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## WLAN Readiness for K-12 One-to-One Student Computer Initiatives

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As more schools move toward a one-to-one computing ratio, IT and network operations managers need to make sure their wireless LAN is ready for the new requirements. Gartner analyst Tim Zimmerman offers a checklist that may be used to ensure that the WLAN has been properly designed so every student in every classroom stays connected with consistent streams from the Internet.

His research shows that most K-12 school system network operations specialists don't assume the somewhat wide inconsistency in the wireless performance of diverse devices and tablets when determining access point (AP) placement and wireless coverage. Further, Zimmerman points out that although IT and network managers do conduct site surveys, critical data necessary for a WLAN are often not collected (i.e. they perform coverage surveys instead of capability surveys).

Zimmerman explains why the K-12 user experience must be defined as 6 Mbps for bandwidth per person as well as the minimum radio capability for any client (e.g. laptop, tablet) in order for optimal performance and planning. This technical note defines how to understand the current environment to establish a baseline and develop Signal-to-Noise Ratio (SNR) policies to maintain consistent transmission. Zimmerman also lays out design parameters that should be communicated to vendors when a WLAN project is being implemented such as:

- User-required throughput in peak transaction density
- Peak client density for each classroom including trailers and open areas
- Device characteristics (i.e. power transmission levels, types of antennas, etc...)

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*\*Individual copies of the original, complete Gartner Research Report may be requested through [TechConnect](#), the Education IT Peer Networking Community ( a service of the San Diego County Office of Education). Log on to your [TechConnect](#) account and join the [Information Technology Research Community](#) to request your individual copy. For more information or to join TechConnect, visit <http://www.techconnectk12.org>*

**Request: [Article 15-224644](#) Is Your WLAN Ready for the K-12 One-to-One Student Computer Initiative?**

Zimmerman, T. (2011, October). *Is Your WLAN Ready for the K-12 One-to-One Student Computer Initiative?* (Rep. No. G00224644). Stamford, CT: Gartner.