

**State of E-Business Readiness Report  
Private Sector Educational Services (PSES) in Canada**

**Final Report**

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for the  
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## **State of e-Business Readiness Report: Private Sector Educational Services**

### **Executive Summary**

This survey was undertaken by the Ontario Society for Training & Development (OSTD) to obtain a better understanding of what the advent of the Internet, e-business and e-learning have meant for small- and medium-sized (SMEs) private sector firms engaged in the delivery of education and training services in Canada.

### ***The Firms Responding***

Eighty-eight percent of respondents were decision-makers: owners or senior managers.

The organizations represented in this survey are mainly very small (86% have fewer than 10 employees), Ontario-based (77%), and serving the Canadian and Ontario markets (65% and 63%, respectively). The primary market segments served are the corporate (90%) and government (76%). Some 50% of the firms export products and services to the United States and about one in four export to the European Union.

A majority of the organizations offer a core group of some seven common training products and services. However, there is a wide range of products and services provided beyond the common ones.

### ***Information and Communications Technologies (ICT) used***

The use of personal computers (100%), e-mail (98%) and the Internet (96%) is very high by the firms included in this survey. Workplace access to ICTs is correspondingly high, with access in the 76 – 100% range, reported by 98% of the respondents for personal computers and e-mail, and 96% for the Internet. Forty-one percent report workplace access to laptops in the 76 – 100% range. A comparison of results to Statistics Canada's Survey of Electronic Commerce and Technology 2002<sup>1</sup> indicates that this group of training and development firms' utilization of ICT is slightly higher than that reported for the general private sector educational services (PSES).

Seventy-seven percent of firms reported having their own web site, a higher proportion than reported by the Net Impact Study Canada<sup>2</sup> for the PSES sector.

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<sup>1</sup> Statistics Canada, *Survey of Electronic Commerce and Technology 2002*, Ottawa: April 2003.

<sup>2</sup> Canadian e-Business Initiative, *Net Impact Study Canada: The SME Experience. A Preliminary Report*, November 2002, p. 1. Available online: <http://www.netimpactstudy.com/ca/pdf/canada-en.pdf>

Eighty-four percent of the respondents report that their firms have broadband / high speed Internet access. Compared to Statistics Canada's survey data<sup>3</sup> for 2002, this group of training and development firms' utilization of broadband / high speed Internet connections is considerably above that reported for the general PSES sector and the private sector. The use of regular dial-up modems is, by comparison, considerably lower.

### ***e-Business / e-Commerce***

Forty-four percent of respondents indicated that their firms engaged in e-business compared to 50% of the Net Impact Canada Study<sup>4</sup> sample who indicated that they were currently using or implementing Internet business solutions (IBS). Customer development and e-marketing (72%) was the main IBS implemented followed by customer service and support (56%). Forty-seven percent reported implementing employee training via e-learning.

Seventy percent of the respondents who reported that their organizations were engaged in e-business also indicated that their organization had an e-commerce capability. The main reasons given by a majority of respondents for conducting business on the Internet were to: *reach / attract new customers; remain competitive with other organizations; provide better coordination with customers / suppliers; and, improved revenue / more sales.*

The top three barriers to using e-business reported were a cluster consisting of *time required to implement, cost of new infrastructure, and uncertain return on investment.* These are the same barriers reported in the Net Impact<sup>5</sup> study for SME firms having from 50 – 99 employees. Only 35% of respondents overall identified *products / services not appropriate* as a barrier to the adoption of IBS in this study compared to 60% who indicated this as a barrier in the Industry Canada PSES Survey<sup>6</sup>. However, for non-adopters this is the main barrier identified by 57% of respondents.

In common with the Net Impact study<sup>7</sup>, this study found that only a few firms used tangible metrics to measure the performance of IBS.

Three out of four firms responding have no immediate plans to increase or develop e-business capabilities.

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<sup>3</sup> *Survey of Electronic Commerce and Technology 2002*

<sup>4</sup> *Net Impact Study Canada*

<sup>5</sup> *Ibid*

<sup>6</sup> Industry Canada E-commerce Overview Series, *Private Sector Educational Services in Canada*, Industry Canada, February 2002. Available online: [http://strategis.ic.gc.ca/pics/ss/eservices\\_e.pdf](http://strategis.ic.gc.ca/pics/ss/eservices_e.pdf)

<sup>7</sup> *Net Impact Study Canada*

## **e-Learning**

Forty-five percent of respondents indicated that their organizations sold e-learning products and services and 53% reported receiving more than 50% of their gross revenues from the sale of these products and services indicating that these firms are mainly to exclusively involved in offering e-learning products and services. This represents about 24% of the firms responding.

Sixty-eight percent of the organizations involved in e-learning classified themselves as learning content providers while the remaining 32% were divided evenly between learning services and learning infrastructure solutions with 16% each.

The top three reasons / benefits reported for offering e-learning products and services were: *market for e-learning has strong projected growth: to reach / attract new customers*; and, *for improved revenue / more sales*.

For adopters of e-learning, the top two actual barriers are *cost of developing e-learning* and *need to retrain / hire staff*. Eighty-eight percent of non-adopters perceive the *cost of developing e-learning products / services* as the greatest barrier to becoming involved in e-learning. Other barriers perceived as important by some 50% of respondents include: *lack of in-house expertise*; *prefer to maintain current products / services*; and, *lack of obvious market opportunities*.

