

Clarinda Community School District
1:1 Implementation Plan
March 2017
Prepared by the Technology Committee
Written by Superintendent Deron Stender

“To educate all students to succeed by ensuring quality leadership, curriculum and instruction.”

This technology plan articulates the process and strategy for successfully implementing extensive technology programs in our district. Education and technology are always in a constant state of change and this plan should be considered open-ended and flexible.

To accomplish district goals, there are a number of components to be addressed: Technology Committee, Definition and Goals, Digital Environment, Teaching and Learning, Professional Development, Sustainable Financing, Policy, and Community Engagement. Each of the components articulates our current plan to address the identified critical questions. We believe this plan will serve as a guide for further discussions and investigations and as a benchmark for future planning.

This plan should always be viewed as a flexible and adaptable process, as many decisions are budget dependent and subject to Board of Education action.

Technology Committee Professional Development Instructional Framework Curriculum and Materials Monitoring Performance and Growth	Community Engagement Parent Training Communication Plan Updates and Transparency
Digital Environment Infrastructure Device Management Staffing Projections Sustainable Financing Back End Support	Procedures Review of Policy & Procedures Device Deployment Forms & Paperwork User-End Issues

This plan identified five goal areas for implementation between 2017-2023:

1. Provide ongoing, embedded and differentiated professional development to increase the use of technology as a tool to transform instruction.
2. Identify workflow enhancements to support technology integration and efficiency.

3. Monitor and evaluate the effectiveness of instructional software, tools, and curriculum to support instruction.
4. Establish an educationally responsive device replacement cycle for that supports integrated instruction for staff.
5. Implement an educationally responsive 1:1 device replacement plan to provide access to technology to all students.

Technology Committee

In October of 2016 all staff members were invited and given the opportunity to serve on the Technology Committee. Broad participation has been sought throughout the vision and planning stages in the development of this plan to ensure varied perspectives, input and insights given consideration. The following staff members volunteered to serve on the Technology Committee:

Cindy Aldrich	Jess Engstrand	Kaitlin Nuckolls	Trulla Pullen
Mike Roate	Emily Thompson	Susan Wedemeyer	Nola Bond
James Hash	Kim McNees	Cindy Opperman	Mike Smith
Linda VandenBosch	Allison Wellhausen	Julie Cabeen	Alisha Jobe
Kim Nesvik	Josh Porter	Suzi Stanton	Marilyn Wagoner
Colleen Comer	Greg Jones	Connie Sunderman	Teresa Nook
Deron Stender	Brian Wedemeyer		

The newly organized committee started meeting in November and began the process to define the purpose and goals for technology in learning and instruction. The committee examined the current technology landscape and what is the district's potential. While the district has enough devices to provide 1:1 learning and instruction, it currently does not allow students to have possession or full access of the devices. The devices are provided through labs, checkout, our carts and are mostly centered in specific classrooms and thereby limiting access and utilization of devices.

To establish a foundation for technology in instruction and learning, the committee reviewed and studied the SAMR (substitute, augment, modify, replace) model as a guide for technology integration in the classroom. The SAMR model is a commonly accepted model in education worldwide and will be our guide to identify and measure technology utilization in the classroom.

The committee engaged in an extensive process to explore and study best practices for 1:1 programs. The process included discussions on the use of technology to drive curriculum and instruction, site visits to observe and compare technology, attended technology conferences to learn more about the opportunities that exist, and learned about open resources to support curriculum and instruction.

As a result of the exploration process the committee defined the district's 1:1 vision:

"Every student K-12 will have access to a device during the school day to enhance learning and differentiated instruction."

Realizing a need to establish a goal that supports the definition, the committee developed a goal that focuses on students and instruction:

To allow students to think critically, collaborate, communicate, & create.

The definition and goal are the foundation to effective and successful implementation of 1:1 technology in learning and instruction.

