## Summary Findings/Recommendations Table

| **Indicator Strand** | **Findings (Pages 13 – 43)** | **Recommendations (Pages 44 – 55)** |
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| ***Student Outcomes*** | | |
| 4Cs and ISTE NETS-S | * Students have access to technology devices and computer-based-instruction systems at all grade/subject levels in the district. * There is disagreement among teachers at different grade levels that their students have grade-level appropriate technology and digital literacy skills. (Elementary teachers generally feel that their students are NOT skilled, whereas Secondary teachers are mixed in their assessment. Principals across all levels are generally positive about student technology skills.) * Most teachers, K-12, find that their students do not use technology in ways that the evaluators identify as aligned with NETS-S * There is no clear “standard” in the district for what it means for a student to be technology skilled or digital literate or for what it means to “integrate” technology within the instructional environment. There is no clear or uniform understanding of the 4Cs or how technology supports the development of these. | * Establish a district orientation that recognizes and supports technology as a teaching and learning objective that is overseen by instructional staff versus technology staff. This starts with the development of a strategic technology plan that is rooted in an instructional vision, but continues to the development of staffing and oversight for technology that emphasizes the predominance of curriculum over technical issues. * Expand teacher understanding of “technology integration” to focus more on student-centered, inquiry-based, learning environments that move beyond teacher-directed uses of technology (such as projection, presentation, etc.). * Develop a clear set of K-12 student and teacher technology expectations and provide the teacher professional development to support these expectations. |
| Personalized Learning Environment that Emphasizes PBL and STEM | * The majority of teachers report that they do not have the necessary infrastructure and support to consistently operate a personalized learning environment. * Tech Ready has done and admirable job in an impossibly short period of time to train and create awareness of PBL and STEM among WUSD teachers. | * Develop a district vision that emphasizes – and a plan that supports – a personalized learning environment for all students. * Institutionalize the Tech Ready-initiated professional development and related staffing so that the training offered via Tech Ready can become a systemic part of the WUSD student experience. |
| ***High Quality Professional Development*** | | |
| Teacher Fluency in Technology Skills and PBL-Related Pedagogies | * WUSD teachers are proficient in the use of basic instructional technology tools for personal and professional productivity as well as for routine (teacher-centered) teaching tasks. * Tech Ready hired and enabled an admirable professional development staff (in terms of quantity of hired staff and the skills that staff possessed) | * Institutionalize the Tech Ready-initiated professional development and related staffing so that the training offered via Tech Ready can become a systemic part of the WUSD student experience. * Build district capacity – largely through improvements to the management of the network infrastructure and updating of policies – to achieve a 1:1 computing environment (as was the original intent of the Tech Ready grants). |
| Implementation of an Effective Professional Development Model | * The PD model employed by Tech Ready staff was well-received by teachers, but had insufficient time to operate and show widespread results. In those cases where Tech Ready STEM Developers had close contact with teachers, there was growth in these teachers’ awareness of student-centered technology-infused learning. | * Institutionalize the Tech Ready-initiated professional development and related staffing so that the training offered via Tech Ready can become a systemic part of the WUSD student experience. |
| ***Instructional and Technical Support*** | | |
| Technical Support | * While the grants hired a (relatively) large number of staff who might have been able to provide technical support – and who attempted to provide such support – this staff was largely ineffective at actually providing such support due to the way that WUSD organizes and identifies “technical support” staff. * Many IT-department policies (e.g. the limiting of technology administration privileges to only IT department staff) are not in sync with the needs of teachers and students and do not seem to be driven by instructional concerns. | * Ensure – through reorganization of the district’s technical and instructional technology staff and the creation of a visionary strategic plan that emphasizes instructional/curriculum goals versus technical concerns – that technical staff support teachers’ needs. * Ensure that building-level support staff have sufficient technical privileges to address basic technical issues such as workstation configuration, permissions, user accounts, etc. * Leverage existing “Computer Teacher” positions to provide at least some minimum level of technical assistance in each building. |
