
Instruction	$139,125	$143,299	$147,598
Instructional support	$70,625	$72,744	$74,926
IT support	$146,180	$150,565	$155,082
Total staffing	**$355,930**	**$366,608**	**$377,606**
Hardware & networking			
Network hardware & cabling	$314,093	$10,000	$10,000
Instructional hardware	$338,326	$225,878	$380,578
Administrative hardware	$26,369	$21,970	$12,970
Total hardware & networking	**$678,789**	**$257,848**	**$403,548**
Maintenance & service			
Network maintenance - contracted	$65,000	$65,000	$65,000
Hardware maintenance & supplies	$22,286	$21,493	$22,578
Telecom & internet connectivity	$114,785	$114,785	$114,785
Total maintenance & service	**$202,071**	**$201,278**	**$202,363**
Software licenses & curriculum support			
Curriculum software	$60,106	$66,105	$50,106
Virtual/web-based curricula	$25,000	$25,000	$25,000
Administrative software	$11,687	$11,750	$11,800
Network & operating software	$56,926	$7,400	$7,400
Total software licenses & curriculum support	**$153,719**	**$110,255**	**$94,306**
Professional development	**$10,000**	**$10,000**	**$10,000**
Technical support	**$10,000**	**$10,000**	**$10,000**
Total Technology Expenditures	**$1,410,509**	**$955,989**	**$1,097,823**

Funding Strategy

As a public school academy, the district does not have general obligation bonding authority with which to finance major technology purchases. Therefore, district administration makes every effort to effectively coordinate available state and local grant resources to implement the strategic long-range technology plan, taking into full account the total cost of technology ownership in the process.

E-rate discounts are a major source of grant funding for retrofitting and connectivity. ATA serves a predominantly at-risk student population and in so doing qualifies for a 90 percent discount rate.

ATA is making a significant effort to retrofit all of its school buildings. Under the "two-in-five years" rule for Priority 2 E-rate eligible expenditures (internal connections and network upgrades), the Academy has applied for significant Priority 2-eligible discounts for the 2009-10 E-rate year totaling over $445,000. These E-rate discounts will enable the Academy to expand network capacity, with Gigabit Switching Technology allowing access to a multitude of local and web-based applications, presentation tools, multimedia, internet and other resources into every classroom. These improvements in both speed and reliability will make our network function better than it has ever functioned and directly led to an increase in computer use by all staff and students.

Coordination of Resources

Currently, ATA provides high-speed access to the Internet for up to 2,000 users through a direct connection to Merit's Fiber Ring. E-Rate discounts enable this level of connectivity to be affordable. E-Rate funds also will enable us to add new servers providing Web, File, and E-Mail services as well as to increase network efficiency with the addition of new network infrastructure technologies. ATA will continue to apply for E-rate discounts in future years to further upgrade our network capacity and efficiency as well as improve end-user functionality.

The Academy is the beneficiary of *federal education technology grant funds* in the form of federal flow-through Title II - Part D formula grant funds. As required by the newly reauthorized ESEA program, the district uses at least 25 percent of its award on ongoing, sustained and intensive high-quality professional development for curriculum integration, which is a primary emphasis of our Technology Plan. With the considerable flexibility afforded districts under the new Title II - Part D program, the district anticipates using a significant portion of federal grant funds to purchase new curriculum software titles that are directly linked to professional development in curriculum integration. Professional development and related curriculum software purchases will be based on a review of relevant research in terms of effectiveness in improving student academic achievement.

The district will actively participate in *state technology grant programs* to the extent they are available. For example, during 2000-01, all of the district's teachers applied for and received laptop programs under the Teacher Technology Initiative. Unfortunately in recent years state technology grant programs have been cut back due to hard economic times. Hopefully new state grant funds in support of educational technology will become more available during the term of this plan and the district will make every effort to access these funds, with an emphasis on professional development and curriculum development.

The district will continue to aggressively pursue *local and private grant resources* for implementation of its Technology Plan. A formal Grant Committee regularly meets to identify prospective local and private grant programs and to coordinate preparation of grant applications; technology grants are a very high priority for the committee. This effort has strong support from the school administration as well. The district also will participate in local and private grant-funded programs in support of educational technology, particularly those oriented toward a train-the-trainer program and training teachers how to design enhanced instructional units that incorporate software tools and the Internet to implement directly in their classrooms. Also, the Chief Academic Officer is and will continue to be an active participant in programs to prepare administrators to provide successful strategic, instructional, organizational and public leadership through the development of technology-related knowledge, attitudes and skills.

