BREMEN CITY SCHOOLS
Excellence in all we do!

Three Year Technology Plan
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Introduction

In 2011, Bremen City Schools had a student-to-device ratio of 2.24 to 1. By 2017, we had lowered that ratio to 1.49 to 1. In 2018, Bremen City Schools was able to reduce the student-to-device ratio to one-to-one. Our progress toward a one-to-one student to device ratio was slower than some districts due to Bremen City Schools' limited access to federally and state funded programs. However, we utilized E-SPLOST and general funding to gradually increase the number of student devices to the desired ratio. The Board of Education was critical in the process by approving use of general funding to gradually increase the computer device leases from 2011 until 2018. By continuing to utilize existing Chromebook devices, we were able to reach our goal of reaching a district-wide one-to-one student-to-device ratio by FY 2019.

From 2011 until now, Bremen City Schools has been able to migrate classroom display technology from interactive whiteboards to the currently utilized interactive projectors. However, the current interactive projectors are beginning to approach their end-of-life. As the technology progresses, and instructional technology needs are re-evaluated, we are considering the idea of replacing the current interactive projectors with flat panel displays, or interactive flat panel displays. This will be a large part of the current plan.

Since utilizing the Connections for Classrooms Grant provided by GaDOE and GOSA in 2015, Bremen City Schools has been able to utilize that funding along with federal E-Rate funding to continue to upgrade and solidify the network infrastructure throughout the district. In addition to the increase in Internet bandwidth provided by GaDOE, we have upgraded the network infrastructure to provide a 10 GB WAN backbone, and installed an 802.11ac wireless access point in every instructional room throughout the district. The intermediate data frames throughout the district were upgraded in the summer of 2017 in order to provide a 10 GB LAN backbone for each school campus. The network infrastructure is now able to handle well over 4,000 concurrent wireless device connections district-wide, easily maintaining expected performance, and should continue to do so with the enrollment growth expected over the next several years.

Bremen City Schools has been able to perform 100% online testing at the high school level since the 2013-2014 academic school year and by utilizing district Chromebook devices, began performing 100% online testing from elementary through middle school grade levels beginning in the 2015-2016 academic year. Since that time, Bremen City Schools has continued to successfully handle the EOC and EOG testing with no problems and expect the infrastructure and devices to successfully allow for 100% participation of online testing for the foreseeable future.

Components for System-Level Technology Plan

I. Vision for Technology Use

Bremen City Schools Purpose Statement
Bremen City Schools is committed to a shared purpose which is "excellence in all we do." Expectations for student learning are high in our school district. The community and parents expect the school system to provide an education that is exemplary. An expectation of excellence is interwoven into everything.

Technology Vision and Mission
We share a belief that the effective and efficient use of technology will enhance the quality of teaching and positively impact the learning process. We envision an educational environment rich with opportunities allowing all learners access to the benefits of technology. This educational environment will allow our students to be lifelong learners, problem solvers, responsible citizens, and productive in a changing society. This technology vision supports the purpose statement of the school system.

The objective of the Bremen City Schools technology plan is to aid and improve student achievement and teacher performance. The fulfillment of this objective will require the latest technology to be made available, sufficient training of teachers, and a curriculum that properly utilizes the technology.

Over the next 3 years we envision:

- Schools will be a dynamic environment where all students and staff have ready access to a full range of current technology, software, as well as online applications and information.

- Comprehensive professional development to provide the knowledge and skills necessary to seamlessly integrate technology into the curriculum.

- The active use of technology hardware such as computers, tablets or other mobile devices, interactive projectors, and student response systems in order to provide enhanced instruction.

- The use of web-based technology such as Georgia Online Formative Assessment Resource (GOFAR), USA Test Prep, Renaissance Learning and other such applications to support all learning across the curriculum, for direct instruction in rigorous courses, benchmarking and progress monitoring of math and ELA skills.

- The use of online learning management utilities, such as Google Classroom, in order to facilitate communication between teachers and students, promote collaboration between students, and provide the students and teachers with 24/7 access to their classroom assignments and curriculum in a web-based environment.

