

Noon's Four-Tier Model of Technological Proficiency for Teachers

STAGE	DESCRIPTION	EXAMPLES
Preliterate	Not yet using technology for personal or instructional purposes	Traditional media and materials
Technocrat	Experimenting with technology but unsure of its overall dependability and usefulness	Demonstration station with LCD projector, computer lab, learning station with computer
Technotraditionalist	Using technology proficiently to accomplish traditional classroom tasks	Word processed lesson plans, electronic grade book, e-mail, digital slideshows
Technoconstructivist	Using technology to completely change approaches to teaching and learning in the classroom	Online projects, virtual field trips, WebQuests, digital portfolios, virtual classrooms

Scott Noon of Classroom Connect

The Preliterate User

This is where we all begin. We are aware of technology's presence in our buildings, even in our classrooms, but we do not have the training, experience, or confidence to use the technology. Teachers who fit in this category have yet to establish an e-mail account, use a word processor, or even find a piece of appropriate software that can be used with students to enrich instruction. Perhaps technology seems like another entire body of knowledge that there just isn't time to master. Or perhaps technology seems like a lot of fluff that gets in the way of honest, on-task instructional time. For each teacher the reasons may vary, but the overwhelming response I hear from educator groups no matter where I go is, "We just haven't had the training we need to make good use of all the hardware and software that's been purchased for us to use." Educational institutions in general are very quick to throw money at a new issue or innovation, and then very quick to move on to other trendy ideas without giving invested initiatives time to fully realize their potential. Many teachers are telling us that this is happening with technology: they don't have the training time or funds needed to complete the technology puzzle. Few teachers are preliterate users by choice; no one wants to be left behind. And since we all start at this point, perhaps that is the impetus that compels us to move forward and become more proficient with technology. Still, how do we move on without the prerequisite training?

The Technocrat

This second tier of Noon's model is a critical point in teacher technology training. Teachers in this category have ventured out to learn how to use an LCD projector connected to a demonstration computer station. They have made the effort to identify instructional applications that students can successfully use in the computer lab. At the high end of this tier, teachers even dabble in new, more advanced applications to invigorate themselves. The main characteristic of this category, however, is preoccupation with the technical aspects of technology. How do I turn it on? What do I do if the bulb burns out while I'm presenting to my entire class? What if the server is down and I have 25 children unable to complete the online task I had planned? Of course, the only way to answer these questions is to learn from experience. Technology always offers the possibility of glitches and unforeseen mishaps. High-end users understand this and have learned the tricks of the trade, which include having a Plan B handy whenever technology is going to be used. By giving teachers the time and support they need to grow as technocrats, we are creating an instructional environment in which technology really gets used because teachers are no longer afraid of it. I believe once teachers can see past their initial fears, they will come to recognize how technology can enrich their lives both personally and professionally.

The Technotraditionalist

For teachers in the third tier of Noon's model, technology is seen as an inherently good thing in instruction, which can be used in a variety of ways around the classroom. Teachers at this level often create word processing templates so they can write their lesson plans in an easy-to-use format. Likewise, technotraditionalist teachers use spreadsheets to create seating charts and electronic grade books. The teachers at this level are high-end users, and they make use of technology to complete the same tasks they have traditionally always accomplished as teachers. Is there anything wrong with that? No! It is an important stage in the development of the technology-savvy teacher. Still, if we are using technology only to keep track of lunch counts and type reports to hang on the wall, how far have we really come? Yes it's more efficient to set up a database to make student mailing labels that you can use all year, but you're still holding on to traditional attitudes about instruction. If technology is going to be a true agent for change in education (and this remains to be seen), educators at all levels are going to have to be willing to ask themselves fundamental questions about why they continue to do things as they always have. Perhaps some of our preconceptions have to do with growing up in the Industrial Age, when many Digital Age possibilities were not yet available. If technology is to offer any hope for solving traditional problems, then we may have to rethink our assumptions and be willing to go beyond traditionalist uses of technology.

The Technoconstructivist

The technoconstructivist is the highest tier in Noon's model. Here, teachers not only integrate technology into traditional views of instruction, but are willing to reshape those views and explore wholly new learning models made possible by technology. For technoconstructivists, technology is not just an instructional tool, it is a way to transform the classroom into a new and vital learning environment for students. The technoconstructivist classroom makes use of Web resources, electronic mail, online collaborative projects, synchronous Web-based events, virtual field trips, WebQuests, multimedia presentations, virtual classrooms, interactive simulations, and much, much more. As the Internet breaks down the four physical walls of the classroom as well as the traditional boundaries of time, space, and money, students are able to use higher levels of thinking, apply real-world approaches and solutions, and collaborate with experts and other learners from around the world. The result is a learning revolution, in which the teacher becomes a facilitator and guide to all the learning possibilities in the world around us, virtual and otherwise. The technoconstructivist is the highest level of technological proficiency for teachers, and one we must all aspire to if we are to realize educational technology's full potential.

If we believe that technology is just another tool for instruction, then it is worth no more than any other piece of equipment in our classrooms. When we are willing to let go of our preconceived notions and traditional ideas, however, we can see technology's true potential to transform instruction. As long as we force technology into the Industrial Age model of education, we are limiting its promise. That is why we have not yet seen much research evidence to support the role of technology in instruction. We need to allow technology to transform our classrooms for the Information Age. It cannot do so if it is just superimposed upon a model of teaching that faded with the end of the last century.

Excerpt from Chapter 8, "Becoming a Technoconstructivist" from Multiple Intelligences and Instructional Technology by Walter McKenzie, Second Edition

Used with permission of ISTE

<http://www.iste.org/eseries/source/orders/excerpts/multi2.pdf>