

## **Education and Workforce Development: Formulating a National Investment Strategy**

### **The Issue**

In the Information Age, intellect and innovation give the United States its competitive edge and make a highly educated and skilled workforce essential. This fact is no more clearly demonstrated than in high technology fields and industries-fast becoming the driving force of the new global economy-where a four-year college degree is a basic requirement for employment and on-the-job performance expectations are absolute.

In 1999, the U.S. faces a daunting scenario. Foreign competition in high technology fields is gradually eating away our leadership of the global marketplace. At the same time, software and information content companies face a workforce skills shortage that is rising to crisis proportions. Unless there is dramatic change, the U.S. Department of Labor predicts that as many as 1.3 million U.S. high tech jobs will go unfilled in the next five years. Congress began to address immediate worker shortage issues in 1998 when it temporarily lifted restrictions on the number of foreign-born professionals allowed into the U.S. to work in high tech firms. However, this strategy only addresses the short-term needs and their still needs to be a comprehensive national education and training strategy designed to address the root causes of the crisis.

The Software & Information Industry Association believes a two-pronged approach is necessary. First, it is essential to focus national investment in the general areas of education and workforce development. Our goal should be to develop the technological knowledge and skills of students and workers to ensure that they are well prepared for the high-tech job market and contribute to the information economy.

Second, a student's overall educational achievement, as well as technology skills, can be enhanced when taught about and through technology. Effective utilization of technology in all aspects of the K-12, postsecondary and life-long learning process will help maximize opportunities for both student achievement and high performance worker output-and begin to bridge the information technology skills gap. A cornerstone of national policy in this area must be sustained investment in integrating modern technology, including educational software and digital content, Internet-ready hardware and telecommunications, into teaching, training and learning.

The barriers to achieving these twin objectives remain substantial. For example, \$30 billion is spent annually by industry on improving just the basic remedial skills of workers, not including what is necessary to close the information technology skills gap. Science and engineering degrees are down 28 percent from a high of 50,000 in 1986 to 36,000 in 1994. And while the technology infrastructure gap between the K-12 "haves" and "have-nots" is beginning to close, there remains a huge gulf between the two. Slightly fewer than 10 percent of public schools nationwide are considered "high tech" based on the most current computer-student ratios, classroom Internet access and the number of networked schools. A striking 80 percent of U.S. teachers are insufficiently prepared to take full advantage of technology in their classrooms.

### **SIIA Interest**

The software and information industries bear the brunt of the skills shortage crisis. Together, they employ close to 3 million professionals who develop the innovative products and services that are defining the world in which we live and work. As technology gains propel forward, demand for-and the cost of-skilled workers continues to rise. The result reflects back negatively for consumers, who potentially face fewer product choices and higher prices.

Software and digital content providers also develop the products and services designed to improve the learning process. The market for instructional software and digital content used at the elementary, secondary and postsecondary levels-estimated in 1999 to be \$5.4 billion-is largely built upon public funding, thereby placing a premium on a comprehensive national investment strategy.

### **SIIA Position**

In order to implement this two-pronged investment approach, SIIA supports policy measures aimed at improving K-16 and life-long educational achievement and increasing the supply of qualified workers in high tech fields and industries. Likewise, SIIA seeks to meet this need by also growing the market for digital education and training content through policy adaptations at the local, state, federal and international levels. The association advocates the following objectives:

- Promote a dynamic policy environment that enables full market access to digitally developed, high-quality education and training content.
- Improve U.S. high tech workforce training opportunities through specifically tailored federal and state legislation.
- Support the liberalization of immigration laws to increase the number of high-skilled foreign workers allowed into the U.S.
- Increase federal and state funding for K-16 and life-long learning technology products and services, technical support and professional development, and promote initiatives that limit regulatory barriers to marketplace entry.
- Support measures that protect the copyrights of digital distance learning products and services and ensure that educators understand their rights and duties under the law.

### **Additional Information**

For additional information, please visit SIIA's Web site at <http://www.sii.net>, or contact Mark Schneiderman at (202) 452-1600, ext. 329, or [marks@sii.net](mailto:marks@sii.net) or David LeDuc at (202) 452-1600, ext. 352, or [dleduc@sii.net](mailto:dleduc@sii.net).