The committee answered the critical question on why we believe that 1:1 is the appropriate step to take and move learning and instruction forward. The role and purpose of technology has shifted the model of learning and instruction. Technology devices have become essential tools for teachers, just as they have for other professionals and in the business world. For our students, they have become the equalizer that provides access to information, the ability to collaborate, create, and connect with people throughout the world, and the opportunity for differentiation and personalization of education.

Infrastructure Audits were conducted by the following vendors:

1. Midwest Data from Rockport
2. IP Pathways from Des Moines
3. Tech Support Services from Essex
4. Spiral from Glenwood

Device Implementation & Timeline:

- 2017-2018, grades 5-8 students will bring devices home on a daily basis
- 2018-2019, grades 9-12 students will bring devices home on a daily basis
- 2019-2020, grades K-4 students will have access to devices during the instructional day and stored at school

The iPad allows for a personalized learning experience, with over 80,000 education apps geared to any level or subject. Teachers and students can develop interactive materials with iBooks, along with organizing and delivering lessons via iTunes and other integrated applications. This device empowers our students and teachers to engage in creation of content with the flexibility for growth.

Purpose:

1. To transform what the classroom is and what we can do in the classroom.
2. To use technology as a tool to improve and enhance teaching and learning.
3. To prepare students for their future, not ours.
4. To empower students to take ownership in their learning.
5. To engage students in creating content, collaboration, and critical thinking.
6. To remove traditional classroom constraints.
7. To provide meaningful and authentic learning experiences for students and teachers.

8. To allow educators to become creators of curriculum and instruction.
9. To facilitate parent and community communication and connections.

Building the Digital Environment:

The district has a long term commitment of meeting the technology needs of students and staff. Over the past five years, the district has invested an average of \$300,000 on technology each year. The investments have resulted in the following:

- increased technology utilization
- increased devices to students and staff
- converted phone services to voice over internet protocol (voip)
- installed fiber connections to the district and between each building
- maintained a network and infrastructure

As the district has increased the utilization of technology in teaching and instruction, the capacity of the existing network and infrastructure is stressed beyond its original design and capacity. What has created stress on the network and infrastructure:

- increased technology utilization
- increased devices connecting to the system
- moving the phone system from a landline to voice over internet protocol (voip)
- network maintenance and service designed to maintain the current system

In order for our 1:1 implementation plan to reach its full potential, we must also plan for and address infrastructure and "back-end" issues. Our infrastructure has been reviewed by several third party agencies who acknowledge that the current system cannot sustain 1:1 technology and needs to be replaced. We are currently in the process of developing specifications that will provide a solid foundation to manage current device allocations as well as our future needs.

Device Management:

Training and software will be purchased from Apple as a component of our initial roll-out, and an annual per device charge will be included in the purchase/lease price. Casper/JAMF will be utilized as the device management system for our 1:1 implementation. Additional staffing is required to support the workload.

The librarian is suited to serve as Curriculum, Instruction, and Technology Integrationist and will manage learning, instruction, and curriculum in technology. The role of this position is to provide staff with group and individualized support. In addition, an advanced network will require increased monitoring and support.

Device Registration and Distribution:

Procedures for registration and distribution of iPads will be developed to meet the needs of students and families and ensure that devices will be properly initialized and prepared for use. These procedures will include: Registration, Apple ID creation, Acceptable Use parameters, Accidental Protection plan, Security, and Responsible use.

Teaching and Learning:

The focus of the 1:1 Implementation Plan is Teaching and Learning: the diverse ways technology can be used as a tool to improve and enhance instruction. The shifts may be subtle while others are easily recognizable. This plan is intended to guide the district from the traditional educational environment to the new age of teaching and learning with tools and methodology used to engage our students, elevate rigor and transform instruction.

Best Practices:

Our instructional practices will continue to be soundly based on current research. Ongoing professional development in the following areas will align our practices that engage our students and increase rigor:

- Inquiry based instruction
- Project and problem based learning
- Authentic audience
- Real-life applications
- Collaborative learning
- Increased choice and student ownership
- Differentiated instruction and personalized learning
- Formative and summative assessment

Expected Outcomes:

As with most any method of instruction and learning, it is difficult to quantify outcomes.