Finally, the Academy plans to allocate from its general operating sources sufficient funds to upgrade its network infrastructure capacity, to add computer labs and integrate technology into the classroom, to purchase new software and online instructional products, and for ongoing maintenance; and to successfully integrate technology across the curriculum and into instruction.

In conclusion, the district will coordinate to the best of its ability all federal, state, local and private grant funding to effectively implement the Technology Plan over the next three years and beyond.

V. Monitoring & Evaluation

Academy Staff technology integration skills are assessed annually by the Information Technology Department, where the results are analyzed to provide additional in-servicing, professional development and purchases in order to continue providing a state of the art learning environment for our students.

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Technology Plan Teacher Survey

1. Choose your School

- *Grade School*
- *Middle School*
- *High School*

2. Choose your Position

- *Teacher*
- *Support Staff*
- *Administration*

3. Teaching experience

4. Are you comfortable using electronic tools for interactive classroom instruction? (Examples: multimedia projector, SMART/Interwrite products, classroom response system, document cameras, iPods, or GPS units)

- *Confidently*
- *Minimally*
- *Not at all*

5. Are you comfortable using presentation software for interactive classroom instruction? (Examples: PowerPoint, MovieMaker, PhotoStory, SMART Notebook)

- *Confidently*
- *Minimally*
- *Not at all*

6. Are you comfortable using electronic communication tools for interaction with your students? (Examples: email, text messaging, web pages, Google Apps, blogs, wikis, podcasts)

- *Confidently*
- *Minimally*
- *Not at all*

7. Are you comfortable recording students' grades using an electronic gradebook?

- *Confidently*
- *Minimally*
- *Not at all*

8. Are you comfortable using technology tools to analyze student performance data & create charts and graphs. (Examples: Spreadsheets, GradeQuick, Pinnacle, Centre, TRIAND, Palm or handheld device.)

- *Confidently*
- *Minimally*
- *Not at all*

9. Are you comfortable searching the Internet for resources that align with state standards and support the learning environment?

- *Confidently*
- *Minimally*
- *Not at all*

10. Are you aware of the National Technology Standards for Students (NET-S) for planning lessons that integrate software and Web-based resources?

- *Confidently*
- *Minimally*
- *Not at all*

11. Are you comfortable capturing images and transferring them to a computer? (Examples: digital camera, digital video camera, cellular phone, scanner)

- *Confidently*
- *Minimally*
- *Not at all*

12. Are you comfortable saving and accessing files on your computer or school network?

- *Confidently*
- *Minimally*
- *Not at all*

13. Are you effectively integrating technology resources into the curriculum? (Examples: calculators, data collection probes, videos, handheld hardware, educational software)

- *Confidently*
- *Minimally*
- *Not at all*

14. Are you building technology activities that are interdisciplinary and project-based?

- *Confidently*
- *Minimally*
- *Not at all*

15. Do you teach student strategies to assess the validity and reliability of information they gather via the Web and/or other technologies?

- *Confidently*
- *Minimally*
- *Not at all*

16. Do you teach students strategies that promote safe and ethical use of technology?

- *Confidently*
- *Minimally*
- *Not at all*

17. Do you encourage students with technology interests to share their expertise with peers, teachers and other adults in the learning community?

- *Confidently*
- *Minimally*
- *Not at all*

18. Do you use technology tools to encourage parental and community involvement (Examples: email, school website, electronic newsletters, wikis or web grade book)?

- *Confidently*
- *Minimally*
- *Not at all*

19. Do you participate in technology-based collaboration for your own professional growth (Examples: online college courses/professional development, local cooperative professional development, tech-buddy, wikis, blogs)?

- *Confidently*
- *Minimally*
- *Not at all*

20. Do you model the guidelines of your districts' acceptable use policy when using technology with your students & colleagues?

- *Confidently*
- *Minimally*
- *Not at all*

21. Are you facilitating assistive technology for students with special needs?

- *Confidently*
- *Minimally*
- *Not at all*

22. Do you take measures to provide equal access to technology for all students in your school?

- *Confidently*
- *Minimally*
- *Not at all*

23. Do you take measures to protect the privacy of student data and information? (Example: preventing student access to sensitive data on your computer)

- *Confidently*
- *Minimally*
- *Not at all*

24. Are you aware of your district's policies & procedures regarding the Cyber bullying Law?

- *Confidently*
- *Minimally*
- *Not at all*

25. What obstacles prevent your use of student centered technology integration?

- *I am currently doing so*
- *I need professional development*
- *Hardware/software resources not available*
- *None of the above*

26. What obstacles prevent your use of the electronic GradeBook?

- *I am currently doing so*
- *I need professional development*
- *Hardware/software resources not available*
- *None of the above*

27. What obstacles prevent your use of presentation equipment?

- *I am currently doing so*
- *I need professional development*
- *Hardware/software resources not available*
- *None of the above*

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Policies

ATA Acceptable Use Policy

Use of communication software and on-line services is an important skill for today's technologically literate students.

