**Fairfax County School Board**
**Operational Expectations Monitoring Report**
A = acceptable condition U = unacceptable condition

# TECHNOLOGY

Period covered: 2006

**The Superintendent will use technology to support teaching, learning, and the Board's operational expectations and goals. The Superintendent will:**

**1. Provide a comprehensive and functional technology infrastructure.**

| | | | | |
|---|---|---|---|---|
| **Superintendent:** | **A** | ☒ | **U** | ☐ |
| **School Board:** | **A** | ☒ | **U** | ☐ |

**Reasonable Interpretation:**
A robust infrastructure is critical to the successful operation of the school division. The technology in the classroom no longer consists simply of stand-alone computers. Every classroom must be connected to the wide area network in order to access important instructional applications and on-line materials. The business functions of the school division rely on access to the internet and the FCPS intranet as well as the major systems located at the Wilton Woods network operations center.

There are two critical elements to ensuring a robust infrastructure. First, the wide area network must provide reliable access for all students and staff and must be available 24 hours a day, 7 days a week. Secondly, when a problem occurs, the support structure must be in place to ensure that incidents are responded to quickly and effectively.

**Indicator 1.a.**
The FCPS Wide Area Network (WAN) services, including the infrastructure, equipment and circuits, will be available 99 percent of the time, 24 hours per day, 7 days per week, 365 days per year.

**Indicator 1.b.**
95 percent of Technology Incidents will be responded to according to established Service Level Agreements (SLA's) outlined in the table below:

| **Priority Level** | **Respond By:** | **Close By:** |
|---|---|---|
| Low – Planned | 3 Business Days | 30 Business Days |
| Medium – Routine | 12 Business Hours | 15 Business Days |
| High – Serious | 6 Business Hours | 3 Business Days |
| Critical – Emergency | 2 Hours | 24 Hours |
| Special – Emergency | 2 Hours | 8 Hours |

The definitions of the priority levels are as follows:

**Low/Planned** - Events that are coordinated with the school/site to be done at a future defined time more than three weeks in advance.

**Medium/Routine** -Incidents that are failures which while inconvenient do not cause disruption for multiple users; users are able to perform the same work somewhere else at the location; is not FCPS mission critical (e.g. Individual workstation boots to blue screen, user cannot access mail, single computer cannot access internet).

**High/Serious** - Incidents that are failures, which may disrupt service for multiple rooms/offices/users at a site; normal work cannot be performed at another location at the site, applications and work affected may or may not be FCPS mission critical (e.g. one wiring closet down impacting a wing of the school, computer lab without network connectivity).

**Critical/Emergency** - Incidents that are failures which affect multiple users and/or multiple instructional applications at multiple sites; failure of a mission critical nature (e.g. one or more exchange servers are unavailable, county-wide virus outbreak, FCPS 24/7 down).

**Special/Emergency** - An incident where a single or multiple users are affected and it is mission critical (e.g. SASI user cannot access SASI during grading period, SOL testing interrupted by internet problems, School Board or LT member computer down and unable to complete critical time/sensitive function).

## Superintendent State of Condition:

### Indicator 1.a.

The Wide Area Network (WAN) is responsible for connecting all FCPS facilities to a backbone core so that FCPS users can utilize network and Internet resources. The health of such a network is vital to instructional as well as business functions of the organization. FCPS provides WAN services to 234 locations across Fairfax County. Beginning in May 2005, FCPS began a WAN upgrade in an effort to increase the speed and reliability of its WAN. The upgraded service, Transparent LAN Services (TLS), is being provided by Verizon, which in turn also provides monitoring and maintenance services. All middle and high/secondary schools are provided with 100 Mb links while elementary school locations are provided with 10 Mb links. At this time, approximately 95 percent of WAN locations have been upgraded with the new technology. The expected completion for all sites is by the end of the 06-07 school year.

The need for increased and more reliable bandwidth has been fueled by the increase demand for web resources, including online applications, to be used primarily for instruction. Examples of such applications are SOL on-line testing, United Streaming and Blackboard.

To provide availability measurements, IT uses a monitoring and reporting tool called Nagios. Nagios is an open source network monitoring program that was put into service in June 2006 to assist IT with the daily monitoring and maintenance of the WAN. To measure FCPS WAN availability, the international standard, Information Technology Infrastructure Library (ITIL) availability measurement is employed which is calculated as follows:

(Agreed service time – Downtime) / (Agreed service time) x 100

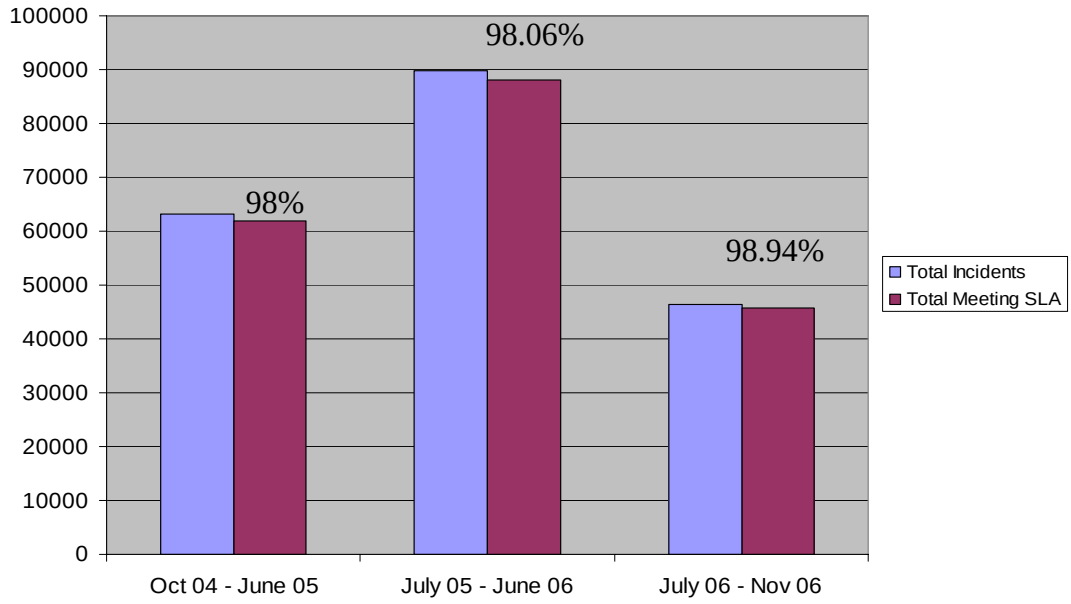
Average uptime for all sites for the period of July 1, 2006, to November 30, 2006, was **99.59** percent. See appendix A for availability on individual sites on the FCPS WAN during this time period.

**Indicator 1.b.**
The FCPS technology support model is based on a collaborative and integrated team approach, which includes school based technology personnel as well as central office IT support partners. These teams provide focused, direct technology support to every school, center, and administrative office in FCPS to ensure the technology is up and running and available when and where it is needed. When the technology is not working or available as expected, these teams work together for prompt resolution according to established Service Level Agreements (SLAs).

These formal agreements define how support entities interact with one another and how timely support is provided to customers. They include escalation procedures that are followed when response and resolution times exceed expectations.