Research on 1:1 initiatives suggest that the following positive results are likely to be expected:

- Improves the quality of teaching and learning
- Improves equity of access to technology
- Enhances formative assessment
- Enhances differentiation of instruction
- Improves students' ability to be self-directed learners
- Prepares students for the world of work and their future

In addition, success measures have been documented as improvements following 1:1 implementation:

- Decreased discipline
- Improved test scores
- Reduced paper and copying expenses
- Improved student and teacher attendance
- Reduced dropout rate
- Increased student engagement
- Increased collaboration
- Increased communication

Professional Development:

Professional development is critical to the success of 1:1 implementation. We are keenly aware that supporting our staff as they learn new skills, approaches, and techniques is fundamental to the success of this investment. Professional development needs to be embedded and ongoing to provide coaching and resources. Thorough planning will be required to allow for differentiation of our professional development plan as well as the development and use of new strategies.

Implementing the 1:1 plan will require stepping out of our comfort zones and into new and innovative places. We will foster a culture of collaborative learning and sustained support. We will encourage and support “risk-taking” so staff feels comfortable exploring and implementing new ways of learning through the use of devices.

To support staff, the Curriculum, Instruction, and Technology Integrationist and technology staff will support staff through personalized professional development. The technology department will conduct a needs assessment to support each schools' professional development needs. Professional development offerings will be directed at differentiated levels of SAMR integration to support staff through this transformation. SAMR is the identified model for instruction and integration.

Proposed Technology Professional Development Plan

TECHNOLOGY PROFESSIONAL DEVELOPMENT PLAN				
Year	Estimated Cost			
2017-2018	\$36,000.00			
2018-2019	\$45,000.00			
2019-2020	\$54,000.00			
2020-2021	\$37,000.00			
2021-2022	\$37,000.00			
2017-2018				
	Staff	Contracted Summer Rate	Hours	Total
Summer	30	30	20	\$18,000.00
School Year				\$18,000.00
Total				\$36,000.00
2018-2019				
	Staff	Contracted Summer Rate	Hours	Total

Summer New Staff	30	30	20	\$18,000.00
Summer 17-18 Staff	30	30	10	\$9,000.00
School Year				\$18,000.00
Total				\$45,000.00
2019-2020				
	Staff	Contracted Summer Rate	Hours	Total
2019-2020 Staff	30	30	20	\$18,000.00
2018-2019 Staff	30	30	10	\$9,000.00
2017-2018 Staff	30	30	10	\$9,000.00
School Year				\$18,000.00
Total				\$54,000.00
2020-2021				
	Staff	Contracted Summer Rate	Hours	Total
2019-2020 Staff	30	30	10	\$9,000.00
2018-2019 Staff	30	30	10	\$9,000.00
2017-2018 Staff	30	30	10	\$9,000.00
School Year				\$10,000.00
Total				\$37,000.00
2021-2022				
	Staff	Contracted Summer Rate	Hours	Total
2019-2020 Staff	30	30	10	\$9,000.00
2018-2019 Staff	30	30	10	\$9,000.00
2017-2018 Staff	30	30	10	\$9,000.00
School Year				\$10,000.00
Total				\$37,000.00
Funding Options:				
Annual professional development			\$35,000.00	
Instructional core			\$16,000.00	\$15,000.00

TLC				
-----	--	--	--	--

Sustainable Financing:

As part of the 1:1 implementation plan we needed to select the right device for our district. The selection process included site visits to observe the Chromebook and the iPad and took into consideration, the implementation challenges, software and availability of applications, capacity for students and staff to create and communicate, and impact on learning and instruction. As a result of this process, the committee recommends the iPad as the 1:1 device to be used districtwide. The implementation will begin in grades 5-8 for the 2017-2018 school year, then continue with grades 9-12 for 2018-2019, and conclude with grades K-4 in 2019-2020.

