Section 6
Human Resources Development

1. IT Education in Public Schools

The installation rate of educational computers in public schools was one for 11.1 pupils in fiscal 2001. In addition, most of the public schools are now connected to the Internet with the connection rate jumping from 57.4% in fiscal 1999 to 97.9% in fiscal 2001.

The proportion of public school teachers who can operate computers was 84.9% in fiscal 2001. At the same time, the proportion of teachers who can teach computer classes became 47.4% in fiscal 2001.

2. Development of IT Experts

(1) Necessity for IT-capable human resources in companies

Since IT has come to be used widely and frequently in corporate activities, such as e-commerce and introduction of various information systems, it has become increasingly important to develop and secure human resources that can utilize IT in order to maintain competitiveness in corporate activities. Today, 42.0% of companies recognize lack of people capable of network administration and management as a problem in using information and communications networks (it is a reason for not using information and communications networks in the case of companies that do not use such networks) (**Figure 2-10**). The most commonly implemented IT education for employees in companies was "external IT educational/training programs" with 25.3% and "in-house IT educational/training programs" with 21.2%. However, the proportion of companies that had not implemented any IT education for employees was the highest at 42.6% (**Figure 2-11**).

(2) Development of IT experts in universities, etc.

In order to respond to the needs for IT experts and to maintain/increase Japan's international competitiveness, there are calls for developing people with advanced, expert IT knowledge and technology even in university education. According to a survey by the Ministry of Education, Culture, Sports, Science and Technology (MEXT), the number of people who acquired a master's degree or a doctor's degree in an IT-related field was 14,808 and 1,663, respectively, in fiscal 2001.

Figure 2-10: Problems Companies Face in Using Information and Communications Networks
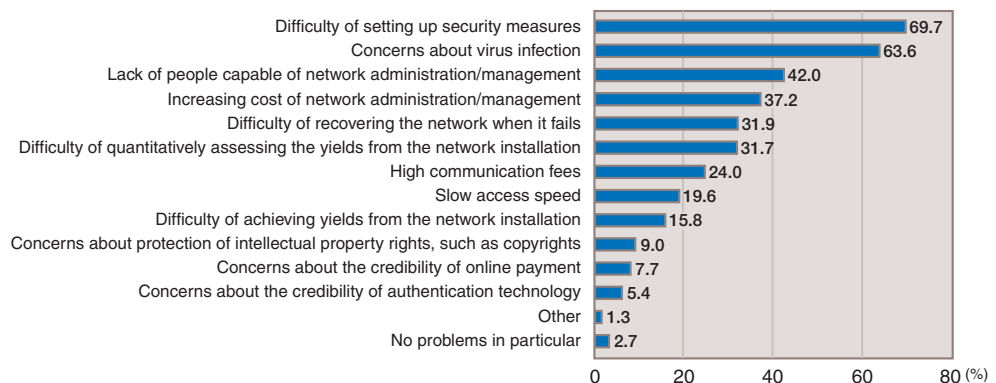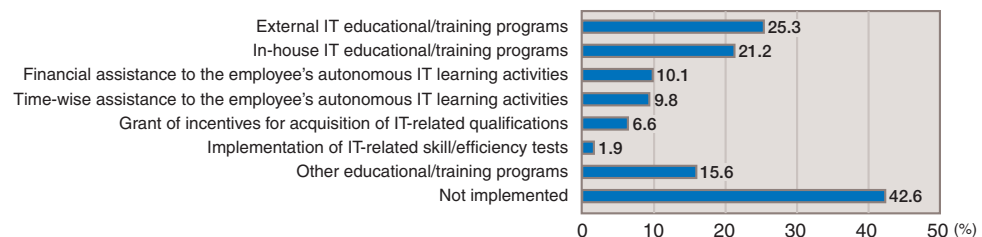

	(%)
Difficulty of setting up security measures	69.7
Concerns about virus infection	63.6
Lack of people capable of network administration/management	42.0
Increasing cost of network administration/management	37.2
Difficulty of recovering the network when it fails	31.9
Difficulty of quantitatively assessing the yields from the network installation	31.7
High communication fees	24.0
Slow access speed	19.6
Difficulty of achieving yields from the network installation	15.8
Concerns about protection of intellectual property rights, such as copyrights	9.0
Concerns about the credibility of online payment	7.7
Concerns about the credibility of authentication technology	5.4
Other	1.3
No problems in particular	2.7

Figure: 2-11: Implementation Status of IT Education for Employees in Companies

	(%)
External IT educational/training programs	25.3
In-house IT educational/training programs	21.2
Financial assistance to the employee's autonomous IT learning activities	10.1
Time-wise assistance to the employee's autonomous IT learning activities	9.8
Grant of incentives for acquisition of IT-related qualifications	6.6
Implementation of IT-related skill/efficiency tests	1.9
Other educational/training programs	15.6
Not implemented	42.6

Source (Figures 2-10&2-11): "Communications Usage Trend Survey in 2002," MPHPT.