



Rationale for 1:1 Technology Initiative

Students are growing up in a complex, technology-driven, information- saturated world. There was a time when the central task of a research paper was finding relevant sources and searching for evidence to either support or refute a claim. Now, evidence is everywhere, and the task of the researching student is to sift through mountains of relevant digital sources to find the most apt and reliable information. The content is much the same: literature, history and mathematics remain at the core of the curriculum. However, today's world also requires a set of skills necessary for students to thrive in college and beyond, and most of those skills are directly related to technology. It is no longer sufficient for students to have scheduled time on shared devices. **Therefore, the 1:1 committee at Calvin Christian School believes that it is imperative for students to have access to individual devices that will not only improve the school's curriculum, instruction, and assessment, but will also more fully prepare students to meet the demands of the 21st century workplace in a manner that glorifies God.**

There are a number of ways in which going 1:1 would immediately benefit our students. First, it would **increase student engagement**. The CCS committee responsible for visiting Valley Christian School and two schools in the Del Mar district reported that all students in 1:1 classrooms were significantly more engaged in the content than students in traditional classrooms because of the inherently interactive nature of personal computer devices. Students were not doodling or daydreaming; they were actively working on assignments and showing genuine interest in the material at hand. Teachers who wish to increase student participation often use the technique of questioning as a means of helping students discover answers for themselves. In a traditional classroom, however, the teacher asks a question, and the same four or five students raise their hands every time. Some students sit quietly and never choose to participate. In a 1:1 classroom, teachers can post a question on an online discussion board and have all students respond to the question simultaneously. This **gives every student a voice**, including those students who have wonderful insights, but are too shy or reserved to speak up in class discussion.

A second immediate benefit to students is **student-centric instruction**. In a classroom of twenty to thirty students, it is difficult for teachers to meet students' individual learning needs. Students who struggle in a particular subject are often lost; students who are academically gifted are often bored. Individual computer devices do not eliminate this challenge, but they do significantly ameliorate it by creating opportunities for students to work on projects at their own pace. This student-centric learning model minimizes frustration for students and teachers alike, as gifted students excitedly discover and integrate information that interests them while struggling students have the chance to repeat skills and content until they have mastered the information.

The third immediate benefit is **increased collaboration among students**. In a 1:1 learning environment, students can work together digitally, both at school and at home, to create reports, projects, and presentations. This is one of the most true-to-life benefits of a 1:1 program, because the ability to collaborate in a creative, constructive, and efficient way is currently the skill most sought after by employers.¹ Students can also comment on each other's writing, providing both encouragement and constructive critiques.

One-to-one technology would provide significant benefits for Calvin Christian School's curriculum. More textbook companies are providing **digital editions of textbooks**, which gives students the unique opportunity to underline, highlight, and take notes in their textbooks, something they are currently unable to do. Individual devices would also make students **active participants** in the delivery of curriculum, rather than passive recipients of knowledge. When students are given the opportunity to discover ideas for themselves, they have a sense of ownership of that knowledge, and learning becomes more significant to them. **The curriculum in a 1:1 classroom is no longer confined to the classroom**, but is expanded to include immediate and personal access to digital educational materials, including multimedia resources. This makes lesson plans more interesting and creative. Giving students individual devices would also create access to new learning technologies currently inaccessible, such as computerized evaluation of speech for language-learning classes.

The 1:1 classroom also **optimizes instruction by increasing communication** between teachers and students. When teachers sit down with students for individual conferences over students' work, much important instructional time is lost and it is difficult for the teacher to manage the other students. Handwritten comments on students' work are time consuming for teachers to produce and do not present opportunities for dialogue between teachers and students. Individual devices, however, give teachers the ability to not only increase the amount of feedback they provide students, but also make that feedback more streamlined and efficient.

Individual devices can help **make assessment more authentic**, because students create their own content in response to what they have learned, rather than regurgitating someone else's content. When a student gets a question wrong on a multiple choice test, the

¹ Kruse, Kevin. ["The Top 4 Traits of 'Future Proof' Employees, According to 1,709 CEOs."](#) *forbes.com*. Forbes. 26 Dec. 2012. Web. 18 Feb. 2012.

teacher does not know why the student chose the wrong answer and cannot pinpoint the gaps in the student's learning. **Product-based assessment, on the other hand, provides a more complete picture of what skills and information students have mastered** and what content needs to be retaught. Monitoring student progress becomes easier for teachers because they receive instant feedback from students.

There are also important future benefits that 1:1 technology would provide for our students. First, they would be **better prepared for colleges** that increasingly assume students' educational knowledge of technology and require students to be ready to create, collaborate, and present with ease and speed. Since 99% of CCS students go on to college, this is a relevant and practical concern. The second future benefit of 1:1 is that students would be more fully prepared to meet the demands of technology-centric jobs as they carry the name of Christ out into the world. Currently, most students are fluent and adept at using technology for entertainment purposes, but they also need to be able to use technology for more serious and constructive purposes as well. Finally, students can learn **digital citizenship**, which includes conversations about privacy, information accuracy, the etiquette of digital interaction, internet safety and security, etc.

First Corinthians 10:31 states, "Whether you eat or drink or whatever you do, do all to the glory of God." As parents, teachers, and staff here at Calvin Christian School we have a unique opportunity to teach students **how to use technology in ways that bring glory and honor to God**. The world is inundating children and teenagers with digital information and encouraging them to use technology solely for their own advancement and pleasure. We can send a different message: that technology, like every other aspect of the Christian life, ought to be used in the service of our God and King.