Planning for sustainable financing is as equally important as the device itself. The 1:1 initiative can be carried forward over time and not reliant on a large one time expenditure. The financing for a successful 1:1 initiative must be a fixed component of the long term budget.

We understand that finances are often restricted and have carefully identified strategies to be utilized in providing long-term financial support for 1:1 implementation. The following have been identified:

- Capitalize on leasing option through Apple
- Capitalize on buy back program through Apple
- Gradual implementation of lease over three years
 - 5-8 2017-2018
 - 9-12 2018-2019
 - K-4 2019-2020
- Consider shared cost with families through technology fee
- Reuse and repurpose of existing devices
- Savings through technology enhancements that reduce costs in curriculum and instruction

Long-Term Financial Impacts:

The shift from print to digital materials, open source software improvements, and changing formats for professional development are a few of the key elements of the long-term financial impact on the 1:1 model. We know that we will need to continuously evaluate and monitor the long-term financial impact and have identified the following:

- Staffing-support is required for the successful implementation of the plan and will be monitored for future needs.
- Capital equipment vs. Supply-Funding in these two areas of the technology budget will be monitored to reflect changing costs of devices. Generally, there may be an decrease in capital equipment and an increase in supply.
- Applications and Software-Budgets will need to reflect instructional software and include iPad Apps and other tools. May consider Apple's Volume Purchasing Program to provide and manage applications.

- Professional Development-Professional development is critical to successful 1:1 programs. Ongoing professional development is necessary and will likely decrease after three years of implementation. We will investigate professional development opportunities to help offset increased PD needs.
- Infrastructure-We will need to rebuild our infrastructure to accommodate future needs so that staff and students have full capacity and access to services, curriculum, and systems.
- Student fees-We will evaluate this and determine if it is appropriate and reasonable to request student fees (i.e. insurance).

Estimated annual costs:

Work on the financial details continue and will be presented at the table.

Policies and Procedures:

Generally, policy is established by the school board with input from the attorney, administration, and staff. The policies provide the legal framework for decisions and actions related to students, staff, and programming. Procedures are developed to articulate the process of enacting the policy and provide guidance for correct steps to ensure compliance. While our policies and procedures are already well established, implementation of a 1:1 plan will require a review of these areas to provide direction and guidance for new questions decisions.

Key Policy and Procedure Issues:

As we deploy 1:1, it is critical to evaluate policies and procedures to verify that we meet the requirements. The current Acceptable Use Policy will adequately support and guide the district should an issue arise. We will continue to develop procedures to address filtering requirements, social media, use of student email, and safety and security measures.

Procedures for safe and appropriate care of devices, insurance claims for damaged or lost devices, expected safeguards for use at home, access to unfiltered materials and other items need to be developed.

Engaging the Community:

The effective and successful implementation of the 1:1 plan will require a partnership with our parents and community members. We will develop and provide opportunities to educate and share technology integration with our parents and community.

Goals and Expectations:

The education of our students is a shared responsibility between the home and school. This partnership is the fundamental component of a student's growth and development. As we implement 1:1 and transform instruction, we will need our parents to continue to support and nurture learning at home. When students take their devices home, we will need parents to monitor and support student use. When students work on devices at school, they many need increased access to online resources and tools at home. Communication with our parents is

necessary to help them understand the changes in our instructional approaches and be informed about the available tools and programs.

Goals for a strong partnership include:

- Model, teach, and monitor safe and appropriate use of devices at home.
- Inform school personnel of issues with, concerns about, and or damage to devices.
- Timely and responsible payment of fees and completion of paperwork.
- Provide ongoing transparency and training for parents

Home Support:

Parents, just like our students and staff, have varied needs for support. In order for our students to maximize their learning using devices, we will need continued parent support. Research has identified these key areas of support:

- Orientation: Device set-up, introduction, and basic features
- Policies and Procedures: Acceptable Use, Insurance, student handbook
- IT Troubleshooting: How do I get this to work
- Safety and Security: Content filtering, internet safety, and monitoring
- Curriculum resources: Overview of district approved materials
- Instructional changes: How can I help my child be successful

We will offer a range of opportunities and methods for parents to access this support and may include direct instruction, recorded webinars, or online resources.

