The Bermuda Open Source Technology Summit: Pausing to Look Back Rejuvenates Us for the Future

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The National Technology Leadership Initiative is an ongoing collaboration between SITE and four teacher educator associations representing the core content areas of science education (AETS), mathematics education (AMTE), English education (CEE), and social studies education (CUFA). The online journal you are currently reading represents one collaborative venture among these associations. A series of National Technology Leadership Summits (NTLS I through IV) have been another such collaborative effort.

The most recent leadership summit took place in Fall 2002 in Hamilton, Bermuda. This leadership summit added, for the first time, the editors of five educational technology journals: this journal – Contemporary Issues in Technology and Teacher Education – the Journal of Technology and Teacher Education, the Journal of Computers in Teacher Education, Computers in the Schools, and Learning and Leading With Technology.

Figure 1. An Editorial Task Force met at the Bermuda Summit (Ann Thompson, Lynn Bell, Gerry Swan, L.B. Berg, Anita McAnear, Lamont Johnson, Lajean Thomas, and Debra Sprague).
I am the acquisitions editor for *Learning & Leading With Technology* (*L&L*), the flagship publication of the International Society for Technology in Education (ISTE), and serve as the program chair for the National Educational Computing Conference (NECC). From that vantage point, I have had the opportunity to observe the growth and maturation of the field of educational technology. My participation in the summit was both an end and a beginning for myself in my ongoing role as a promoter of educational technology in schools and an explorer of its potential to improve teaching and learning.

**A JOURNEY OF PERSONAL EXPLORATION**

My journey began as I prepared for Volume 30 of *L&L*. The editorial staff decided to honor our 30th volume with a series of articles examining the past, present, and future of the field of educational technology. I had no idea how personally rejuvenating this process of reflecting and contacting and interacting with authors would be.

I am a product of Dave Moursund’s thinking. In 1974 Dave published the first issue of the *Oregon Computing Teacher*, which became *The Computing Teacher* in 1979 and later *Learning and Leading with Technology* in 1995. Dave served as editor-in-chief for a quarter century, from 1974 through 2001. He is a recipient of SITE’s *Lifetime Achievement Award*, which recognizes his seminal influence on the field of educational computing.

![Figure 2. Dave Moursund received the SITE Lifetime Achievement Award, presented at the SITE 2002 annual meeting by Glen Bull.](image)
As a result of my years with Dave, I value digging deeper to get to “second order applications” (Moursund, 2002). Dave believes in returning to the question, “What can I do with my computer to aid my thinking and problem solving that I couldn’t do without it?” The ultimate goal is for teaching and learning to improve for all students, allowing them to achieve their full potential.

I must say with a certain amount of pride that I was impressed as I looked back at earlier issues of *L&L* and *The Computing Teacher*. The authors often did dig deeply to get to second order issues. In an early issue, a computer science teacher reported that he took his students into the community to identify programs they could write for local agencies.

**BACK TO THE FUTURE**

Upon reflection, I was also discouraged by what we have failed to achieve. We have achieved a widespread and powerful infrastructure for schools and teachers and students. And yet the most common uses are administrative uses of computers and searching the Internet for information. The cost of the infrastructure has left little money for the powerful educational software we were so excited about in the early days. The powerful uses and applications, such as Logo and other learner-based tools championed by the earlier pioneers, have died out. As technology entered the mainstream in schools, its for publication in *L&L* and for conference sessions at NECC has become more difficult.

use often could be best described as … well, trivial and superficial. Identifying powerful uses

But on to the future. That infrastructure is in place (if the current financial situation allows for maintenance and gradual upgrading). The pedagogy has advanced from behavioral to more constructive (if the current emphasis on testable basic skills allows for constructive practices to continue). And teachers have some basic skills with technology (if only to do their grades and answer e-mail). The glass could be regarded as either half full or half empty.

This technology summit was a particularly appropriate one for an editorial
gathering, since the summit addressed use of copyright to encourage development of educational resources. The first U.S. Congress implemented the copyright provision of the U.S. Constitution in the Copyright Act of 1790, aptly titled, “An Act for the Encouragement of Learning.” More recently, in 1991 Richard Stallman and the Free Software Association developed a General Public License (GPL) that relies upon the copyright law to grant the right to distribute, enhance, and improve the source code for useful software (http://www.gnu.org/copyleft/gpl.html). Software distributed under GPL is sometimes termed open source software, because the source code is available to users for modification and enhancement.

