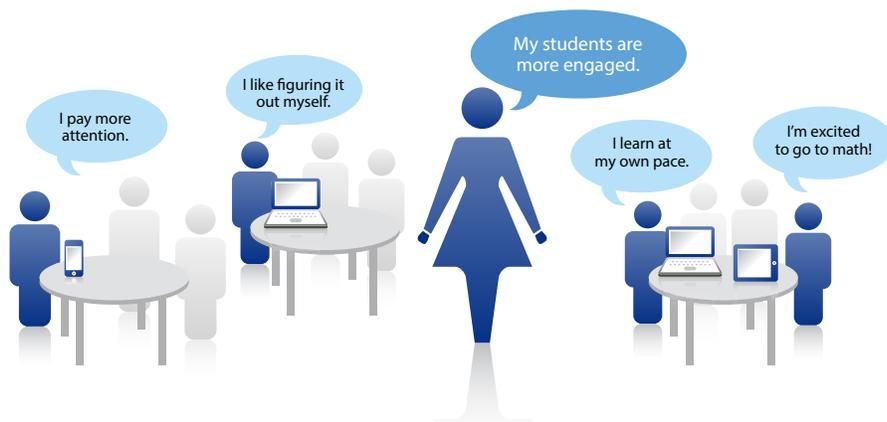# Flipped Classrooms Drive Deeper Student Engagement When Meru Education-Grade™ Wireless Delivers Uninterrupted Learning

The adoption of flipped classrooms is driving the need for seamless, scalable, and secure connectivity for students, teachers, and staff

Many schools want to "flip" the learning process to increase student engagement and support personalized learning. Flipped classrooms allow students to learn course content at their own pace and style by introducing concepts outside of the classroom and using class time for 1:1 tutoring, hands-on activities, and collaborative projects. Laptops, tablets, and smartphones, as well as digital content, are the foundation of this new learning method.

But streaming video, gaming, and other complex content, coupled with the diversity of mobile devices used, can make it challenging to establish a reliable, secure, and responsive connection to the school's Wi-Fi network.

To realize the academic promise of flipped classrooms, schools must deploy a wireless LAN solution that provides seamless connectivity, regardless of device or operating system. The wireless LAN must scale to handle capacity requirements and provide fair network access. And it must maintain security with appropriate access to applications and services according to school or district policies.

Meru Education-Grade wireless uniquely delivers on the requirements for flipped classrooms

The Meru Education-Grade (MEG™) wireless platform is purpose-built to meet the demanding requirements of the flipped classroom. Combining powerful network provisioning software with an innovative approach to wireless networking, which includes Single Channel Architecture (SCA) and channel layering for scalable, reliable Wi-Fi, as well as integrated support for essential applications such as Stoneware LanSchool digital classroom management, Microsoft® Lync® unified communications and collaboration, and Apple® Bonjour services, MEG delivers on the requirements for uninterrupted learning in schools.

Solution Benefits

➢ **Rapid, Secure Onboarding** - Quickly onboard students with automated, secure client provisioning using Meru Smart Connect, part of Meru's Identity Manager software suite.

➢ **Seamless Connectivity** - Reliably connect mobile devices anywhere in the school using Meru's broad portfolio of Wi-Fi access points, wireless controllers, and network management software.

➢ **Enable 21st Century Learning** - Support online learning with innovative applications, digital classroom management, unified communications and collaboration, and Bonjour services.

"On any given day, we can probably hit on 20 different concepts in my classroom. Because it's so differentiated through the flipped classroom, [students] are able to do all kinds of different things."

— Linda Gutierrez, Math Teacher, Heights Middle School, Farmington Municipal School District

Solution Benefits

Quick Onboarding to Maximize Instruction Time

- **Spend more time learning, not troubleshooting.** Get students' devices logged onto the network quickly so class time can be spent learning, not troubleshooting the Wi-Fi. Use Meru Identity Manager software to quickly onboard client devices and ensure secure client provisioning for 1:1, BYOD, and mixed environments, whether students and teachers are using the latest iPad or a five-year-old laptop.

