TEACHING

One Access Point per Classroom Makes Wi-Fi Worse

By **Keith Parsons, CWNE #3** · 2026-07-06 · originally on LinkedIn

Putting one Access Point in every classroom does not make a school's Wi-Fi better. It makes it worse.

More APs packed close together is not more capacity. It is more co-channel contention. And contention is exactly what slows a network to a crawl the day the students show up with their devices.

I wrote that in 2014.

After running the full design process through more than 4,000 classrooms since, I have not found one reason to change the verdict.

Capacity is a frequency-reuse problem. It has never been an AP-count problem. Drop an AP in every room and same-channel APs hear each other, defer to each other, and split the airtime down to a fraction. When the frequency is full, no more traffic flows, no matter how many Access Points you bolt to the ceiling.

Here is the trap that keeps this alive: if you do put in one access point per classroom, it actually works, just not well. Not because the design is good, but because of the resilience built into 802.11. The network looks fine on day one, before the 1:1 and BYOD clients arrive. Then the load hits and it stalls. The fix at those schools is almost always the same. Remove Access Points.

Throughput goes up.

And in 2026 the waste is bigger than it was. Every over-deployed AP today is a Wi-Fi 6E or 7 AP that likely needs 802.3bt power and a multi-gig uplink. You are pre-paying for power and switching to run radios you will end up turning off.

Do you still design using marketing ratios, like 1 access point per XXX?

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