The Open Source Summit in Bermuda brought together editors and other educational leaders to consider how the concepts of open source might be applicable to the world’s schools. The setting was also particularly appropriate, since Bermuda as a nation is exploring how best to integrate technology in its schools, to prepare a new generation of leadership for the future. The sunshine and beautiful surroundings added a special aura to the thinking, camaraderie, questioning, and creative process that we all experienced as we pondered the potential of open source software for education.

SUMMIT PROCEEDINGS AND OUTCOMES

The full summit proceedings are provided in this issue. The preface to the proceedings provides an overview, outlining the “Rationale for Building an Education Source Forge.” John Mergendoller and Sara Kadjer identify promising directions for implementation of open source applications in the core content areas of science, mathematics, English, and social studies in “Open Resources and Teacher Education.” An Enterprise Task Force led by Allen Glen describes how the public and private sectors might work together to implement recommendations emerging from the summit in their report, “Open Resources and Public/Private Partnerships.” Judi Harris and Kathy Swan identify steps leading to establishment of a web site for exchange of open source educational resources in “An Educational Open Source Development Model.” Ann Thompson and Lynn Bell describe ways in which an international dialog on use of open source software in K-12 education might be structured in their report, “Editorial Directions: Establishing a Dialog on Open Resources in Education.”

Two results emerged as a consensus across all task forces. The first was a
general consensus that discussion of shared resources in education should be extended to encompass the full range of educational resources and not just software. The term *open resources* was chosen to represent the full range of shared resources employed in K-12 education.

Figure 4. SITE President Niki Davis and ISTE CEO Don Knezek agreed to develop a joint SITE/ISTE General Public License for Teachers at the Open Source Summit in Bermuda.

The second outcome was an agreement to develop a General Public License for teachers to facilitate and encourage use of open resources in K-12 education. SITE and ISTE have agreed to collaborate on development of language for a General Public License for Teachers, for which we agreed we would employ the acronym of “GPL*T,” paralleling the abbreviation for the National Educational Technology Standards for Teachers (NETS*T).

**OPEN RESOURCES IN EDUCATION**

So what were the “ah ha’s!”? For some participants, it was first clarifying that we were talking about open source as a model for collaborating on development of learner-based tools and not necessarily advocating that schools shift to an open source operating system. Related to this one, was the “ah ha!” that this isn’t an entirely new idea to education and that there were different levels of “shared code.” (Code can also be shared if all users
“own” the software or programming code.) An important benefit identified for open source educational software was that longevity of the tool would be more directly related to pedagogical utility than to market forces.

Another “ah ha!” is that teachers have always shared resources and that a general public license (GPL) for shared educational resources is a good idea and would help teachers model ethical behavior to students. The editors among us realized that a GPL could allow us to share more content and shape it to make sense for our respective audiences.

Allen Glenn noted that teacher educators are in a unique position to undertake interesting projects. Past a certain point in their careers, job security is no longer an issue – university faculty and teacher educators are paid to think and do good in the realm of teaching and learning. Now with a technological infrastructure in place in schools, educational leaders have an opportunity to address issues directly concerned with teaching and learning.

Dave Moursund has urged us to dig deeper and focus on second order applications. Students and teachers need to develop expertise with educational tools, learn them thoroughly, and adapt them to new uses. Does that mean everyone needs to learn programming? I guess that depends on your definition of programming. In any event, collaboration of volunteer programmers with educators can only be a positive force for the future.

AN ONGOING DIALOG

The May 2003 issue of Learning and Leading With Technology will contain a summary of the Open Source Summit. This will not only be distributed to all of ISTE’s members, including teachers around the world who are the leaders in use of technology in education, it will also be distributed to the more than ten thousand participants who attend this year’s NECC in June. A link will direct these technology-using teachers to this issue of the CITE Journal, joining teacher educators who read and contribute to it.

The CITE Journal has a unique feature … each article has a link encouraging submission of a follow-up commentary from those who wish to continue the dialog. The next step is up to you. Read over the Summit proceedings in this issue, if any speak to you, I would encourage you to submit your own
commentary to advance the dialog.

References
