Educational Technology Advisory Council: ETAC
Position on Instructional Technology Support Staff

The Commonwealth of Massachusetts is a world leader in information technology and in education. Unfortunately, many Massachusetts schools are far behind where they should be in using educational technology. According to Technology Counts 2006, a report on educational technology across the nation, Massachusetts scored a D+ as a combined technology grade, ranking 45th among the states, with an overall score of 69. While the ratio of students for each instructional computer had improved from the previous year, Massachusetts lost significant points in the Use of Technology category for not testing students on technology, not having a virtual school[1], and not offering computer-based assessments. The state also lost points in the Capacity to Use Technology category due to the absence of technology requirements for initial teacher licensure and the absence of a technology requirement for recertification.

In business, generally, computers are replaced every three years, while in Massachusetts schools, computers are replaced on average every seven years. In business, most sources estimate one computer support technician for 50 to 150 computers. In Massachusetts schools, these staffing levels vary, but an informal survey puts them at one technology staff for 300 to 750 computers. If the public schools are to help build the workforce of the future, technology needs to be recognized and supported as an integral part of curriculum and instruction.

The Educational Technology Advisory Council (ETAC) enthusiastically supports state and local investment in technology infrastructure for one-to-one initiatives, online learning, data warehousing, decision support systems, and online assessment, but has serious concerns about the support that schools will require and receive to implement these initiatives effectively. The questions are:

• Who will teach administrators to use these technology-based tools effectively?
• Who will teach teachers to use these computers and to integrate technology into the curriculum and instructional practice?
• Who will teach the students technology competencies (IT fluency) to ensure that they are prepared to achieve and succeed in a technological society?

Teachers need two kinds of support. They need "tech support," that is, help with set up, maintenance, and troubleshooting. Tech support comes from those with skills related to hardware and networking. This support is at the survival level, a basic need. But if we are to move toward the value-added use of technology, we need ongoing, just-in-time support from expert instructional technologists, who know how to teach and how to use technology in support of teaching and learning. This second, sophisticated

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[1] Education Week's category for "virtual schools" is defined as a state funded program. MA's Virtual High School does not meet that criterion.
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level of support is the work of the Instructional Technology Specialist[2]. For technology to be used to enhance standards-based learning this support is essential. It not only ensures the appropriate use of technology but it also contributes to the development of technology competencies that result in 21st century skills for all members of the school community.

ETAC has defined a School Technology Access Readiness (STaR) chart that sets specific staffing benchmarks for districts in specific areas, such as leadership, integration, and instructional support, in addition to benchmarks for infrastructure, budget, and proficiencies. Each category is ranked into four levels of accomplishment: early technology, developing technology, proficient level, and advanced level. All districts are expected to have a district technology coordinator.

In most Massachusetts districts, the district technology coordinator is responsible for the development and implementation of the technology plan, E-Rate applications, grant- writing, coordinating professional development and technical support, procurement and purchasing, and other aspects of educational technology in the district. The instructional technology specialist works in partnership with teachers to integrate technology into the curriculum and often conducts professional development related to technology competencies.

At the STaR chart proficient level, districts should have dedicated instructional technology specialists–at least one half full time equivalent (.5 FTE) person for 30-60 staff. Technical support at the proficient level consists of at least one technical staff for 200 computers (one technical staff for 150 computers at the advanced level) to ensure same-day in-classroom technical response. At the proficient level one can expect problems that infrequently cause major disruptions in the use of technology for curriculum delivery.

How districts achieve these benchmarks in reality is discouraging. Severe budget constraints and limited funding sources often force districts to reduce technology support staff in favor or other programs. According to the most recent state education technology report, Technology in Massachusetts Schools 2004 – 2005, only 40% of the districts have a dedicated full-time technology coordinator. The staffing level of Instructional Technology Specialist is at 1 FTE for 20 to 80 instructional staff in 37% of districts; 1 FTE for 81 to 160 instructional staff in 18% of districts; 1 FTE for more than 160 instructional staff in 24% of districts; no curriculum integration support in 15% of districts; and sadly, only 7% of the districts have committed to 1 FTE for 20 or fewer instructional staff. (Note that these numbers are rounded.) This ratio is demonstrated in the second figure below, excerpted from the DOE's EdTech report[3].