All technology support activities are managed and tracked in a comprehensive service management system, Magic, that records and tracks computer-related requests through resolution. All incidents are directly resolved, referred, tracked and/or escalated according to agreed-upon business rules and service level agreements. Magic was implemented in October of 2004 and the chart below shows the total number of incidents and the number/percentage of technology incidents that met established SLAs. Information Technology met the indicator 1.b. by responding to more than 95 percent of the technology incidents according to established service level agreements.

**Technology Incidents Meeting Established Service Level Agreements**




**Board Comments:** See Summary Statement of the Board

**2. Provide technology capabilities that are useful for staff members and students.**

**Superintendent:** **A** ☒ **U** ☐
**School Board:** **A** ☒ **U** ☐

**Reasonable Interpretation:**
Technology is integrated into the curriculum at all levels, K-12, as well as across all subject areas. FCPS must ensure that computers are available in sufficient numbers, and those computers must be relatively current, in order to be useful to students. Aging computers have a higher incidence of breaking down, and often cannot run the latest instructional software applications.

Software applications are also vital to students and teachers in the instructional program. Usefulness of applications can be measured by usage statistics and teacher survey information. In addition, FCPS Online Campus, provided though FCPS 24/7, uses technology to expand the boundaries of space and time. Online courses are identical in content to those offered in the traditional classroom and provide students additional useful opportunities for learning.

**Indicator 2.a.**
FCPS will maintain a student to standard computer (5 years old or newer) ratio of at least 2.5 to 1.

**Indicator 2.b.**
FCPS will report on how frequently teachers report using technology productivity tools and how frequently teachers report using technology to support student learning based on an annual survey. Focus groups will also be utilized to seek input from teachers on the usefulness of technology.

**Indicator 2.c.**
FCPS will report on number of courses offered through the FCPS Online Campus and the number of students enrolled annually.

**Superintendent State of Condition:**

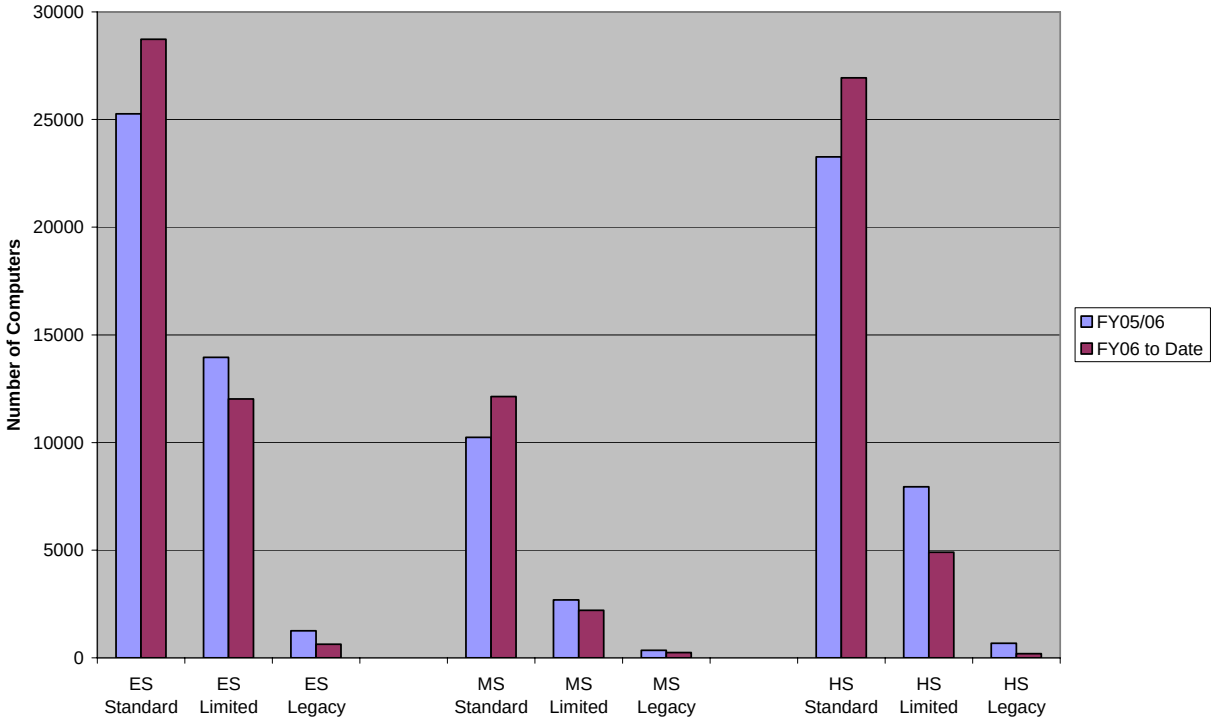
**Indicator 2.a.**
FCPS has a computer inventory of more than 95,000 desktop and laptop computers. These computers are classified as standard (five years or newer), limited (six to ten years old) and legacy (more than ten years old).

FCPS has created a process of maintaining an accurate computer hardware inventory that is used to support a systematic computer replacement program. Funding for computer replacements is used to replace computers in the legacy and limited categories with the goal of a five-year refreshment cycle and all computers in the standard category. This would ensure that all computers have the ability to deliver all current instructional and administrative software in a secured operating environment.

While at this point it is cost prohibitive to establish and maintain the desired five-year life cycle, the following charts illustrate the progress FCPS has made towards increasing the number of standard computers available to FCPS students and teachers as a result of annual replacement equipment funding and a one time grant from the Fairfax County Government. Seventy-eight percent of FCPS computers now fall into the standard category compared to forty-six percent three years ago.

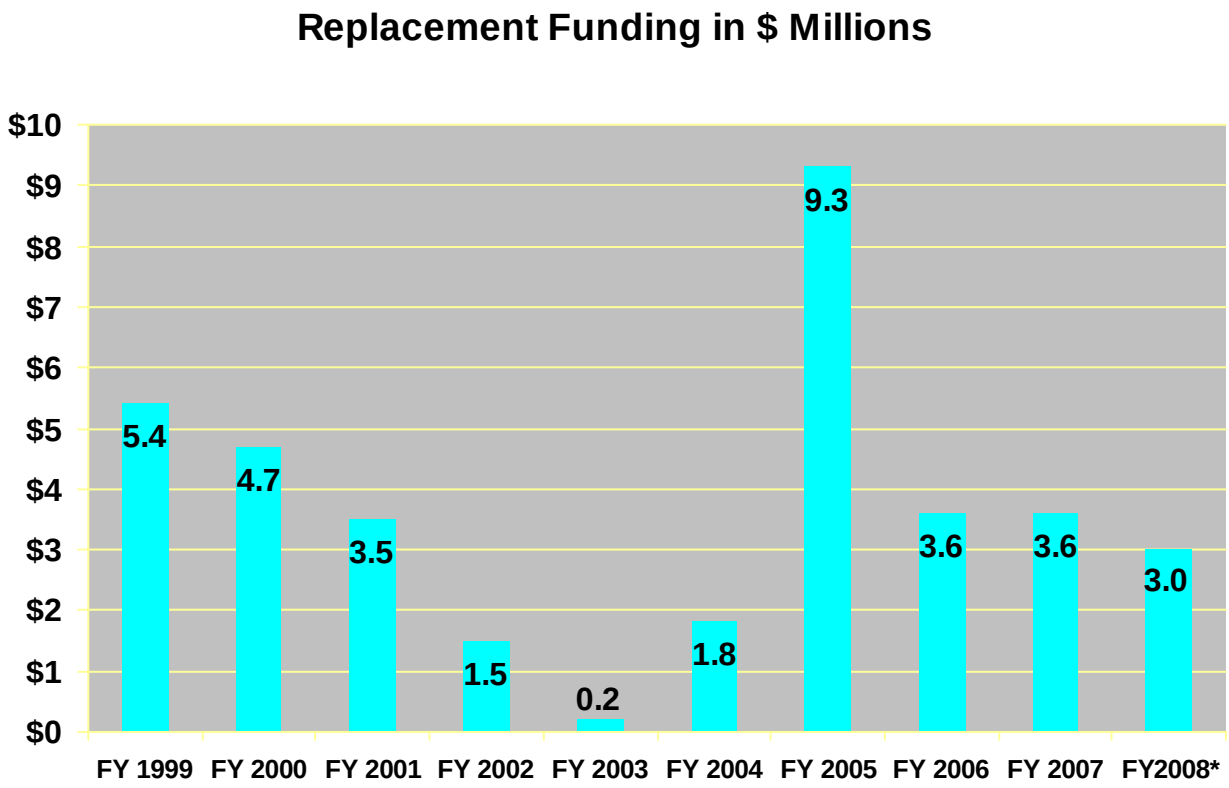
See Appendix A for a school-by-school computer inventory breakdown.