- **Protect the network and school's resources while ensuring that students and teachers get the appropriate access to the right network services.** Implementing enterprise-class authentication, authorization control, and encryption, Meru Education-Grade wireless insulates the school's network from outside threat potentials from BYOD. Flexible policy enforcement delivers the right service levels for students, teachers, and staff while restricting access to specific network resources. By dynamically assigning different access policies based on predefined roles, teachers can keep students focused on flipped classroom activities and limit non-course-related activities such as texting and email.

Connect Reliably Wherever, Whenever

- **Ensure all students have fair access to network resources across classrooms, schools, and districts.** Meru's innovative Airtime Fairness® feature delivers equal access to network resources and provides consistent performance for all students and teachers. Bandwidth-hungry applications such as video and voice that are used in a flipped classroom will perform at peak capability alongside data and other applications, allowing every transmission to move at its highest potential speed.

- **Built for capacity and density, not just coverage.** Meru offers a broad portfolio of Wi-Fi access points, wireless controllers, and network management software to address an array of Wi-Fi needs. Features like Virtual Cell technology simplify deployment and provide seamless mobility and predictable performance for all flipped classroom activities that use voice, video, and multimedia applications.

- **Built for flexibility and scalability.** Meru's innovative SCA and channel layering features help ensure students and teachers connect and stay connected. With channel layering, Meru can deliver nearly twice the capacity of competing solutions in dense environments and during peak classroom usage.

Deeper, Richer Learning

- **Tightly integrated application support for flipped classroom applications on mobile devices.** The MEG wireless platform supports digital classroom management with Stoneware LanSchool, unified communications and collaboration from Microsoft Lync, and Bonjour services for Apple-centric learning environments.

- **Robust and dependable wireless platform to support multiple modes of digital content used inside and outside the classroom.** With the MEG wireless platform as the foundation, teachers can be assured that the transition from traditional teaching methods to digital learning with audio, video, and web materials will be smooth.

- **Learn anytime, anywhere, any device.** Realize the power of mobility with the MEG wireless platform. Count on reliable access to educational content wherever the student may be and on whatever device they have. And that makes it possible to truly flip the classroom environment and deliver uninterrupted learning to K-12 students.

Additional Resources

- Flipping classrooms on a 21st century network webinar - www.merunetworks.com/FCwebinar
- Meru Wi-Fi Supports Schools' New Flipped Classrooms video - www.merunetworks.com/FCvideo
- School Wi-Fi Network Connects 9,000 Laptops at Farmington Municipal Schools customer testimonial - www.merunetworks.com/Essa
- Meru education resources - www.merunetworks.com/education

For more information about Meru Networks, visit **www.merunetworks.com** or email your questions to: meruinfo@merunetworks.com

"An instance where the wireless is really benefiting us is in the flipped classroom, where we see students coming in with the iPads, doing research on the Internet, and then contributing this knowledge to the class"

— Kayla Price,
Director of Languages,
University of Houston

About Meru Networks

Meru Networks (NASDAQ: MERU) designs, delivers, and distributes best-of-breed mobile access and virtualized Wi-Fi solutions that are easy to deploy, operate, and expand to meet enterprises' ever-changing mobility requirements. Meru's Mobile**FLEX** wireless architecture addresses the market demand for higher bandwidth and higher client densities with its innovative virtualized wireless technology, while simultaneously simplifying device onboarding. It also offers flexible and scalable deployment options and the unique support for context-aware application layers (CALs) or dedicated channels for different applications and usage contexts. Meru wireless LAN solutions are deployed in major vertical industries including Fortune 500 businesses, education, healthcare, and hospitality. Founded in 2002, Meru is headquartered in Sunnyvale, Calif., with operations in North America, Europe, the Middle East, and Asia Pacific. Visit www.merunetworks.com or call (408) 215-5300 for more information.

MERU NETWORKS®

Meru Networks
894 Ross Drive, Sunnyvale, CA 94089
T +1.408.215.5300
F +1.408.215.5301
E meruinfo@merunetworks.com