- The use of the student information system and Georgia SLDS to supply and access the information necessary to develop appropriate educational strategies.

- The effective evaluation and use of the latest technology to maintain the student to computer ratio and provide a more robust and efficient computer and network environment.

- Encourage parent and community use of available technology resources to aid and support in increasing student achievement.

II. Current Reality

Instructional Use of Technology

Bremen City Schools utilizes a wide variety of technology tools to enhance the overall instructional process. Through the use of the district network, Bremen City Schools is able to provide collaboration, communication and instructional resources. Active incorporation of technology into direct instruction has increased dramatically, with interactive projectors being utilized daily for classroom presentation and instruction, as well as use of a multitude of education-centered web-based applications.

A monthly, collaborative meeting between the Media and Instructional Technology Specialists, Teacher Leaders and the Technology Department is intended to develop a more organized approach to the vertical alignment of technology use in the classroom. Another purpose of this monthly collaboration is to provide more in-room, instructional technology training for faculty of all grade levels. Although our budget currently does not allow for full-time Instructional Technology Specialists, we plan for this collaboration to provide some of the support the faculty might receive from such a position. The "Lunch and Learn" meetings currently provided allow for hands-on training in instructional technology, and are the types of opportunities we would like to increase. Due to this type of professional learning, we have seen an increase in the utilization of the instructional and assessment tools we currently provide, such as Google G-Suite, Google Classroom, and many of the growing number of classroom-specific cloud-based web applications. We also expect new and exciting instructional tools to be added to that list as we increase technology proficiency and promote imaginative uses of new technology.

The district also utilizes computer labs to provide student opportunities for advanced training in engineering, including 3-D CAD (Computer Aided Design) software, as well as other areas such as graphic design, digital photography, and even competitive esports teams.

Administrative Use of Technology

Administrative access to technology is consistent across the system. All schools use the student information system for student records and data access. Grade reporting through the student information system is utilized at all schools from grade 2 and up. All members of the faculty are provided with a district-owned notebook computer, and all schools have access to the district telephone system and email for communication.

A new intranet website provides a central, web accessible portal for all critical information, files, or news updates for our faculty and staff.

Parent/Community Use of Technology

Across the system, the primary parent/community use of technology is accomplished by providing each teacher with a school email address and voicemail to facilitate communication with parents. Most schools send out announcements via email or text messages, either by grade level or even individual classes, to keep parents informed and involved. All teachers and administrators are required to use a texting program to communicate with the parents and the teachers about upcoming assignments and events. In addition to the Bremen City Schools website, each school also has a website which provides information to parents, students, and community members. School websites are updated regularly with news, events and other

information. Parents of students in grade 2 and up can access their student's grades at any time through the web-based student information portal.

System Readiness

In addition to providing access to hardware and software, Bremen City Schools provides a technology director, a network administrator and a support technician to maintain all technology throughout the district. A web-based ticket system is utilized to collect and manage support requests for technology problems or needs. Emergency problems are handled on a case by case basis. The current infrastructure provides for a 10 Gigabit inter-campus backbone, and 1 Gigabit backbone at each campus. System readiness is equal across all schools and subgroups. In addition, network security is an increasingly critical component of the network infrastructure, and includes such things as advanced endpoint protection, advanced firewall security capabilities, and training for all faculty and staff members to assist in protecting against phishing or other malicious attacks. The network security components, as well as all content filtering for student devices is implemented, maintained, and managed by the network administrator.

III. Technology Goals

Access to Technology

Bremen City Schools plans to maintain a one-to-one device to student ratio with our growing enrollment. To do this, the district must continually adapt to the available technology, and provide the appropriate number of devices to students that are both affordable and functional. This is also being made possible by leveraging the single sign-on capabilities provided by the district's Google Apps for Schools domain. Maintaining the ratio of devices to students is critical in order to continue providing 100% computer-based EOC and EOG assessments.