**Computer Inventory by Category**




| Student to Standard Computer Ratio | | | |
|---|---|---|---|
| **FY05/06** | **Standard Computers** | **Students** | **Ratio** |
| Elementary | 25266 | 84811 | 3.3 |
| Middle | 10243 | 24887 | 2.4 |
| High School | 23266 | 51995 | 2.3 |
| Total | 58631 | 161693 | 2.8 |
| | | | |
| **FY06 to Date** | **Standard Computers** | **Students** | **Ratio** |
| Elementary | 28731 | 84364 | 2.9 |
| Middle School | 12133 | 25995 | 2.1 |
| High School | 26936 | 52247 | 1.9 |
| Total | 67799 | 162606 | **2.4** |

Additional and consistent replacement equipment funding will be required in order to maintain a 2.5 to 1 student to standard computer ratio. Computer replacement funding has varied widely over the past 10 years as shown in the following chart. In FY 2005, FCPS received a one-time funding grant from Fairfax County Government of $5M for computer replacement.




* In the Superintendent's Proposed Budget for FY 08

Note: Sustained annual funding of $23 million would be required to maintain a five-year refreshment cycle of all FCPS computers.

**Indicator 2.b.**
In order to ensure that technology is useful and adding value to the overall goals of FCPS, IT regularly solicits feedback and information from teachers at various stages during the planning and implementation of major technology initiatives.

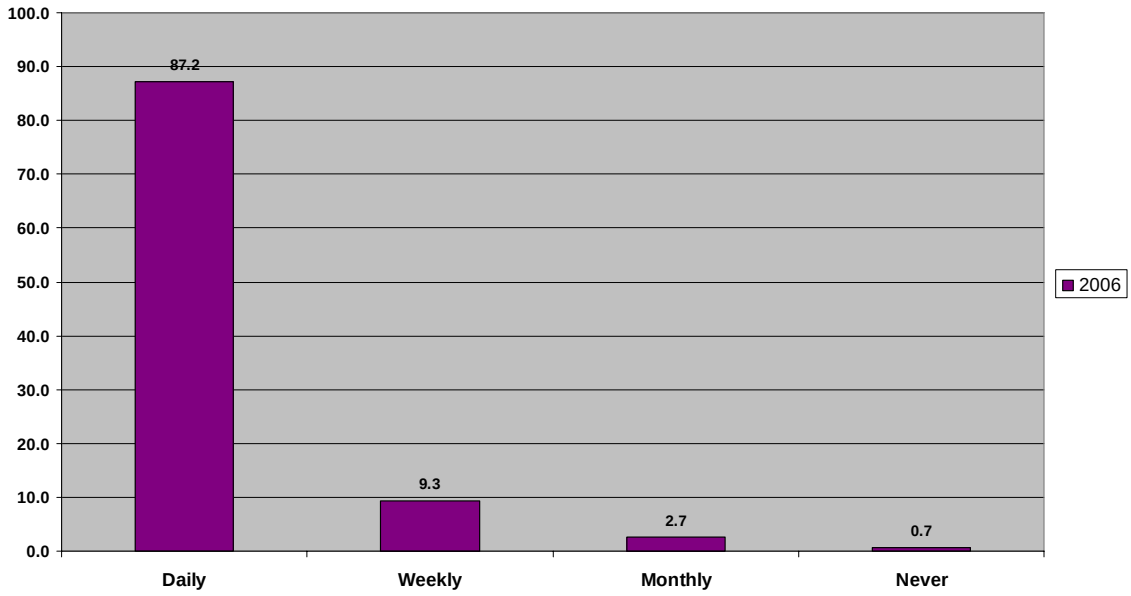
User advisory focus groups are often formed during the early stages of planning a technology initiative. For example, Wecare@school, FCPS 24/7, Curriculum and Assessment Initiative, On-Line IEP, EDSL for school planning and public profiles all benefited from user focus groups established to help define requirements, policy and procedures, and ensure that the end user perspective was incorporated into the design and development of these critical technology programs for the schools.

During the pilot stage of a technology implementation, the users of the system are surveyed through focus groups and other means to obtain their input on the features, functionality, and usefulness of the system allowing for adjustments to be made as necessary prior to full implementation. During the past year, users provided invaluable feedback on United Streaming, Elementary Academic Grading, BART, on-line SOL testing, Classxp for elementary schools, and Naviance during the pilot stage of these technology initiatives. Based on feedback and requests from teachers following the elementary teacher laptop initiative, VPN (Virtual Private Network) service was made available to all staff in 2006. VPN is the method FCPS uses to allow its employees to access school system resources while they are not at an FCPS site, while protecting those same resources.

Teachers are also surveyed annually on their use of technology. In FY06, Information Technology surveyed all general education and special education classroom teachers as well as teacher aids on their use of technology to support teaching and learning. The charts below show that of the 2,215 teachers that responded to the survey, 87 percent indicated that they utilized technology productivity tools every day in their jobs. Additionally, more than 88 percent of those responding said they used technology to support student learning on a weekly basis and 61 percent indicated they used it daily in support of student learning. The high percentage of teachers' usage is indicative of the usefulness of the technology in FCPS.