| Instructional Support | * Tech Ready brought in a large number of staff to provide Instructional Support (including the Coaches who ostensibly provided Technical Support, but also did a fair bit of what would be know as instructional support in other districts). * In its short time of operation, relatively little time was available for instructional support staff to work on Tech Ready classroom implementation. This was compounded by myriad infrastructure configuration and management issues. Nevertheless, Tech Ready Developers did work with some teachers in all buildings. | * Institutionalize the Tech Ready-initiated instructional support and professional development so that the training and instructional support offered via Tech Ready can become a systemic part of the WUSD teacher and student experience. * Ensure – through planning and budget – that there are technology instructional support staff positions to support classroom-based technology integration. |
| Systems | * WUSD teachers and students have access to a wide range of CBI and assessment systems. * Tech Ready staff have done an admirable job establishing and maintaining the district’s new LMS | * Continue development of the district LMS by continuing to expand the number of connections made between instructional technology integration expectations and grade/subject area curriculum maps (pacing guides, etc.) |
| ***Infrastructure and Hardware*** | | |
| Infrastructure Capacity | * WUSD has a very high device to student ratio. There are many many machines available to teachers and students. More than half of those machines are less than two years old. * The district’s internal network is highly problematic. IT policies and practices have resulted in a network that is overloaded, over-built, too complicated, and difficult to administer effectively. * There is insufficient Internet bandwidth. Attempts to protect this scant resource have resulted in further overload on the internal network and much user frustration. * Demands for technical support far outstrip supply, and efforts to expand and streamline technical support (for the benefit of users and usability) have been thwarted by the IT department in the name of technical control and user protection. | * Overhaul the way that the technology infrastructure is managed and organized. Establish policies and procedures that foster user responsibility in lieu of user disablement. Emphasize the achievement of instructional and curricular objectives over “protecting” the infrastructure. * Increase Internet bandwidth to recommended standards (for school district Internet bandwidth). This will reduce the need to limit user access to the Internet; and this in turn will reduce the need to replicate the WWW inside the district’s network (i.e., take apart the walled garden). * Provide users with competent, enabled (i.e., with sufficient technical access privileges), technical support. * Commission an independent “technical audit” of the district’s network architecture, bandwidth, and administration (this should inform the specific infrastructure plan component of the district-wide strategic technology plan). |
| Policies | * The Internet firewall filtering policy is detrimental to teacher and student morale and is inadvertently hindering the development of student digital literacy skills. * The IT department has become the arbiter of policies that impact instructional issues. Issues identified as “technology policy” are in fact instructional/curriculum issues. * WUSD does not have an effective forum for debate on issues related to policies that have any relation to technology. | * Provide clear curriculum and instruction oversight over policies such as how the firewall is enabled and administered. * Ensure that the district’s strategic technology plan and vision drive the discussion and formation of technology-related policy. |
| Digital Literacy | * The district’s Internet firewall, and other attempts to “control” student access to resources is inadvertently hindering students’ development of digital literacy skills. * There is no current digital literacy curriculum | * Reduce the barriers to student digital literacy by allowing students (and teachers) more access to the authentic, real-world, information and resources available on the Internet. * Ensure that there is a digital literacy strand within the district’s scope and sequence of student technology skills (as reflected via lessons/activities on the LMS) |
| ***Capacity-Building and Sustainability*** | | |
|  | * This indicator is future-oriented and inspires future planning work. | * Develop a district-wide strategic plan for technology that starts with the Student Outcomes indicator as its vision and that proceeds to implement the recommendations of this evaluation (particularly those related to technology organization, staffing, and professional development) * Ensure that the district’s strategic technology plan is developed with a wide-base of WUSD stakeholder involvement/input. * Create the position of Director of Instructional Technology to oversee and coordinate the district’s strategic plan to bring technology to bear on issues of teaching and learning. |

**Table 2 –** Summary of Findings and Recommendations