

## Douglas County School District – 1:1 Interactive Classroom

### OVERVIEW

1:1 computing is not about *the device*, nor putting technology into every student's hands. Meaningful and successful 1:1 programs are based on instructional change in the classroom with the technology being a tool to help students and teachers create a collaborative and inquiry based learning environment. The Douglas County School District 1:1 Interactive Classroom is based on facilitating and creating instructional delivery and learning models within our classrooms that permit students to produce content, rather than solely passively consume content. The Nevada Academic Content Standards expect students to be digitally literate by reading and writing digital text and developing the technical skills necessary to consume and produce digital texts. Students are expected to strategically and capably use technology and digital media by intelligently sorting through and using digital information. We have an obligation to develop and utilize the technological fluency that students bring to us and to thoroughly integrate technology into the curriculum through engagement in authentic work. We also have an obligation to create an environment in which students can develop as independent, lifelong learners. With this in mind, the overall driving forces behind implementing a 1:1 project are as follows:

- Provide any time learning and access to a vast collection of resources
- Develop 21st century skills and understand digital spaces
- Reduce paper and transition to digital work flows
- Promote careers and interest in computer science
- Give teachers tools to remix "stand and deliver" lessons
- Increase opportunities to differentiate instruction
- Increase student engagement and creativity

The Douglas County School District (DCSD) has been actively involved in the implementation of the Common Core State Standards. Deeper learning provides our students with the opportunity to use varied resources and media to help process information, learn concepts, and communicate information by utilizing a myriad of digital and non-digital tools. However, there are obstacles for our students in regard to the CCSS ELA and Math Standards and changes to the Science Standards. With reduced funding for textbooks, the current cost of hardbound resources, their lack of alignment to the Common Core Standards, and the inability to update information within the hardcopy textbooks without reprinting has made providing current resources and materials to classrooms extremely difficult and costly. Lack of digital resources has also limited student engagement and ownership in the educational process. Students are being asked to 'switch off' their connection with online resources when entering school and in many cases are not being provided with skills and resources that will enable them to be

successful in college and/or careers. In order for 1:1 computing to be successful, classroom instruction and student engagement and ownership in the learning process must evolve.

While DCSD is implementing the Common Core Standards with its focus on deep, active learning and student engagement, the classroom learning environment must then provide consistent collaborative and interactive classroom tools. With the use of 1:1 devices in the classroom, connecting efficiently and effectively to a wireless network, students and teachers will be able to access a vast collection of digital resources. These are necessities if our students are to meet the increased rigor of the ELA and Math CCSS. In addition to the 1:1 student devices, the interactive classroom project involves the use of an interactive projector that provides a wireless hot spot for the 1:1 student devices and teacher device, and allows the individual devices to connect and display through the projector. Providing this interactivity is meant to promote a more student-centered classroom in which students are delivering information and/or connecting with the global community using such tools as Skype or Google Hangouts.

### **PROFESSIONAL DEVELOPMENT**

Professional development and support is a large portion of this proposal and to the success of the project. Extensive professional development and support is critical in order to help teachers develop instructional strategies that will empower and engage students in 24/7 learning environment. This puts students in an active, not passive, role in their learning and moves them from 'covering' material to mastering it. These changes essentially move teachers from "sage on the stage" to "guide on the side". Professional development will need to focus on changing instructional strategies necessary to create collaborative and inquiry based classrooms; how to use the technologies (student device, interactive projector, teacher device); and the development of new resources and instructional materials that can be used in these classrooms and lessons. The goal is to provide teachers with the tools and resources that will enable them to provide students with the lessons and opportunities to produce meaningful content and to make real-world connections.

Additional and ongoing professional development will need to focus on developing digital learning and understanding within our site and district administrators. This starts with developing the understanding that adding technology to the classroom is not another initiative, but is an integrated part of the curriculum. Digital leaders will support ongoing and embedded staff development focused on pedagogy, not just technology. These leaders will assist all teachers with moving forward and encourage cohorts of teachers with their development of innovative concepts and the development of content resources.

Along with training teachers, parents should also receive support and awareness in how the change in classroom learning is benefitting their child and their role in the process. Training can cover such things as basic computer and device instruction, how parents can assist their child with their homework, how the parent can access resources, information, and portals to find out information on their child's coursework, assignments, and assessments. As classroom instructional materials are developed, awareness of these materials can be communicated to parents.