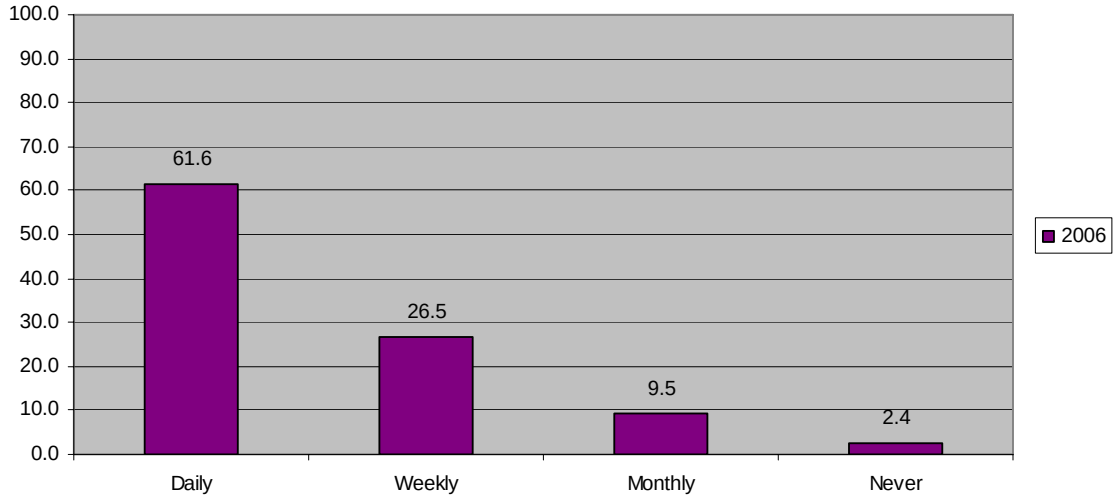
## Use of Classroom Technology

**How frequently do you use productivity tools?**




## Use of Classroom Technology

**How frequently do you use technology to support student learning?**

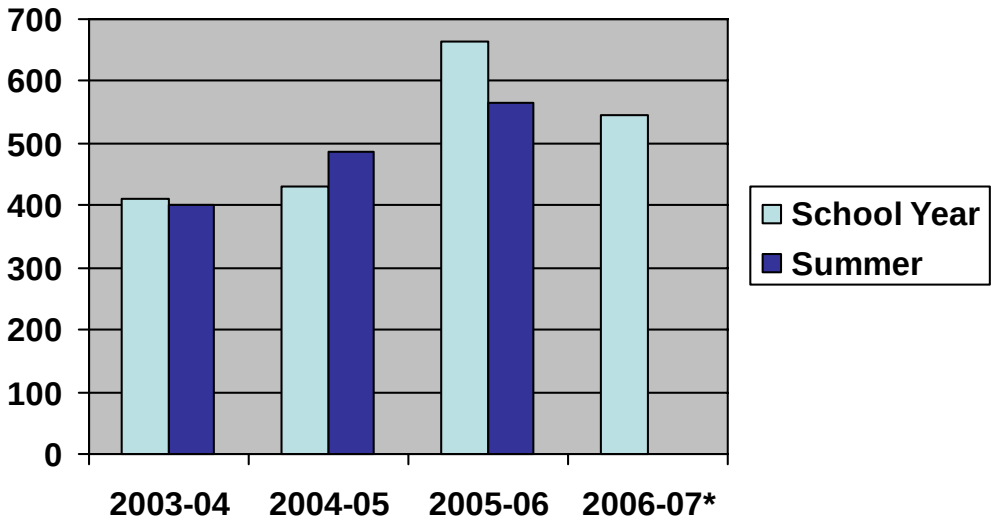


**Indicator 2.c.**
The FCPS Online Campus provides high school courses through the Internet. These courses are built to teach the same curriculum available in regular face-to-face courses. Online Campus addresses the needs and characteristics of a number of student groups including traditional high school students, AP students, special education high school and middle school including autistic students, English for speakers of other languages, alternative education, homebound, home schooled, transfer students, out-of-system students including students in foreign countries, and pregnant students.

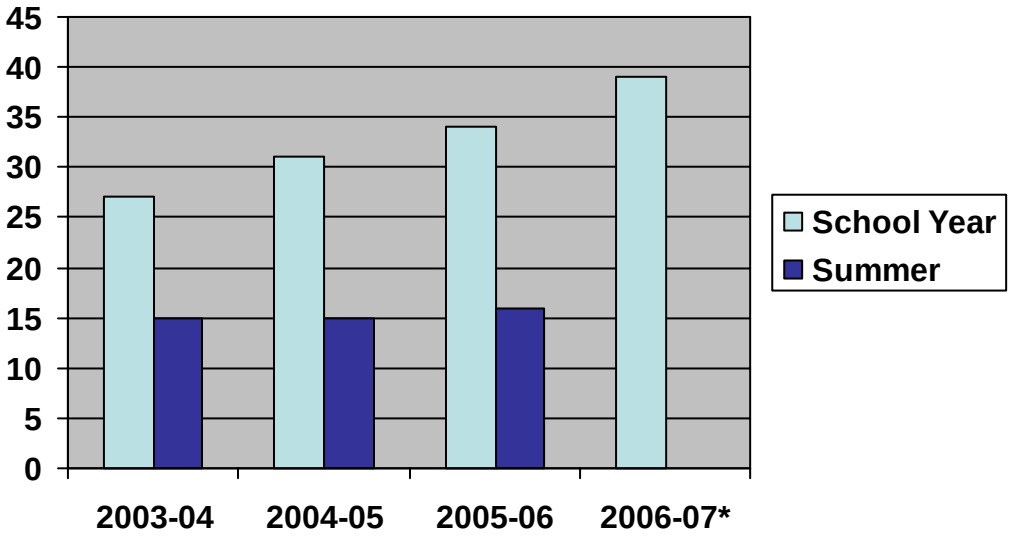
In school year 2005-2006, the Online Campus offered 34 courses and served 665 students. In summer school 2006, the Online Campus offered 16 courses with 565 students enrolled. Student enrollment continues to grow each school year. This school year as of December 2006, the Online Campus has served 545 students in the following 39 courses:

| | |
|---|---|
| <u>English</u> | <u>Mathematics</u> |
| Creative Writing | Algebra I |
| English 9 | Algebra II |
| English 10 | Geometry |
| English 11 | Geometry Honors |
| English 12 | Trigonometry |
| AP English Language Composition | AP Calculus AB |
| AP English Literature Composition | AP Statistics |
| | |
| <u>Foreign Language</u> | <u>Science</u> |
| AP French Language | Biology I |
| AP French Literature | AP Biology |
| Spanish I | Chemistry I |
| AP Spanish Language | AP Chemistry |
| | Geosystems |
| <u>Social Studies</u> | Oceanography |
| AP Macroeconomics | Physics I |
| AP Microeconomics | AP Physics B |
| AP Psychology | |
| AP US Government & Politics | <u>Career & Technical Education</u> |
| AP US History | Advanced Accounting |
| Virginia and US Government | Aerospace Science 1 |
| Virginia and United States History | Database Design and Management 1 |
| World History and Geography I | Life Planning |
| World History and Geography II | Network Administration |

## On-Line Campus - # Students Served




## On-Line Campus - # Courses Offered




* School Year as of December 2006.

**Board Comments:** See Summary Statement of the Board

**3. Use technology to support diverse learning techniques and styles.**

**Superintendent:** **A** ☒ **U** ☐
**School Board:** **A** ☒ **U** ☐

**Reasonable Interpretation:**
FCPS must provide technology for students with disabilities that will allow them to participate in the education process. Assistive technology can allow many students with disabilities the capacity to participate in an inclusive environment in the general education setting. For students with more severe disabilities, assistive devices can allow them to communicate with their teachers, other students, family, and friends which would be impossible without the technology.