Parent and Community Issues:

Issues will arise as we implement the 1:1 plan that will need to be addressed. To ensure equitable access, we will need to seek methods for families in obtaining low cost internet access at home, provide additional time and space for access on school grounds, and continue to partner with local agencies that encourage technology integration across all community settings.

References:

Apple, (2015, February). Strategic 1:1 Planning. Prospect Heights, IL: Apple

District Consultation: Aptakisic 102; Gurnee 56

Education Elements (2013). Hardware Analysis for School Districts. www.edelements.com/wp/_EE.HardwareAnalysis_20130911-2.pdf

Edutopia, (2015, January 27). Why Technology into the Curriculum? The Reasons Are Many. <http://www.edutopia.org/technology-integrationintroduction>

eSchool News, (2014, October 8). Quick Guide to Launching Your First 1:1 Program. <http://www.eschoolnews.com/2014/10/08/quick-guide-launching-first-11-program>

Fullan, M., Donnelly, K. (2013, July). ALIVE IN THE SWAMP: Assessing Digital Innovations in Education. http://www.nesta.org.uk/sites/default/files/alive_in_the_swamp.Pdf

Project Red: Revolutionizing Education. (2013). <http://www.projectred.org>

Partnership for 21st Century Skills, (2015, February 2). Framework for 21st Century Learning, <http://www.p21.org/our-work/p21-framework>

Schrock, K. (2015). Kathy Schrock's Guide To Everything. <http://www.schrockguide.net>

The 6 C's of Education for the 21st Century, (2014, March). Flipped 4 Science. <http://flipped4science.blogspot.com/p/the-6-cs-ofeducation-for-future-during.html>

THE Journal: Transforming Education through Technology, (February 2015)
<http://thejournal.com/whitepapers/2015/02/dell-checklist-for-success-1to1-020315/asset.aspx?tc=assetpg&LCSKey=b4628806-652c-4fa4-a1aa-e7ddacc4beb4>

Wilson, L. (2014, December). 1:1 Computing: A Guidebook to Help You Make The Right Decisions. (Amplify)
<http://fladeo.com/detail/1-1-computing-a-guidebook-to-help-you-make-the-right-decisions-896551>

Estimated Technology Budget Plan 2017-2023

Lease (student & staff devices (iPads & laptops), cases, & Casper device management system)

2017-2018	\$53,166.00	\$53,166.00	\$53,166.00	\$53,166.00	
2018-2019		\$55,000.00	\$55,000.00	\$55,000.00	\$55,000.00
2019-2020			\$55,000.00	\$55,000.00	\$55,000.00
2021-2022					\$55,000.00
2022-2023					
Total	\$53,166.00	\$108,166.00	\$163,166.00	\$163,166.00	\$165,000.00

Learning Management System (Schoology)

2017-2018	\$7,500.00				
2018-2019		\$6,210.00			
2019-2020			\$10,000.00		
2021-2022				\$10,000.00	
2022-2023					\$10,000.00

Network & Infrastructure

2017-2018	\$150,000.00				
2018-2019		\$8,000.00			
2019-2020			\$8,000.00		
2021-2022				\$8,000.00	
2022-2023					\$8,000.00

Miscellaneous Technology (projectors, device cameras, printers, labs, etc.)