Instructional Use of Technology

It is our goal to continue and enhance professional learning communities through an intense collaboration between Media Specialists, Teacher Leaders and the Technology Department. Our approach would allow for year-long training and professional development to our faculty on a consistent basis. This would accelerate the progress towards using technology to reach or even surpass our district teaching and learning goals. In the classroom, we plan to upgrade the interactive projectors with state-of-the-art flat panels. We also have goals to utilize any of the innovative technology that becomes available. Some of the opportunities that could be provided are live events such as distance learning, labs and demos, connected classrooms, international exchanges and guest lecturers. Of course, as the technology continues to be improved, the learning possibilities are only limited by our imagination.

As we learned in the spring of 2020, the ability to provide distance learning capabilities to our students was a sudden and critical need. We were able to make adjustments on short notice to provide this to the majority of our students. However, we plan to improve the training, devices, infrastructure, and use of applications to be better prepared for this need, and to make certain that all students are able to have the same educational experience in that scenario, if the need arises again.

Administrative Use of Technology

A now well established VoIP system provides improved communication by providing follow-me functionality, voicemail notifications via email, and many other new features. Our goal is to continue to fully utilize the existing features to make sure we keep a strong communication connection with our stakeholders. We are also happy to see an increase in the use of social media, texting and other technology

to better communicate with our students and stakeholders. Our goal is to make use of these and any other upcoming technology advances that may provide the ability to better communicate with our faculty, staff, students and stakeholders.

Parent/Community Use of Technology

We are currently encouraging parents to make use of the texting and email distribution lists which are used by administration to keep our parents informed of upcoming events, but can also be used in emergency situations. We will continue to make parents aware that they are able to use Twitter, Instagram and Facebook, among other social media applications, to stay informed of accomplishments, events and other announcements provided by district and school administration.

System Readiness

Continued upgrades to the district network backbone will eventually provide a full 10 gigabit backbone. In addition, upgrades and additions to our wireless network infrastructure will provide a robust and efficient wireless network, taking full advantage of the latest technologies in order to improve performance when possible. This will provide the capability to handle the steady, annual increases in the number of wireless clients we can expect, as well as the number of wireless clients necessary to perform online assessment testing of all students.

IV. Communication and Marketing Plan

Technology provides an excellent medium for communication and marketing to our stakeholders. The Bremen City Schools' website and the local school websites continue to be used, but social media and texting is also being widely used as a rapid method for dissemination of information to students, parents, and stakeholders. Schools also use other methods, including calendar pages, school newsletters, and current events pages on their websites to notify parents of upcoming events. Award recognitions and other congratulatory items are posted when appropriate. Online surveys are increasingly being used as a method of gathering information and allowing stakeholders input into system decisions. System and school performance on test scores is also available for use by stakeholders in evaluating school performance.

At the district level, communication and collaboration is maintained through several mediums of communication. Administrative personnel meet with the Superintendent once per week for a group staff meeting to share activities, needs, and concerns. The Director of Technology attends these meetings, along with the directors of the other school programs and Title programs. The Director of Technology also participates in the school improvement meetings, provides a monthly report at Board of Education meetings and participates in a leadership retreat which is held once per year.

V. Professional Development:

Professional development opportunities are made available at the district and school levels to support instructional technology. The administrators, teachers, Technology Department and media specialists assess district and school teaching and learning goals and provide the appropriate professional development to fulfill those goals. The goal of enhancing Professional Learning Communities by increasing collaboration between the technology department, Teacher Leaders, and Media Specialists will dramatically increase the amount and relevance of professional development provided to our faculty on a consistent and ongoing basis. We believe this critically important work will provide the necessary instructional technology tools to

our teachers in order to maximize the educational opportunities provided to all of our students on a daily basis.

Appendix:

Policies and Procedures

Copies of the district's Acceptable Use Policy and Cybersafety Use Agreement are provided.

Copies of any other policies that govern action (for example, purchasing policies, contract awards and management, redeployment of old equipment, minimum specifications for classroom equipment, etc.) are provided.