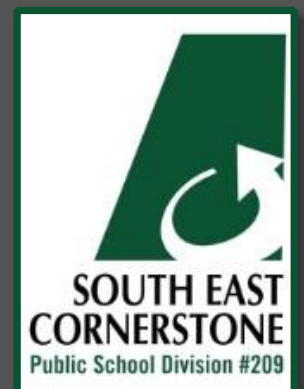


STRATEGIC PLAN FOR TECHNOLOGY: VISION 2020

2014 - 2020

South East
Cornerstone Public
School Division #209



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Introduction

In South East Cornerstone, technology's primary function is to support our vision of achievement and success for all students in every school. This is accomplished directly at the classroom level, but also ultimately through all business and support services. Classroom teachers, support staff, learning support teams, business services and technological infrastructure all work towards our common purpose.

Vision and Goals

Our technology vision guides us to provide a progressive technological environment that empowers continued success and achievement. Following our vision allows us to achieve our technology goals:

1. SECPSD teachers are competent and confident using and integrating information technology.
2. SECPSD will have a reliable, adequate, cost effective, and secure technology infrastructure that supports the learning, teaching and administrative goals of the school division.
3. SECPSD will use technology to improve its administrative effectiveness through efficient business practices, communications, planning and record keeping.
4. All SECPSD teachers will have the technology, training, skills and resources needed to assure students will meet provincial learning objectives and have the technological means to assess and record student progress.
5. Technology will be used to provide the most current, accurate and extensive information resources possible to all learners in the school division and community in a cost effective and reliable manner at maximum convenience to the user.

Instructional Technology

Our 2014 - 2020 Strategic Plan for Technology re-examines how we continue to achieve our goals. Technology changes rapidly, and our students are different because of it. Technology is pervasive in the lives of our students, and providing them with educational experiences that are not reflective of life beyond the classroom walls is not supportive of student learning in today's digital world.

Three closely integrated areas allow us to move forward with South East Cornerstone's Technology Strategic Plan for 2014 - 2020. Smart goals outlined in this plan for each sector not only build upon our existing technological structure but also closely align with SECPSD's new four year strategic plan for education which emphasizes student achievement in math, smooth transitions, and improved graduation rates for our students. Through the smart goals, strategies and actions described in this plan, we work towards instilling in our students the essential 21st century competencies that they will require to be successful in today's knowledge society.

The International Society for Technology in Education (ISTE) has developed standards for learning, teaching and leading in the digital age. These standards, recognized and adopted worldwide, offer guidance for students, teachers, administrators, and technology coaches. Student standards, listed below with details of each competency provided in the appendix, identify what students "should know and be able to do to learn effectively and live productively in an increasing digital world" (ISTE, 2007).

1. Creativity and Innovation
2. Communication and Collaboration
3. Research and Information Fluency
4. Critical Thinking, Problem Solving, and Decision Making
5. Digital Citizenship
6. Technology Operations and Concepts



Figure 1. ISTE Standards (formerly NETS) for Students

The technological tools, both hardware and software, that best help prepare our students continue to change. These tools, at their best, allow us to support our students' academic growth, provides for personalized learning, and help create full engagement of each student in their own learning. While always chasing the latest technological gadget is poor practice (for example Bates and Poole's SECTIONS model, 2003), classroom teachers are aware that there are tools and services common in our students lives but not in our schools that offer huge potential for their students' learning, and that options that were sufficient only a few years ago may need to be revisited as different alternatives and better solutions have come into play. For example, school computer labs and laptop carts are sometimes less well-suited to meet the changing digital educational needs of their students who are often more comfortable and familiar with truly mobile devices such as iPads and smart phones.

It has always been SECPD policy to provide schools with essential technology needs. However, as the world has changed – the iPad was only introduced in 2010 – so have the needs of our students. Schools have, over the past few years, been introducing into their schools other technologies that they increasingly see as beneficial educational resources, including iPads and SMARTBoards. This grassroots approach, with classroom teachers identifying educational needs and supports for their students, is fundamental. Furthermore, it is to be recognized that a one-size-fits-all model may no longer be appropriate for all choices, in all cases.