For the general education students, offering multimedia technology capabilities benefits students with diverse learning styles. In today's world where multimedia and visual stimulations are pervasive, many students benefit in their learning when video segments can be appropriately integrated into the instructional day. Video streaming capabilities, tied to the FCPS Program of Studies and Virginia Standards of Learning provides the visual learner with reinforcement of essential learning concepts.

**Indicator 3.a.**
FCPS will provide and maintain targeted and appropriate assistive technology (e.g. augmentative communication devices, adaptive access peripherals, and software) to 100 percent of students with disabilities who are determined to require assistive technology support through the annual IEP process.

**Indicator 3.b.**
FCPS will provide to all schools a multimedia on-demand video streaming instructional tool, supporting diverse learning techniques and styles, and will report on the usage of this tool.

**Superintendent State of Condition:**

**Indicator 3.a.**
Fairfax County Public Schools is a national leader in the integration of assistive technology for students with disabilities. This service includes a comprehensive assessment component to determine which specific hardware, software, and/or adaptations a student might require. For example, a student who is non-verbal might require an augmentative and alternative communication device to effectively enable participation in all aspects of school curriculum and life.

The number of students with disabilities receiving assistive technology services over the last three years has grown from 2,514 in FY04 to 2910 in FY05 to 3,321 in FY06. During this time 100 percent of the students with disabilities determined to require assistive technology as identified in their IEPs received the services. To date in FY07, all 3,061 students with disabilities requiring assistive technology services according to their IEP are currently receiving them. As many as 700 new students are referred for an

assessment each year, so it is projected that this number will increase during the year. See appendix A for a school by school accounting of the number of students with disabilities served with assistive technology.

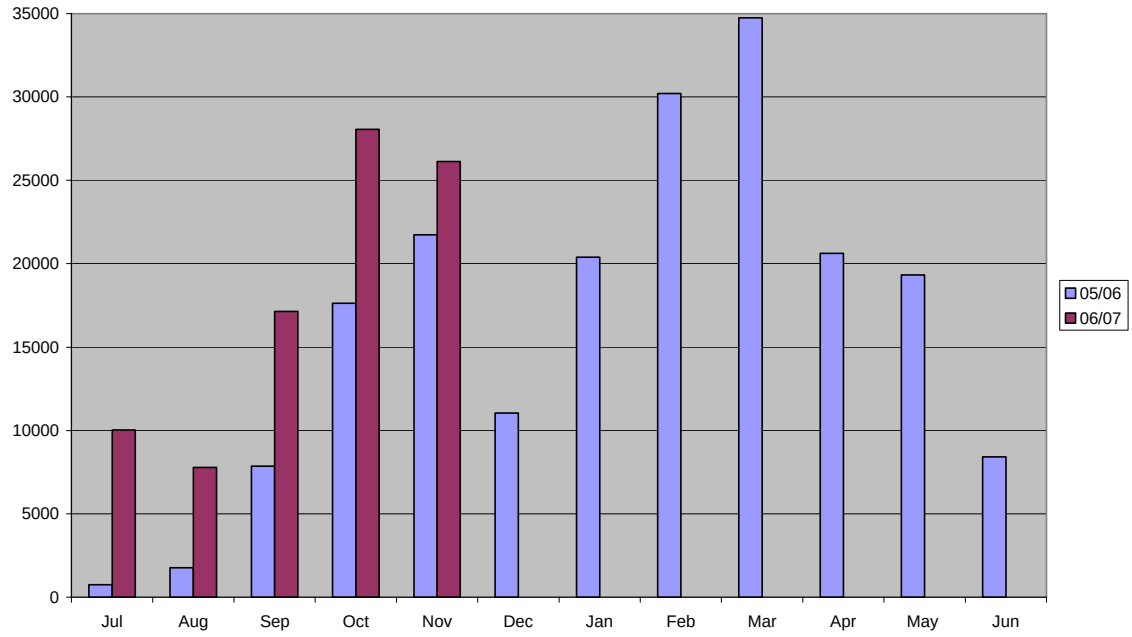
**Indicator 3.b.**

FCPS provides *Unitedstreaming,* a subscription-based Internet-delivered video streaming instructional application offered through Discovery Education, to all schools. *Unitedstreaming* offers streamed video clips of education programs (over 3,000 full-length streamed videos, edited into 30,000 titled segments) correlated to and searchable by Virginia SOL. The site also contains additional learning resources including teacher guides, writing prompts, and a library of over 3,000 images.

*Unitedstreaming* allows instructors to present educational information in a variety of formats to accommodate different learning styles. Segments can be hyperlinked into PowerPoint presentations, saved to a CD for viewing off-line, many are closed-captioned, which is particularly helpful to teachers of special student populations and, the visual nature of the clips works well with all student populations to reinforce spoken concepts in class.

*Unitedstreaming* was piloted at 28 sites during the 04/05 school year and extended to all sites the following school year. This instructional tool was rapidly adopted by schools and teachers and utilization continues to grow as the following chart illustrates the increased numbers of video clips viewed for each month this year as compared to last year. See Appendix A for school by school *Unitedstreaming* Usage information.

**United Streaming Usage Statistics**
**Clips Viewed**




**Board Comments:**

**4. Provide a means for interactive communication between the school system, parents, students, and the community.**

**Superintendent:** **A** ☒ **U** ☐
**School Board:** **A** ☒ **U** ☐

**Reasonable Interpretation:**
It is important that parents, teachers, and students have strong communications ties to ensure the best academic success for our students. Communications links must be available 24 hours a day, 7 days a week. FCPS provides a valuable resource tool to foster communication with our FCPS 24/7 Learning system. The FCPS 24/7 Learning system provides the capability to post homework assignments, participate in secure discussion boards, share on-line instructional resources, post announcements, share calendar information on upcoming events, and much more. FCPS should continue to encourage active use of this powerful communication tool by all schools.

In addition, electronic mail is a critical tool for interactive communication between the school system and the community. All employees, regardless of position, must have e-mail capabilities.

**Indicator 4.a.**
FCPS will report on utilization of FCPS 24-7 learning, by school, supporting interactive communication between students, parents, and teachers.

**Indicator 4.b.**
FCPS will report on monthly utilization of total e-mail traffic, including the counts for both internal and external messages.