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[2] We are still using the term specialist which was the title of the original license. We are willing to consider another term, especially in view of the current licensure category.

[3] (http://www.doe.mass.edu/edtech/etreport/2005.doc)

Relative to technical support, only 26% of districts have the recommended 1 full-time technical support position for every 200 computers (in contrast to 35% on 2002). Instead, the majority of technical support staff maintains an average of 413 computers.
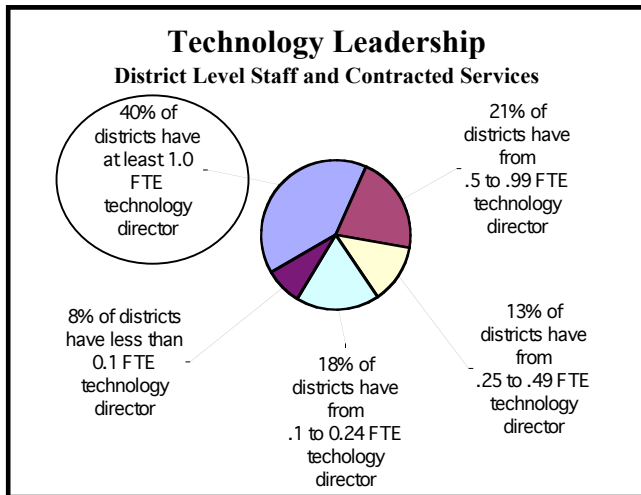
40% Districts: 1 FTE Technology Director
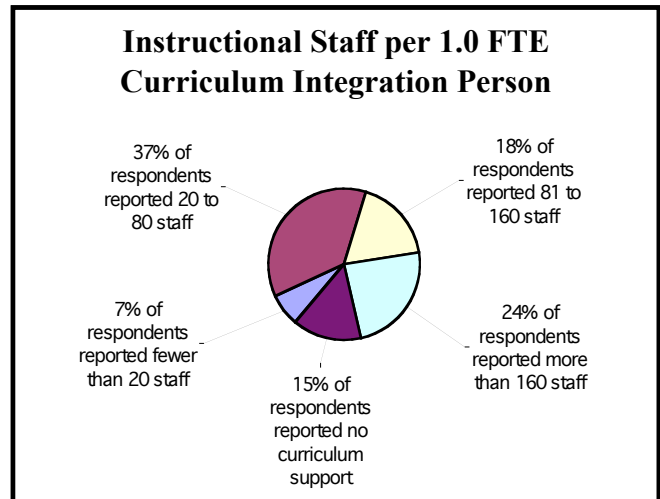
37% Districts: 20-80 to 1 FTE Instructional Technology Specialist

Several years ago, the MA Department of Education considered the role of the Instructional Technology Specialist important enough to create a license defining the qualifications needed for this pivotal position. At that time, many schools established the position of Instructional Technology Specialist to assist with valuable teacher development, technology integration, and administrative training as they implemented their school and district technology plans. Yet today, even as districts explore opportunities for using new technologies and methodologies to improve student achievement and help their districts meet accountability goals, we find that many districts are cutting these mission-critical positions.

As a result of competing demands for time and financial resources, the integration of technology is now defined as an under-funded, grass roots effort in many schools. Those who are interested take courses and obtain technology for their classrooms through grant writing and persuading the keepers of the budget that their need for technology is important. For this relatively small group of teacher-pioneers who have learned to use technology well, an independent model of implementation is fine.

But if we are to look beyond these self-limiting implementation strategies to more systemic and equitable models that afford access and opportunity for all members of the school community, we must adequately fund the Instructional Technology Specialist and Tech Support positions. Students, teachers, and schools need curricular support. Students, teachers, and schools need Instructional Technology Specialists.