Yet leaving all change at the individual school level has several disadvantages, and a balance between total school autonomy and centralized services is necessary. There are economies of scale that can best be achieved through central purchasing as well as better support through training and maintenance that can be provided with standardized resources. Most important, however, is that we ensure that students across the entire division are afforded equitable learning opportunities. While schools are encouraged to provide advantages to their own students, we must avoid creating our own digital divide of technological resources. We recognize that in today's world, technology plays an increasingly essential component in providing our students with the 21st century skills that they need for success, not only for today but for their futures. To be fiscally responsible we know that not every student nor every school can be provided with every technological device – choices must be made regarding what is becoming essential and what may be optional. Additionally, it is expected that the Saskatchewan Ministry of Education will increasingly employ computerized assessments for students for which we must be prepared to support.

Our 2014 - 2020 strategic plan for technology recognizes the changing requirements and expectations of educational technology, and works to accept the challenges of keeping pace with an effective and responsible approach.

IS Strategic Planning Climate

The Information systems environment is an increasingly important element of South East Cornerstone Public School Division. School divisions within Saskatchewan and across Canada are struggling to meet the growing technology expectations required by provincial mandates, expanding divisional, school and student needs and directions. Information Systems in SECPSD is fortunate to have the support of our school board and senior administration to assist in solidifying our infrastructure needs, ensuring we continue to meet and exceed the ongoing demands of the Ministry for our Administration Office and enhance learning opportunities for our students.

Over the past decade, the technology environment has become an increasingly important dynamic for our administrative requirements and for a student's school experience. SECPSD students spend more time interacting with technology in traditional classroom settings and through a virtualized online learning environment we offer through Cyber Stone. Our students today are familiar with computers and the Internet since birth and have grown up to expect a wide range of services and information be available electronically any time of the day or night. There is a strong

and increasing desire by our students wishing to incorporate their own technology devices in our schools, which they expect to easily integrate within our infrastructure and for them to be useful in their studies.

Our staff as well have increasingly high expectations for information services. More and more staff now use a variety of digital materials and tools to supplement yesterday's textbooks, in-class lectures and traditional classroom infrastructures. Where a chalkboard, whiteboard or overhead projector was sufficient to conduct class, many teachers now expect their classrooms to be equipped with network LCD projection equipment, interactive white boards (SMART boards), audio enhancements for hearing impaired students, networked desktop and laptop computers and mobile devices.

While the importance of technology in schools and our administrative office continues to grow, we are losing the technology leadership we once enjoyed. The vertically integrated approach that led to the first widespread use of email, administrative automation and computer networks is being eclipsed by the rapid industrialization of information technology in the consumer sector. The result is that vertically integrated organizations are now struggling just to continue to maintain basic services, leaving little resources, time and energy for deep application of rapidly emerging technologies to the core activities of our school division.

The unprecedented acceleration in technological advancements that marks the dawn of the 21st century offers both opportunities and challenges. The stream of new technologies will continuously enable new and better ways of communicating, creating and synthesizing knowledge. But at the same time, the mounting pace of technological enhancements will apply increasingly competitive pressure as schools are differentially able to adapt to the escalating pace of change.

To be successful, SECPSD must be able to reap continual advantage from the power of rapidly changing technologies while effectively managing the disruption these changes will bring. To advance in the face of these impending pressures, SECPSD must develop new strategies for rapidly and continually integrating technology into every aspect of its operational structure.

Information Systems in most school divisions are struggling to shift their energy and expenditures from Context to Core; Context activities are those that an school division requires but which do not distinguish it from its competitors, while Core activities are those which, when improved, provide an organization with differential advantage. For SECPSD, Core activities are those that improve teaching and learning, enhance growth and quality of administrative support. Typically, an IS/IT enterprise will spend 80% of its resources to run the operation (Context) and only

20% to improve it (Core). However, those organizations wishing to leverage these numbers have been able to shift these percentages dramatically, pushing more resources into advancement by using IS simplifications to continually reduce the costs of operations.

The Information Systems portion of the Strategic IS/IT plan will focus on this recognizing the potential for Core improvements while continuing to support recommended IT Context. Primary focus will be in Infrastructure, Privacy and Security and Service Delivery.

Gap Analysis

In the fall of 2013, stakeholders across the division were invited to provide input into the strategic plan through a *THOUGHTstream* process. Students, teachers, support staff, parents, administrators, senior leadership, and board members were encouraged to participate and provide their thoughts, and later prioritize the collective stream, regarding the challenges and benefits of technology in their educational experiences. Over the month long process, over 2 300 individuals participated, providing over 6 100 thoughts. These voices helped identify gaps in our current strategic plan, and provided direction for future planning. Detailed results for all individual *THOUGHTstreams* may be viewed online at <http://sites.THUGHTstream.ca/cornerstone/>; a comprehensive division summary is provided in the Appendix.