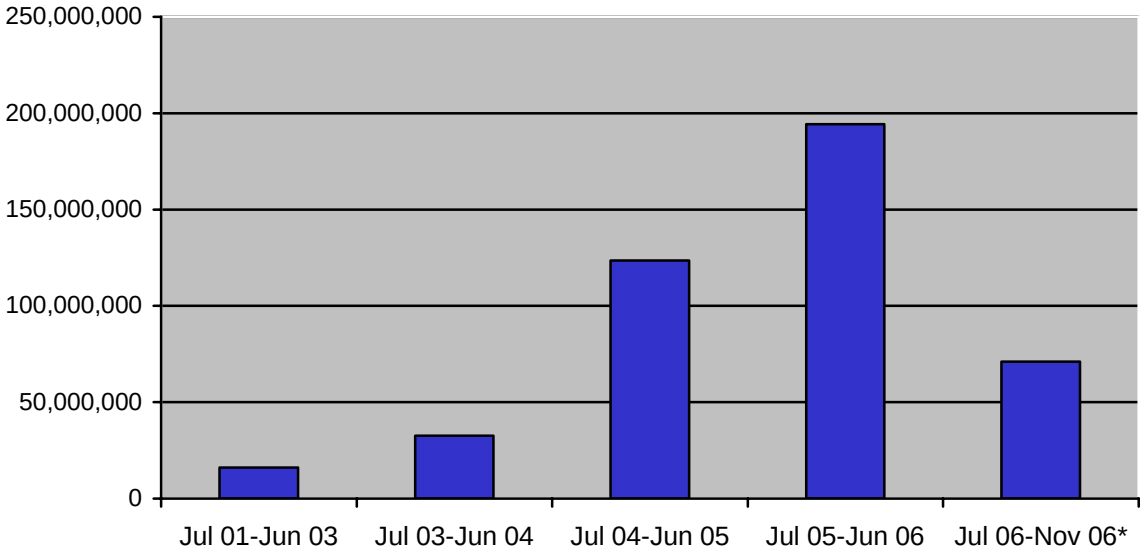
**Superintendent State of Condition:**

**Indicator 4.a.**
Currently 19,197 FCPS 24-7 classroom sites are in use by 13,243 teachers and being accessed by 118,537 students and their parents. The average daily visits are over 727,000. During each school day, FCPS 24-7 Learning is the predominant Internet destination from within the FCPS network. Internet traffic to FCPS 24-7 Learning generates over 2,000 hits per minute with users accessing in excess of 15 megabits per second of resources from the site.

Many parents share their students' FCPS 24-7 Learning accounts to monitor classroom activities, review homework and other assignments, view 9 week plans, and review descriptions of activities that occur in the classroom. Additionally, through the posting by many teachers of e-mail address and other contact information, parents may correspond directly with teachers from within their online "classrooms." To expand the capabilities of FCPS 24-7 Learning as a communication tool for all parents, the capability has been developed to allow parents and guardians to register online for their own accounts and gain access with that account to all of their students' classroom sites. This capability was successfully piloted in the late spring and fall of 2006 and is currently being fielded throughout FCPS. The target for availability to all schools is fall 2007.

The following chart shows the growth in FCPS 24-7 usage since its implementation in 2003. The total number of visits has increased more than 1,256 percent during this time. See Appendix A for school-by-school details on the number of FCPS 24-7 visits-to-student ratio.

## FCPS 24-7 Usage Trends - Total Visits




* Fiscal Year to Date as of November 2006

**Indicator 4.b.**
The proliferation and reliance upon e-mail in the world marketplace in the last five years is remarkable. For FCPS, a robust and reliable e-mail system enables and eases communications between users – both internal and external to the system. Increased e-mail usage can be attributed to a number of factors. One primary reason is the need for teachers to effectively and efficiently communicate with parents on student's progress and performance.

The FCPS e-mail system is comprised of mailbox servers, a Storage Area Network (SAN) used for mailbox contents on-line storage and an enterprise class tape library used to provide backup capabilities and long term data storage. The e-mail system, which holds over 43,000 user and resource mailboxes, runs Microsoft Exchange 2003 and is one of the largest implementations of Microsoft Exchange on the East Coast.

To provide e-mail traffic reporting, IT utilizes a reporting tool for Exchange called Promodag. Exchange Administrators run monthly reports on e-mail usage, as well as other key indicators such as a spam activity, to monitor and, if necessary, make system adjustments and enhancements.

Total e-mail messages sent and received from January 1, 2006, to December 31, 2006, was 202,479,024. During this same time frame, 127,983,216 SPAM and Virus messages were blocked/caught. The following table shows month-by-month statistics on internal an external e-mail traffic.

| | | Total Enterprise Messages | Total Internal Messages | Total External Messages |
|---|---|---|---|---|
| Jan | 2006 | 16,092,005 | 10,717,671 | 5,374,334 |
| Feb | 2006 | 16,132,282 | 10,840,377 | 5,291,905 |
| March | 2006 | 17,887,950 | 9,297,820 | 8,590,130 |
| April | 2006 | 23,504,400 | 9,434,630 | 14,069,770 |
| May | 2006 | 27,758,020 | 15,204,460 | 12,553,560 |
| June | 2006 | 14,439,928 | 11,033,257 | 3,406,671 |
| July | 2006 | 5,769,121 | 3,667,280 | 2,101,841 |
| August | 2006 | 9,912,918 | 6,777,570 | 3,135,348 |
| September | 2006 | 19,126,650 | 14,682,770 | 4,443,880 |
| October | 2006 | 23,257,940 | 14,071,380 | 9,186,560 |
| November | 2006 | 16,101,240 | 12,240,800 | 3,860,440 |
| December | 2006 | 12,496,570 | 9,336,490 | 3,160,080 |
| Total YTD | | 202,479,024 | 127,304,505 | 75,174,519 |

**Board Comments:** See Summary Statement of the Board

**5. Provide information electronically about school and division programs and academic progress.**

**Superintendent:** **A** ☒ **U** ☐
**School Board:** **A** ☒ **U** ☐

**Reasonable Interpretation:**

Parents, students, and community members need access to information about FCPS. With a diverse community, it is important that FCPS provide information electronically through multiple venues and in multiple languages. Many constituents prefer to receive information via e-mail. Others wish to access information via a rich internet presence. While others, especially those who may not have easy access to the internet, benefit from information via television. FCPS must provide a variety of technology tools to facilitate sharing of information electronically about school and division programs and academic progress. Please note that there is a corresponding goal in the community relations operational goals which addresses effective communications.

School Profiles available on the FCPS public website provide valuable information on programs and academic progress. (See indicator 6.a.) In addition to providing school and division-wide information about FCPS programs and academic progress, technology is also critical to providing parents with academic progress of individual students. Secondary teachers utilize an electronic gradebook, IGPro, which is integrated with SASI to provide academic progress information to parents and students.

**Indicator 5.a.**
FCPS will provide the Keep In Touch System for broadcasting electronic messages to parents and community members and will report on the number of subscribers, the number of schools with local customized Keep In Touch Systems, and the number of messages broadcast annually.

**Indicator 5.b.**
FCPS will provide public information and instructional television programming, and will report on the number of *SchoolScene, InSight,* and *In Other Words* programs to provide news and information about the schools, emergency messages and curriculum programming produced, and aired annually on Channel 21.

**Indicator 5.c.**
FCPS will report on the number of times FCPS Public Service Announcements air by cable providers annually.

**Indicator 5.d.**
The FCPS Public Website www.fcps.edu will be available 99 percent of the time, 24 hours per day, 7 days per week, 365 days per year.

**Indicator 5.e.**
FCPS will report on the number of secondary teachers who use IGPro electronic gradebooks to provide student academic progress.

