

Reflections on ICT Fluency: Content and Context

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Developed for the National Academy of Sciences IT Workshop, October 2005

These observations begin with the content of the Components of Fluency framework but move fairly quickly to thoughts about the contexts in which young people can and should be encouraged to learn, practice and apply this content. From where I sit, the Components of Fluency framework does include the menu of skills, concepts and capabilities that are important and that have – in many cases – been included in other frameworks. More important than the specific items, however, the framework as a whole acknowledges the three important layers of learning that are needed in order to be “fluent” in the 21st century. But there is a challenge.

As presented on the page, it is not clear that the three lists of indicators represent different levels of fluency. All indicators appear equal. But all are not. The skills indicators are narrower and much more specific to ICT fluency. Many would argue that mastery of many of the capabilities, on the other hand, is neither dependent on having ICT skills nor in the sole domain of ICT fluency.

The specific skills, concepts and capabilities listed differ in scope and importance and the underlying assumptions about how students develop skills, concepts and capabilities differ. The assumptions about how ICT skills, concepts and capabilities relate to one another, should, therefore, be made much more explicit. It should be obvious at-a-glance that no one is trying to equate building a spreadsheet with sustained reasoning. Any of a number of graphic tricks would make this clear (e.g. linking skills to concepts to capabilities with arrows that lead upward, or putting the lists in nested boxes.) The layering used by the Partnership for 21st Century Skills, for example (core subjects, learning skills, 21st century context, 21st century content, etc.), has proven effective (Partnership for 21st Century Skills, 2003).

Having offered comments on the content of the framework, let me move on quickly to context. The skills list is certainly the narrowest of the three areas, but it may be the most important from a student engagement perspective. This is an area where students – even students lacking in some of the basic concepts and capabilities –

increasingly bring prior knowledge and experience to the table, with technology becoming so prevalent in their personal lives. (When a nationally representative sample of 10-17 year olds were recently asked what skills they need more experience with in order to be successful in life, technology skills actually ranked close to the bottom – after financial, job, life, communication, people, thinking, academic and cultural skills (America’s Promise, 2005)).

From an implementation perspective, it is reasonable to argue that young people who have the intellectual capabilities identified in the framework will have an easier time acquiring specific concepts and technology skills. The power of the argument for ICT fluency, however, may lie in the fact that the more effective engagement strategy may actually be to work our way up from the bottom, with specific skills as a starting point.

Your arguments become much more persuasive when you offer the framework as an answer to a bigger question: How can we capitalize on the fact that youth increasingly have and want to use skills in this space, in order to teach the concepts underlying those skills and then push further to the build the larger intellectual capabilities?

Coming in the skills door also helps illustrate how and why schools are critical but not the only important setting that must be part of the conversation. I think we can all agree that the worst thing we could do is turn a natural skill acquisition space into a rote technology class or static curriculum. We must figure out how to integrate the application of technology skills plus the development of new skills into engaging learning contexts where the development of the underlying concepts and intellectual capabilities are embedded learning goals.

People learn these skills and concepts through project-based, applied learning opportunities, as discussed in the *Being Fluent* executive summary. Applied learning happens in school buildings and in the broader community, both during the school day and beyond. In fact we would be in deep trouble if there weren’t applied learning opportunities all over the place, since not every young person we are trying to reach can be found in school. Knowing that roughly one-third of all teens (and nearly half of all teens of color) does not graduate from high school makes it all the more critical that opportunities to learn and apply technology and other skills be available in school and out.

The question isn't whether learning opportunities outside of the traditional classroom and school day are important. The question is why these opportunities are considered beyond or even peripheral to mainstream conversations about learning and high school reform. Research by Reed Larson (2000) and his colleagues suggest that American adolescents spend only a small fraction of their days fully engaged — meaning in contexts where they consistently report high challenge, high concentration and high motivation. More often than not, the daily context for this high engagement is not school, but structured, voluntary activities like internships, extra-curricular clubs, community service projects and youth programs.

School must be at the center of the solution. But the non-school hours represent too significant an opportunity to be left out of the conversation. And non-school partners – families, community-based youth organizations, businesses, libraries, faith communities, cultural institutions – represent too significant an asset to be left cheering on the sidelines.

For example, in Seattle, Washington, low-income teens are employed as technology experts at King County branch libraries, providing computer assistance to library patrons. In San Diego, students in afterschool multimedia arts and civic engagement program work on new media journalism, digital photography, and graphic design projects while acquiring basic journalism skills. In Santa Cruz, middle school girls spend time at their local Boys and Girls Club during the summer creating computer games with interactive story narratives using Micromedia's Flash program. And every year at the Education Video Center, 60 New York City high school students learn to write, shoot and edit documentaries on issues that impact their lives as urban teens, learning media analysis and video documentary production on state-of-the-art equipment during a semester-long workshop that they earn high school credit for.

I am not trying to suggest that community programs are a silver bullet, or that we should shut down high schools and let students join youth programs. The point is that high-yield learning environments can be found or created in school and out. If the broad goal of the K-12 system is to ensure students leave school ready for the future – the changes that are necessary can be complemented by – and perhaps only fully implemented through – intentional collaboration with community partners. The vision of

community education partnerships put forth by Paul Hill and colleagues (2000) in *It Takes a City* helps articulate this goal, by recognizing that “the traditional boundaries between the public school system’s responsibilities and those of other community agencies are themselves a part of the educational problem.”

References

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