Figure 2 illustrates the top five prioritized ideas across all groups. Chief among concerns expressed were the loss of basic skills in students due to over-reliance on technology, insufficient access to technology both at school and at home, ongoing costs, the need for ongoing training and professional development, and limitations due to insufficient bandwidth. The strategic plan works to address these concerns through the SMART goals and strategies. Recognizing the constant change of technology, the technology plan will be an evergreen document.



Technology Planning

2013 - 2014 Engagement Results

Below is an overview highlighting participation and the top 5 prioritized ideas.

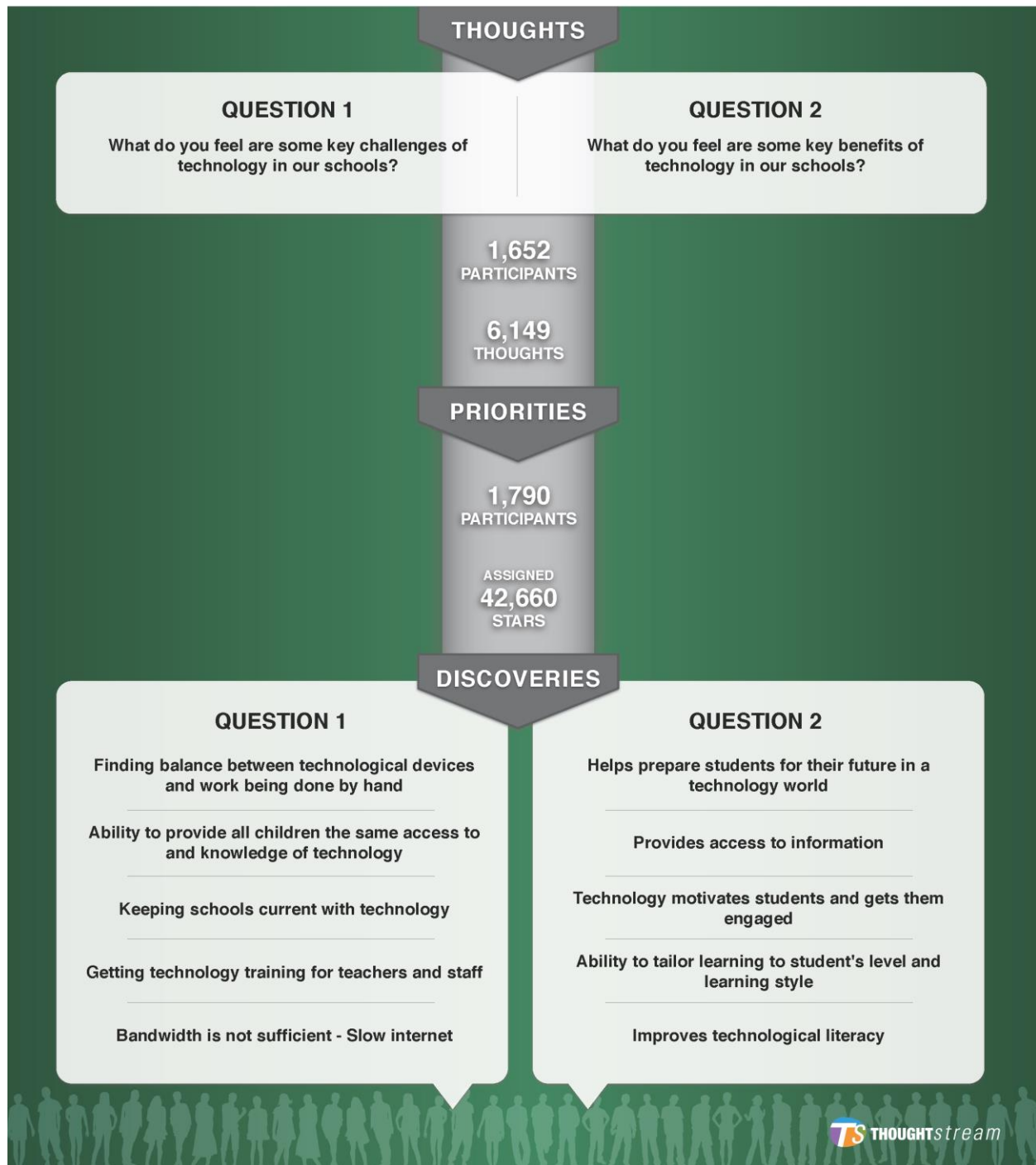


Figure 2 Top Priorities

Future Directions

The three broad areas of focus in the strategic plan, which align with the Saskatchewan Ministry of Education Technology in Education Framework (2013), are:

- To ensure that all students are provided with the technology that will engage them in their educational experiences and support and enhance their learning opportunities. This includes fostering digital fluency, for both staff and students, as well as providing equitable technology-supported learning. Successful implementation of changing pedagogical practice requires effective and ongoing professional development; “Just giving a teacher a technology tool and expecting him or her to maximize its learning potential is a strategy destined for failure (Beglau, Hare, Foltos, Gann, James, Jobe, Knight, & Smith, 2011)
- To provide efficient and effective administrative operations, from the classroom to system-wide supports
- To provide a secure and reliable technological infrastructure that is foundational to successful achievement of the other goals.

SMART goals that tie in most directly with learning opportunities for students focus on getting more computing devices, and more appropriate devices, into the hands of students. For technology to become truly integrated into learning, it must be available when needed. If teachers must plan lessons and instruction around when they can arrange for access, technology becomes obtrusive to learning. Instead, it should receive as little thought towards planning as for making pen and paper available to students.

Greater access to computers also provides greater opportunities for personalized learning, for which there are increasing opportunities. Access to such affordances allows us to distance ourselves from restrictive one-size-fits-all model of instruction and helps provide teachers with an essential tool for reaching the individual needs of all students.

There are important caveats. Accounts of failed 1:1 K-12 computing initiatives are common. Until the necessary pedagogical shifts take place, 1:1 initiatives are often expensive experiments that do not produce the desired advantages to student learning, instead becoming “\$1,000 pencil” programs (November, 2013). Collaborative work does not require each student to have their own device. Simply reducing the ratio of students sharing devices does not automatically lead to better learning. Without well designed staff development and changing pedagogical practice, more

computers just means more computers, with the risk of students becoming isolated in digital worlds but with little to no advantage for learning. Students need support and practice in taking control of their own learning, something made more possible with greater access to computers, but not a given.

Annual reports produced by the NMC Horizons Project provide expert analysis and research on emerging technologies and practices that are likely to have significant impacts on education in the coming years. Two items have topped their lists of important educational agents for the past several years – cloud computing and mobile technology (NMC Horizons K-12 Report, 2013). Both elements are now incorporated into the 2014 - 2020 Strategic Plan for Technology for South East Cornerstone.

Implementation Plan

Skovision (<http://skovision.cornerstonesd.ca>; login required) will house the strategic plan for technology. To view this plan from within Skovision, select the “Technology” department found within the Administration section. A current version is provided in the Appendix.

Conclusion

The three components that require budget consideration are hardware (including infrastructure), software, and staff development. Research states that a budget which places equal financial support in all three areas will in fact support student learning.

Hardware needs to be robust enough to support the type of activities people are trying to accomplish with their computers and support the software we wish to purchase.

Software decisions should always come back to the support of student learning and ensure that students are able to meet curricular outcomes.

Staff development must support teachers so that technology is not getting in the way of pedagogy. Embedding philosophical technology training into core curricular in-service on a regular basis is essential. Training then expands to focus on skill attainment to fill identified needs for general skills and specific software implementations.

Reviewing and communicating the intent of the technology plan to administrators, teachers, and technology department personnel is important to the success of the overall plan. Addressing key questions in focus groups and actively seeking solutions to existing problems is essential.