**Superintendent State of Condition:**

**Indicator 5.a.**
FCPS implemented its Keep In Touch (KIT) communication system in 2002 as a means to provide timely, effective and targeted communication with the FCPS community. The Keep In Touch system allows the FCPS community to self-subscribe to receive FCPS information via email that is important to them, and it allows FCPS administrators and schools to provide the right information to the right people at the right time. Over the past several years, schools have been trained to implement a local version of the Keep In Touch System which allows them to send customized messages from their school, tailored to their specific school community. As of December 2006, 81,693 users were subscribed to the service and 82 schools had local customized KIT systems.

| | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|
| **Number of Subscribers** | 22,476 | 51,072 | 63,369 | 78,901 | 81,693 |
| **Number of Schools with Local Customized KIT Systems *** | 0 | 2 | 17 | 35 | 82* |
| **Number of Messages Broadcast** | 772,853 | 6,238,860 | 8,777,575 | 10,978,117 | 12,066,865 |

*See Appendix A for a listing of schools with local customized Keep In Touch systems.

**Indicator 5.b.**
In FY06, FCPS produced 315 individual public information and instructional video segments, as well as 112 full-length television programs. The total includes 96 half-hour broadcast programs that provided news and information, including:

- Live coverage of FCPS School Board meetings - 33 meetings (plus 1 repeat per meeting)
- *SchoolScene* - 22 half-hour programs
- *Top Priority* – 9 shows
- *Insight* - 19 half-hour programs
- *In Other Words* - 15 half hour shows (three programs each in Arabic, Farsi, Korean, Spanish and Vietnamese)

Curriculum programming included eight half-hour *Meet the Author* programs, a four-part series on ethics, and several performance-based programs highlighting the fine arts

To date in FY07, FCPS has produced approximately 152 video segments, as well as 33 full-length television programs, in support of public information and instruction. Programs include:

- Live coverage of school board meetings – 8 meetings
- *SchoolScene* - 9 half-hour programs
- *Insight* - 8 half-hour programs
- *In Other Words* – 5 half-hour programs (one program each in Arabic, Farsi, Korean, Spanish and Vietnamese)

Curriculum programming included three half-hour Meet the Author programs, and 65 video segments in support of an online Chinese I course.

**Indicator 5.c.**
The FCPS "smart" PSA campaign is a bold and creative effort that informs cable television viewers about FCPS efforts and initiatives through public service announcements (PSAs.) The "smart" campaign addresses many critical issues facing

children, families, schools, businesses, and the general community. Through the messages conveyed in these PSAs, and with the financial and in-kind support of Cox Communications and Comcast Cablevision, FCPS is able to reach over 250,000 homes in Fairfax County. "smart" PSAs are aired on over 40 cable channels and on the school system's flagship station Red Apple 21.

The 30-second video clips help simplify information about the academic and business aspects of FCPS. They feature teacher excellence, highlight vital school-business partnerships, and explain safety, security and student health issues. FCPS encourages businesses and organizations to partner in the production of these PSAs to highlight their efforts in supporting our students and teachers.

Since 2005, 17,744 PSAs have aired on over 40 cable channels valued at $887,250 in air time.

| Year | Spots Annually | Value |
|---|---|---|
| 2005 | 8977 | $448,850 |
| 2006 to 11/21/06 | 8767 | $438,400 |

**Indicator 5.d.**
A well-designed and highly available website is an essential part of the success and future of an organization. Often, the FCPS public website is the first introduction a customer (such as a parent, student, potential employee, or vendor) will have with the organization. It is vital that the web presence be available and reliable to provide internal and external users with the information and services they need when interacting with FCPS.

The FCPS public web presence is comprised of web servers and related SAN designed and engineered in a redundant fashion to provide a high degree of availability. The FCPS public web infrastructure provides web space for all FCPS schools and administrative offices to publish information consumed by FCPS users, parents, and citizens alike.

To provide FCPS public website availability measurements, a reporting tool for system uptime, called ActiveExperts, is utilized. This application is regularly used by the IT Network Operations Center to monitor and report on enterprise systems. To measure FCPS public website availability, the international standard, Information Technology Infrastructure Library (ITIL) availability measurement, is employed which is calculated as follows: (Agreed service time – Downtime) / (Agreed service time) x 100.

The FCPS Public Website had the following availability between the dates July 1, 2006, to December 31, 2006:

Agreed service time, in minutes = 263,880; Downtime = 400 minutes

(263,880 – 400) / 263,880 x 100 = **99.84%**

**Indicator 5.e.**
InteGrade Pro is the electronic gradebook used by middle and high school teachers. By electronically managing students' scores, assignments, and calculated grades, it provides teachers with the ability to track student performance throughout the duration of a course. IGpro also provides teachers with the ability to communicate a student's academic progress to parents during the grading period. Progress reports can be printed and sent home with students or can be sent to parents via e-mail from InteGrade Pro. InteGrade Pro transmits period and final grades back to SASI for report card printing.

Currently 6,011 middle and high school teachers use the InteGrade Pro electronic gradebooks. See Appendix A for a school by school breakdown of teachers with InteGrade Pro gradebooks.

While this tool provides basic functionality for secondary teachers, there are significant limitations. InteGrade Pro is part of the outdated SASI suite of products in place in FCPS for managing student information. These systems are more than 10 years old, pre-date web-based applications, do not support kindergarten and early elementary grading, do not address the concept of learning communities, and pre-date SOLs and NCLB.

**Board Comments:** See Summary Statement of the Board

**6. Provide a system to access relevant and current data by appropriate users.**

**Superintendent:** **A** ☒ **U** ☐
**School Board:** **A** ☒ **U** ☐

**Reasonable Interpretation:**
The effective use of data for instructional decision making can improve performance and academic achievement of all students. Having a tool deployed across the organization enables users to have instant access to much of the data they need without waiting for staff members to deliver customized reports**.** The FCPS Educational Decision Support Library (EDSL) is an enterprisewide decision support system that provides a central location (data warehouse) for informed instructional decision making for FCPS teachers, principals, and district administrators. EDSL provides an easily accessible and user-friendly web-based "one-stop-shop" to systemwide data to support educational decision-making at the local school level, cluster level, and the division level. EDSL delivers Standards of Learning data linked with demographic information, student enrollment and attendance, additional standardized test results, course marks, and educational status such as limited English proficiency levels and special education status, to assist teachers and schools in meeting local, state, and federal NCLB guidelines. School-based leaders can leverage the information to assess existing instructional programs, communicate effectiveness with local school communities, and plan for the future. Via the school profiles on the public website www.fcps.edu, EDSL data can also be shared electronically with the public, providing useful information on each of the schools in the areas of academic achievement, demographics, staffing, and discipline.

FCPS must maintain and enhance the EDSL system to support the changing needs of the school division.

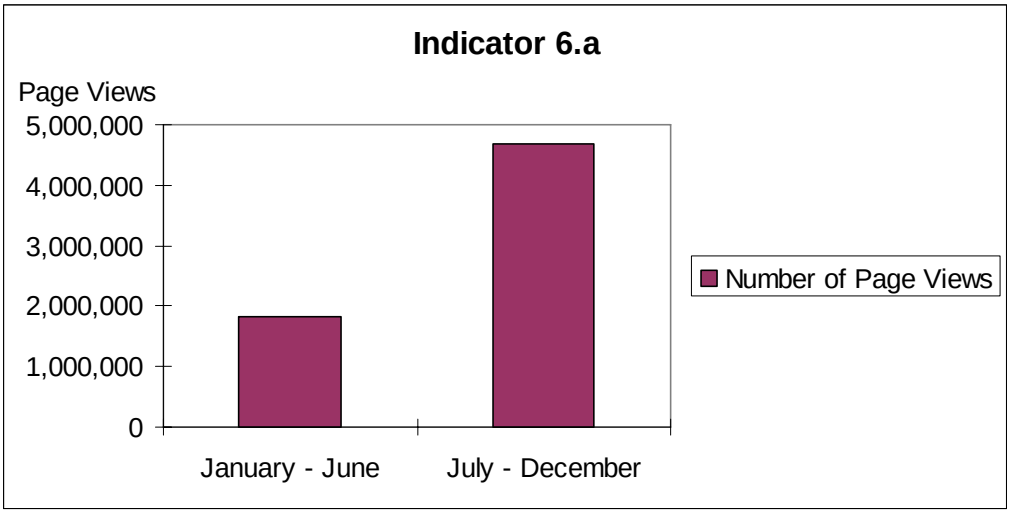
**Indicator 6.a.**
FCPS will report on public utilization of EDSL via the school profiles on www.fcps.edu by counting page views within the profiles.