2017-2018	\$23,000.00				
2018-2019		\$47,390.00			
2019-2020			\$50,890.00		
2021-2022				\$44,390.00	
2022-2023					\$29,390.00

Software & Apps

2017-2018	\$25,000.00				
2018-2019		\$25,000.00			
2019-2020			\$25,000.00		
2021-2022				\$25,000.00	
2022-2023					\$25,000.00

Network Administrator (currently 38,000)

2017-2018	\$70,000.00				
2018-2019		\$70,000.00			
2019-2020			\$70,000.00		
2021-2022				\$70,000.00	
2022-2023					\$70,000.00

Average (5 year)

Sub Total	\$303,666.00	\$239,766.00	\$302,056.00	\$295,556.00	\$282,390.00	\$284,686.80
Buyback Estimate		\$5,000.00	\$5,000.00	\$45,000.00	\$45,000.00	\$45,000.00
Total	\$303,666.00	\$234,766.00	\$297,056.00	\$250,556.00	\$237,390.00	\$239,686.80

**PROPOSED TECHNOLOGY PROFESSIONAL DEVELOPMENT PLAN
2017-2022**

Year	Estimated Cost
2017-2018	\$36,000.00
2018-2019	\$45,000.00
2019-2020	\$54,000.00
2020-2021	\$37,000.00
2021-2022	\$37,000.00

	Staff	Contracted Summer Rate	Hours	Total
2017-2018				
Summer	30	30	20	\$18,000.00
School Year				<u>\$18,000.00</u>
Total				\$36,000.00

	Staff	Contracted Summer Rate	Hours	Total
2018-2019				
Summer New Staff	30	30	20	\$18,000.00
Summer 17-18 Staff	30	30	10	\$9,000.00
School Year				<u>\$18,000.00</u>
Total				\$45,000.00

	Staff	Contracted Summer Rate	Hours	Total
2019-2020				
2019-2020 Staff	30	30	20	\$18,000.00
2018-2019 Staff	30	30	10	\$9,000.00
2017-2018 Staff	30	30	10	\$9,000.00
School Year				<u>\$18,000.00</u>
Total				\$54,000.00

	Staff	Contracted Summer Rate	Hours	Total
2020-2021				
2019-2020 Staff	30	30	10	\$9,000.00
2018-2019 Staff	30	30	10	\$9,000.00
2017-2018 Staff	30	30	10	\$9,000.00
School Year				<u>\$10,000.00</u>
Total				\$37,000.00

2021-2022	Staff	Contracted Summer Rate	Hours	Total
2019-2020 Staff	30	30	10	\$9,000.00
2018-2019 Staff	30	30	10	\$9,000.00
2017-2018 Staff	30	30	10	\$9,000.00
School Year				<u>\$10,000.00</u>
Total				\$37,000.00

Funding Options:

Funded from annaul professional development	\$35,000.00	
Funded from instructional core	\$16,000.00	\$15,000.00
Funded from TLC		

Device Rotation Cycle 2017-2027

Student Devices	JK/K	1	2	3	4	5	6	7	8	9	10	11	12	Spare	Total
Students in 17/18	50	99	74	76	86	73	90	87	74	70	72	71	76	10	384
Students in 18/19	90	100	99	74	76	86	73	90	87	74	70	72	71		287
Students in 19/20	90	90	90	99	74	76	86	73	90	87	74	70	72		443
Students in 20/21	90	90	90	90	99	74	76	86	73	90	87	74	70		0
Students in 21/22	90	90	90	90	90	99	74	76	86	73	90	87	74	10	345
Students in 22/23	90	90	90	90	90	90	99	74	76	86	73	90	87		336
Students in 23/24	90	90	90	90	90	90	90	99	74	76	86	73	90		450
Students in 24/25	90	90	90	90	90	90	90	90	99	74	76	86	73		
Students in 25/26	90	90	90	90	90	90	90	90	90	99	74	76	86	10	370
Students in 26/27	90	90	90	90	90	90	90	90	90	90	99	74	76		339

Mac

Staff Devices	iPads	Book	Total iPads
17/18	100	30	484
18/19		30	287
19/20	100	30	543
20/21		30	0
21/22	100		445
22/23		30	336
23/24	100		550
24/25		30	0
25/26	100		470
26/27		30	339