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Appendices

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ISTE Standards for Students

ISTE Standards for Teachers

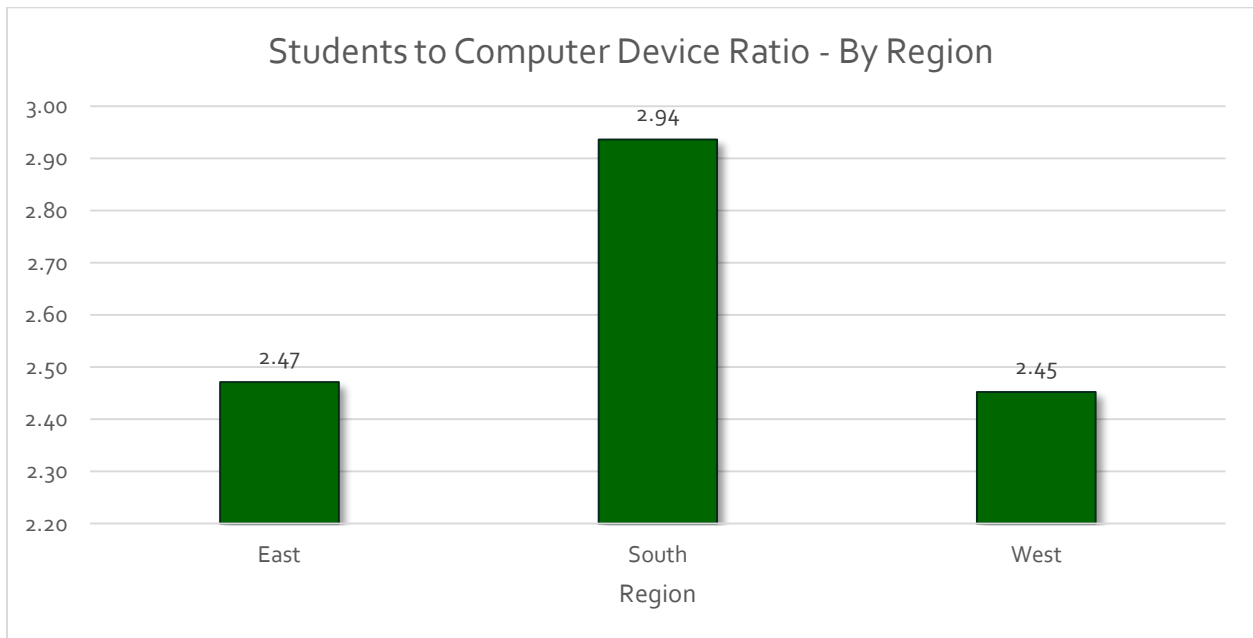
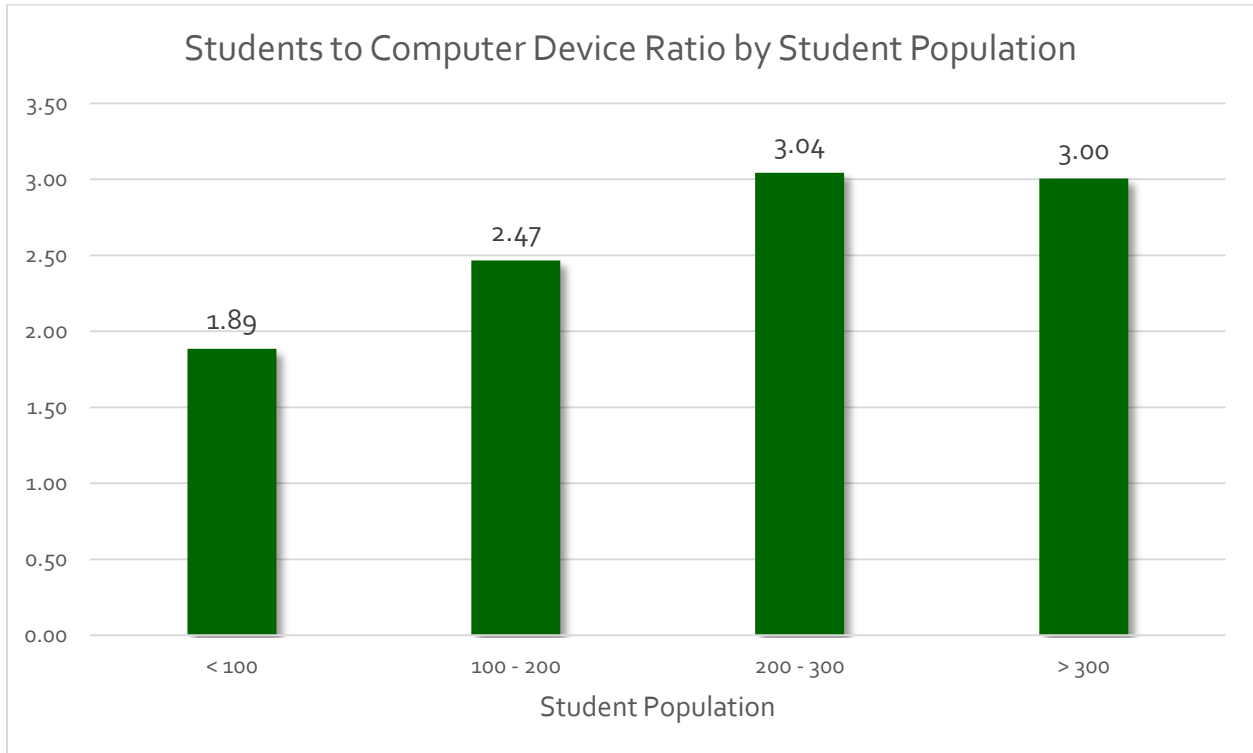
ISTE Standards for Administrators