**Indicator 6.b.**
FCPS will report on FCPS utilization of EDSL via the EDSL portal by counting the number of reports opened by users.

**Superintendent State of Condition:**

**Indicator 6.a.**
The following chart reports on public utilization of EDSL via the school profiles on www.fcps.edu by counting page views within the profiles.

**EDSL Public Access in 2006**



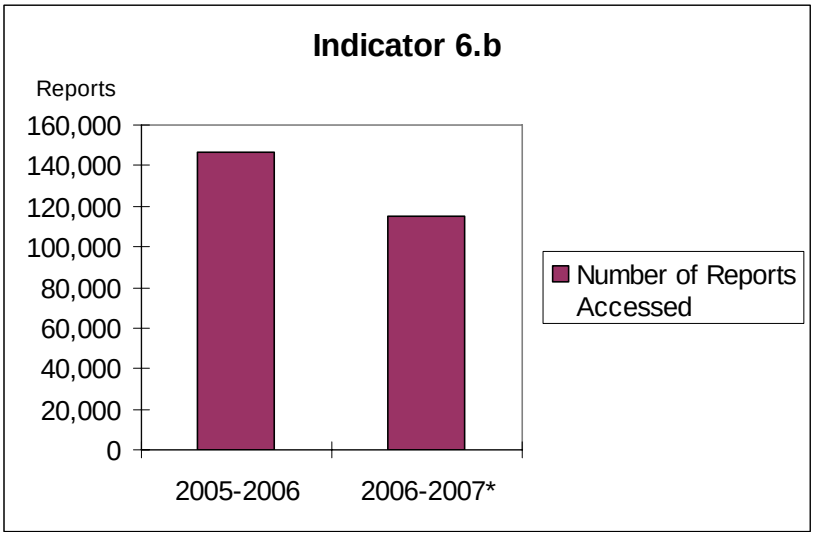

| | January – June 2006 | July – December 2006 |
|---|---|---|
| **Number of Page Views** | 1,834,671 | 4,694,164 |
| **Number of Visitors** | 141,101 | 152,824 |

The chart and table for Indicator 6.a illustrate the level of EDSL usage via the public school profiles. The data indicate that in the six months of July through December 2006,

152,824 visitors viewed 4,694,164 web pages within the EDSL public school profiles. This represents a 156 percent increase over the six month period of January through June 2006. FCPS launched the EDSL public school profiles in January 2006.

**Indicator 6.b.**
The following chart reports on FCPS utilization of EDSL via the EDSL portal by counting the number of reports opened by users.

**EDSL Client Access in Fiscal Years 2005-2006, 2006-2007***




| | 2005-2006 | 2006-2007* |
|---|---|---|
| **Number of Reports Accessed** | 146,473 | 115,147 |
| **Number of Users** | 3,265 | 3,451 |

**(*July – December 2006)**

The chart and table for Indicator 6.b illustrate the level of EDSL usage via the client application available to FCPS staff and school administrators. The data indicate that in the six months of July through December 2006, 3,451 school administrators and staff accessed 115,147 EDSL reports. In the 2005-2006 school year, 3,265 school administrators and staff accessed 146,473 EDSL reports. It will be noted that with the introduction of the public access profiles in 2006, many of the EDSL users now access the school profiles for "quick" reports, and utilize the EDSL Client Access for more in-depth analysis.

**Board Comments:** See Summary Statement of the Board

**Summary Statement of the Superintendent:**

Fairfax County Public Schools can be proud of the investments it has made in technology to support its students, teachers, staff, parents, and community. The state of the technology infrastructure is sound with a robust network and an efficient support model to respond to technology incidents. Information Technology strives to provide technology tools that are useful for students and staff. IT provides opportunities for regular feedback via focus groups and surveys. While the current student-to-standard computer ratio is 2.4, continued investment in replacement equipment will be required to maintain this ratio. For students who need an option to the traditional classroom instruction, the on-line campus with 39 courses provides an excellent alternative.

FCPS excels in supporting diverse learning styles. All of the special education students needing assistive technology receive such equipment and services. As all students benefit from instruction in multiple formats, the *Unitedstreaming* multi-media instructional tool, now available in all schools, provides a valuable learning resource for teachers and students.

FCPS strives to have productive means for communication. The growth in the use of the FCPS 24-7 learning tool has been phenomenal. E-mail usage also continues to grow, providing efficient two-way communication. FCPS successfully shares valuable information about programs, services, and important events through multiple venues – Keep In Touch, cable television, public service announcements, and the web. The award-winning EDSL system provides valuable information for the public as well as FCPS staff, on the academic achievement of our students.

While InteGrade Pro, used by secondary teachers, can provide some academic progress information on their students, this tool, part of the FCPS student information system, is out-dated. The FCPS student information system suite of products (SASI, ClassxP, and InteGrade Pro) are in critical need of replacement. These systems are more than ten years old, pre-date web-based applications, do not address the concept of learning communities, and pre-date SOLs and NCLB. SASI is rapidly falling behind our vision for student learning and achievement. SASI lacks many of the tools and features that teachers need (i.e. kindergarten and elementary gradebook), and that parents want (i.e. web-based access to grades and attendance). From a technical perspective, SASI is at the end of its life cycle, will soon have limited vendor support, is difficult to modify to support business needs and School Board goals, and is unable to maintain/provide real-time student information at central level. FCPS must begin now the process of replacing the student information in order to prepare FCPS for the future.

**Summary Statement of the Board:**
The School Board voted to accept the Superintendent's Operational Expectations Monitoring Report for Technology at the January 22, 2007, work session as follows:

**Main motion: I move that the Board accept the Superintendent's Operational Expectations Monitoring Report for Technology as presented as evidence of his status of compliance with this provision.**

**Amendment #1**: Request that the Superintendent add as an indicator under measure 5 to reflect timely updates of information in school profiles for next year.

**Amendment #2**: Request that next year's report include an indicator under measure 2 that addresses whether the technology tools provided to teachers meet their needs.

**Amendment #3**: Direct the Superintendent to complete a report that analyzes the student information system suite of products and recommend a course of action.

**Amendment #4**: Request that a clearer measure of the teacher usage of blackboard be included in the technology monitoring report for next year.

**Areas for Improvement:**

**Areas of Commendation:**

**Goal(s) for Technology for School Year**

**Date for Re-Monitoring:** January 2008