***ATA** wants to open this important avenue of telecommunication and research to our students while ensuring their safety. Please review these policies with your son/daughter with particular attention to #8. Students need to be reminded that the traditional parent warnings against "talking to strangers" apply in this case for the same safety reasons.*

*1. All use of on-line services (i.e. Internet) must be in support of education and research, and must be consistent with the purposes of **ATA**.*
2. Any use of the network for commercial or for profit purposes is prohibited. Students are not to make purchases on-line from school.
3. Network and E-mail accounts are to be used only by those authorized to use the account for school related purposes.
4. Communications via the network or E-mail should not be assumed to be private or privileged information.
5. Malicious use of the network or E-mail to develop programs that harass other users, infiltrate a computer network system, and/or damage the software components of a computer or computing system is prohibited.
6. Use of the network or E-mail to transmit material likely to be offensive or objectionable to recipients is prohibited.
(i.e. hate mail, harassment, discriminatory remarks, flaming, slamming and other antisocial behaviors)
7. The illegal installation of copyrighted software for use on our computers is prohibited.
8. When using the Internet, students should not use their full names or give out their home telephone number, home address, or school name. We also recommend that you not give out your social security number, bank account numbers, or credit card numbers.
9. I will treat all computer equipment with care and will leave it in good working condition when I am finished. I will
BE SAFE, RESPONSIBLE, and KIND to the computers when I am using them.
10. I understand that the school and home computer software cannot be copied by me to use on any other computer because this would violate copyright law.
11. I will not bring in any of my own software to use on the school computers because this would violate copyright law.

** Note: Please understand that the Internet is a non-censored media and the possibility exists for inappropriate material to be displayed. The utmost care will be taken in the classroom to avoid this situation. **ATA** will not be held liable for any indiscretions involving Common/Internet use. Students should never respond to any messages that are suggestive, obscene or threatening. Show such messages to an adult/teacher so they can forward a copy to the service provider for investigation.*
***ATA** complies with all federal requirements for privacy and Internet safety, i.e., The Children's Internet Protection*
Act, and operates comprehensive filtering software to ensure students are not subject to inappropriate material.
***ATA** reserves the rights to log Common/Internet use; to monitor file server space utilization by users; and remove a user from the network in case of unauthorized activity.*

Abuse is considered serious misconduct and will be dealt with by loss of computer privileges. I understand that if I violate any of the above rules, I could lose my computer privileges, both at home and at school.

Student Signature *Date* / / _

Parent Signature *Date* / / _

Technology Privacy

The Board of Directors recognizes its staff members' right to privacy in their personal lives. The School has established this policy to inform staff members of the School's position with respect to staff-member privacy in the workplace and to protect the School's interests.

All computers, telephone systems, electronic mail systems, and voicemail systems are the schools property and are to be used primarily for School related, business, purposes. The School retains the right to access and review all electronic and voice mail, computer files, databases, and any other electronic transmissions contained in or used in conjunction with the School's computer system, telephone system, electronic mail system and voicemail system. Staff members should have no expectation that any information contained on such systems is confidential or private.

The School with or without the staff member's knowledge may do review of such information. The use of passwords does not guarantee confidentiality, and the School retains the right to access information in spite of any passwords. All passwords or security codes must be registered with the school. A staff member's refusal to permit such access may be grounds for discipline up to and including discharge.

Computers, electronic mail, and voice mail systems are to be used primarily for School related business purposes. Personal messages via School-owned technology should be limited in accordance with the Principal's guidelines. Staff members are prohibited from sending offensive, discriminatory or harassing computer, electronic or voice mail messages.

This policy is necessary to ensure that School resources are used properly. Review of computer files, electronic mail, and voice mail will only be done in the ordinary course of business and will be motivated by a legitimate business reason. If a staff member's personal information is discovered, the contents of such discovery will not be reviewed by the School, except to the extent necessary to determine if the School's interests have been compromised. Any information discovered will be limited to those who have a specific need to know that information.

The administrators and supervisory staff members authorized by the Chief Administrative Officer have the authority to search and access information electronically.

All computers and any information or software contained therein are property of the School. Staff members shall not remove or communicate any such information in any form for their personal use or for the use of others. In addition, staff members may not copy software on any school computer and may not bring software from outside sources for use on school equipment without the proper approval of the Chief Administrative Officer or a staff member authorized by the Chief Administrative Officer. Such pre- approval will include a review of any copyright infringements or virus problems associated with outside software.