ISTE Standards for Coaches

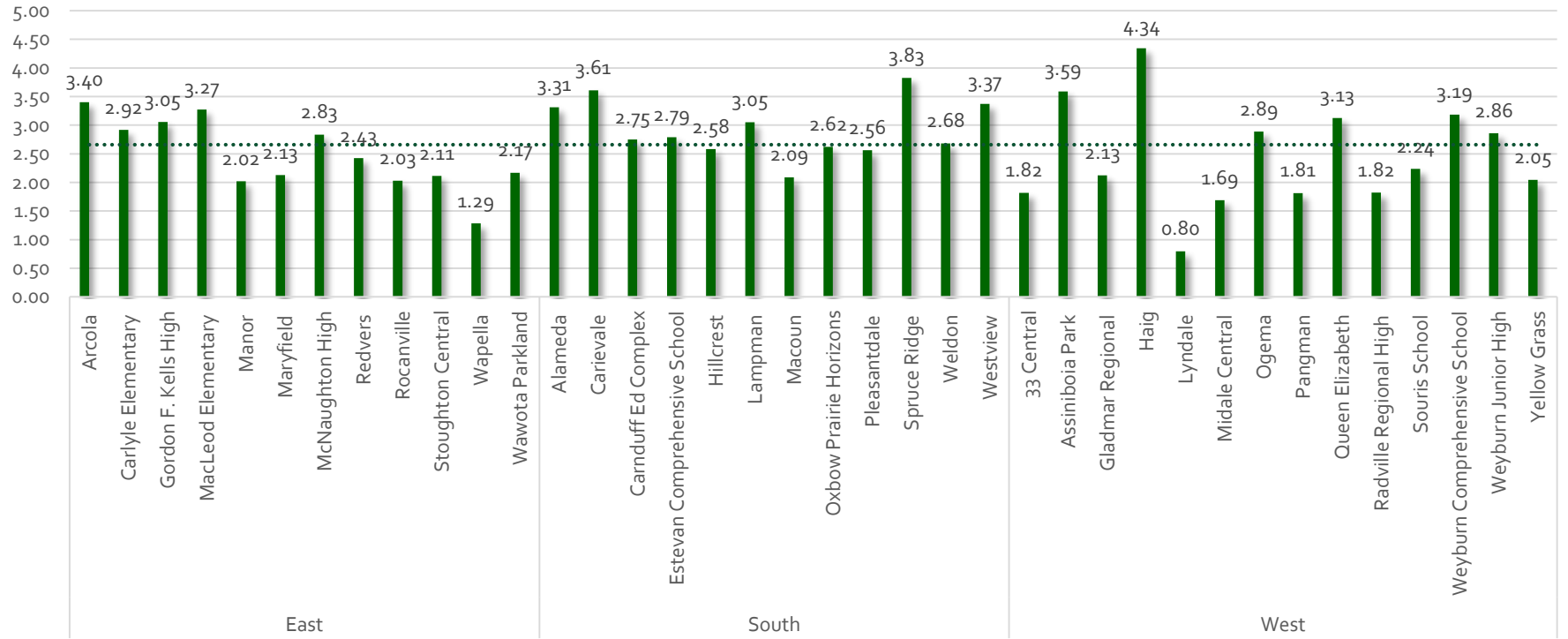
Student-Computer Devices Ratios

Computer devices counted include computers designated for student use and supplied by SECPSD to schools. These include student computers located in computer labs, libraries, classrooms, and laptop carts. Computers designated for teachers or administrative purposes have not been included. iPads purchased directly by schools, or those supplied by Student Services, are not included in these student counts.

Student to Computer Devices Ratios



Students to Computer Device Ratio - By Region



Student to Computer Device Ratio - By School Grade Composition

