<u>Recommendations for the 1:1 Schools Gleaned from the 1:1 Mid-Year Two Report</u>

*Building the Wireless Network* – Some pilot schools report needing double the amount of wireless routers than initially thought – at least one in every classroom. Additionally, schools are finding their networks have difficulty keeping up with demands when many students are on the network at once. Schools implementing 1:1 need appropriate levels of network support. Expanded state supported services, such as those provided by the Customer Support Engineering group at MCNC could lead to better utilization of network resources

*Selecting Machines* - There has been almost no loss or theft of laptops, and limited breakage except for the tablet-style PCs, which experienced substantial breakage rates. Schools should have plans to ensure smooth replacement of student and/or teacher laptops when they need repair (e.g., extra laptops that can be used as temporary loaned units, network backup of student and teacher work).

*Attending to the Details* - Having ways to store and carry laptops safely, plug-in computers and charge batteries, make printer supplies available, establish email class lists for teachers, backup teacher and student machines, respond promptly to technical problems, and address the many other day-to-day needs of making the use of 1:1 laptops go smoothly in classrooms is essential for successful use of the technology to improve student learning.

*Committing to New Policies* –Schools need to be sure the same policies and consequences are applied the same way in every classroom (school-level). Districts need to find the delicate balance between protecting students from inappropriate internet content and giving teachers and students the freedom to access important educational resources online (LEA-level).

*Providing Professional Development* - There is a clear need for ongoing professional development, customized to the participants' stage of development in using technology to enhance teaching and learning. Teachers want not only to learn how to use technology, but they also want to see models of how to effectively incorporate technology into their routine pedagogy.

*Managing a Classroom Full of Laptops* - Teachers continue to look for guidance on issues related to management of 1:1 classes such as student monitoring systems, and collecting and returning student work. Further attention needs to be directed to classroom management strategies and how they can be best supported with technological tools, such as effective monitoring software; centrally-located server resources to provide a protected space for students to save work; and, centrally-supported course management software such as Moodle or BlackBoard.

*Staffing Instructional Support Personnel* - The important role of onsite technology facilitators to help teachers and students use the technology to improve learning, established in prior research, was once again confirmed. According to the IMPACT Model Guidelines, TFs should spend approximately 50% of their time on information access and delivery activities, 42% on supporting teaching and learning activities, and just 8% of their time on program administration. There should be a full-time, on-site TF at any school considering a 1:1 project.

*Staffing Technical Support Personnel* - Pilot school staff are adamant about the importance of having a technician on campus to support a successful 1:1 project. Recommendations included one full-time technician for a smaller high school (less than 1000 students) and two full-time technicians for larger high schools (more than 1000 students) implementing a 1:1 project.

*Promoting Innovative Leadership* - Consistent, supportive, distributed leadership promotes adoption and buy-in from teachers and students for the 1:1 learning innovation. Key characteristics emerged from the conversations with teachers at the 1:1 pilot schools for school leaders to successfully support a new 1:1 laptop project including supporting teacher professional growth, setting reasonable expectations for effective technology integration, modeling technology use, readily addressing instructional and technical needs, and communicating commitment to the purpose of 1:1 learning initiative.