Some of the questions that will guide the collaborative research and design of each school's 1:1 Interactive Classroom program are:

- What are the district's digital learning goals?
- Discussions and training of how to teach within a 1:1 program and blended classroom-- What is different? What materials are needed? What skills are needed? What changes will be noticed within the teacher's classroom? What instructional strategies work best?
- What does classroom management look like in a 1:1/flipped/blended classroom and what instructional strategies are best suited to facilitating classroom management? How do you move from a teacher-centered classroom to a student-centered classroom? How do you help a teacher incorporate more flipped/blended components to their classroom and instruction?
- What resources are available for each course and content area? How can Google Apps for Education and other digital resources be used to assist with flipped/blended classroom lectures and dispensing of information? What equity issues need to be considered?
- How can learning management systems such as Google Classroom be used to create digital work flows?
- What type of assessments can be used that will give students immediate feedback and also give the teacher information to inform instruction (e.g., types of formative, common, and classroom assessments)? This is applicable to both classroom activities and flipped (or blended) instructional models where students view/listen to topical lectures outside of class. How can students discuss, apply, and get feedback from what they hear/view in the lecture? How can the teacher cultivate and use this information to inform lesson planning?
- What training (technology, classroom, and instructional) do students need for an effective 1:1 program and interactive classroom?
- What training and information do parents need to understand and utilize the 1:1 program and interactive classroom?

- How can/will the class be evaluated as to being effective, in the short and long term (e.g. – is 1:1 and the interactive classroom effective)?
- What "look fors" are needed to gather data on educator use of technology, instructional components, leadership, content of technology training, student use of the technology, and technology integration?
- Administrators will be active participants in all of the above discussions and training so that they can help to assess fidelity of implementation, data collection points, and to become proficient users of the 1:1 interactive classroom technology.

A meeting will be held with all parents and students before a 1:1 device will be issued to a student. Some of the information that will be covered at this meeting includes:

- Device care and battery care.
- Expectations for device use.
- Tech support for the device.
- Summer device imaging and upkeep.
- Overview and discussion of the 1:1 Interactive Classroom and the change in classroom instruction.
- Additional information and topics as identified by the site staff, PD trainer, IT department, and the EdTech team.

## **EXPECTATIONS**

The 1:1 Interactive Classroom is not a “spray technology and pray” proposal. It is expected that there will be a change in instructional design and delivery and teachers will actively engage in professional development in order to successfully implement a 1:1 interactive classroom with students. Based on research into successful 1:1 programs, this does not happen overnight, and training and support needs to be differentiated to meet the needs of each instructor. Teachers are expected to *own* the change. Therefore, the professional development trainer, Director of Assessments & Grants, and IT Director will work with the staff as a whole at each site and with cohorts of teachers (content areas, departments) to actively study existing 1:1 and flipped/blended instructional programs from across the nation, high yield classroom instructional strategies, and digital classroom environments in order to learn from what works and to avoid the mistakes made by others. The professional development trainer will then be able to work with the site and individual teachers to construct appropriate professional development based on what each staff member knows and is able to do, much like teachers would do with their students.

## **DISTRICT COMMITMENT**

The Douglas County School District agrees to manage the project according to the final project description. Unless otherwise specified, Assessments and Grants will manage the project funds

in the same manner as with the Promethean donation. Accountability for items purchased, billing, and reimbursement will be completed in a similar manner as with the previous project. Any changes in technology and/or volume (school size and configuration) that might occur will be reviewed with the Community Foundation of Western Nevada personnel prior to purchase.

## **EVALUATION**

While some of the evaluation data points will be identified and defined by site staff through the research and planning phase, the following elements will be included to help identify the impact of the 1:1 interactive classroom on student performance and classroom instruction:

1. The PD trainer and site administrators will use an observational checklist (to be developed with teachers during the pre-implementation research and professional development component) to gather data on the agreed upon elements to be contained in a 1:1 classroom, including the level of inquiry, types of collaboration, and the level of student engagement.
2. Teacher/instructor pre and post perception and feedback survey. Content to be developed with teachers during the pre-implementation research and professional development component.
3. Student pre and post perception and feedback survey. Content to be developed with teachers during the pre-implementation research component.
4. Parent pre and post perception and feedback survey. Content to be developed with teachers during the pre-implementation research component.
5. Using previous years' assessment data as a baseline, the Office of Assessments will provide an annual reporting of SBAC (grades 7-8), HSPE/End-of-Course Exams (grades 10-11) and Local MAP (grades 7-9) results by classroom, grade, and school. Data will be compiled at the end of the year when received from the State.

## **RESEARCH ON 1:1 INITIATIVES**

<http://www.livebinders.com/play/play?id=1673360>