Sixty-eight percent of those responding had no immediate plans to increase or develop their e-learning capabilities.

## **Initiatives to Stimulate Investment and Capacity Building**

Of available programs for assisting business, only MERX and Strategis were known to a majority of respondents and only 35% of respondents have actually participated in / benefited from MERX and only 20% have used Strategis.

Initiatives selected by respondents as most likely to stimulate investment and building capacity by Canadian commercial education and training firms were: *program(s) to subsidize employee training / retraining*; *a Canadian commercial education and training sector online portal*; *a Canada-wide industry association*; *better access to capital*; and, *a national broadband connectivity / infrastructure program*.

## ***Conclusions and Recommendations***

It is rather startling that 76% of the education and training firms responding to this survey have no immediate plans to develop / enhance their e-business capabilities and 68% have no current plans to develop / enhance their e-learning capabilities. This is an obvious challenge that must be addressed by initiatives aimed at increasing awareness and building capacity for this sector.

### **Recommendation 1**

It is recommended that the Canadian Society for Training & Development (CSTD) take a leadership role, in cooperation with Industry Canada and other stakeholders, in finding ways to advance the implementation of the following initiatives in the Canadian private sector educational services (PSES) sector:

- program(s) to subsidize employee training / retraining;
- a Canadian commercial education and training sector online portal;
- a Canada-wide industry association;
- better access to capital; and,
- a national broadband connectivity / infrastructure program.

### **Recommendation 2**

It is recommended that a series of firm-level case studies of e-business and e-learning adopters be conducted as a follow-up to this survey to provide a more in-depth look at some of the key findings with a view to determining how to encourage more PSES firms to adopt e-business and e-learning solutions.

## Introduction

This study was undertaken by the Ontario Society for Training & Development (OSTD) under a contract with Industry Canada, Service Industries Branch.

The purpose of the project was to obtain a better understanding of what the advent of the Internet and e-business have meant for small- and medium-sized private sector firms engaged in the delivery of education and training services in Canada.

Another focus of the study was to examine how the sector is adapting and changing in response to the challenge of providing products and services for the e-learning / e-training marketplace.

Phase 1 of the project consisted of a literature and document review and interviews with a number of key informants. The deliverable was a summary report reviewing the Canadian e-business context, private sector educational services (PSES) in Canada and their use of the Internet, e-business and e-commerce applications, and an overview of the e-learning marketplace.

Phase 2 used the results of Phase 1 to develop a questionnaire to assess:

- the extent to which PSES firms are already involved in e-commerce and e-learning and the perceived benefits of their involvement;
- the readiness of PSES firms to increase their commitment to invest resources in developing e-commerce and e-learning capabilities, products and services;
- the opportunities / threats that PSES firms perceive related to their participation in e-commerce and / or e-learning; and,
- respondents' perceptions regarding the support services that are being provided at the firm and sector level by the various levels of government and industry associations in support of the development of e-commerce and e-learning capabilities and the promotion of Canada's firms and the sector's products and services nationally and internationally.

The resulting survey, *Private Sector Educational Services E-Business Questionnaire* consisted of 66 questions and was made available online. Potential respondents were drawn from the OSTD's database of some 425 independent training firms, both OSTD members and potential members, as well as from some related organizations. Potential respondents were notified by e-mail on February 6, 2003. Two follow-up e-mail prompts, on February 18 and February 27, were sent encouraging people to complete the questionnaire. The survey was closed on March 12, 2003.



## Methodology

A 66-question survey (Appendix A), divided into four main parts, was developed. Part one asked for basic information about the organizations and their use of information and communications technologies (ICT). Part two asked about their use of e-business tools and strategies and their capacity for e-commerce. Part three asked about the organizations' use of e-learning products, services and strategies. A final section, part four, asked respondents about their organizations' knowledge about and participation in various capacity-building services and programs offered by the various levels of government and industry associations. They were then asked for their recommendations for programs and services that, in their opinion, would stimulate investment and capacity building for e-business and e-learning by the Canadian commercial education and training sector.

A number of questions were adaptations of questions from existing surveys including the *Electronic Commerce and Technology Survey*<sup>8</sup> (Statistics Canada), the *Net Impact Study Canada*<sup>9</sup> and the Industry Canada, *E-commerce Overview Series*<sup>10</sup> to provide a baseline for comparing results. The survey contained a mixture of multiple choice, multiple response and open-ended questions.

The survey was translated into French.

Both the English and French versions of the survey were loaded into the Assess online survey tool, provided by The Training Registry (<http://assess.trainingregistry.com/>).

“Pop-up” definitions (Appendix B) were provided for all technical and specialized terms used in the survey.

## The Sample

An e-mail notification was sent out to consultant members of the Ontario Society for Training and Development (OSTD) and to some related groups in the training and education sector in other parts of Canada. There were two follow-up reminders to prompt people to complete the survey.

One hundred and five surveys were submitted. Of these, fourteen respondents indicated that they were not commercial education and training firms, two did not provide complete identification, and five others were incomplete or duplicate surveys, yielding eighty-four completed surveys. Only two of the completed

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<sup>8</sup> Statistics Canada, Science, Innovation and Electronic Information Division, *Electronic Commerce and Technology 2000*. Available online: <http://www.statcan.ca/english/concepts/pdf/science/0501-00-e.pdf>

<sup>9</sup> Canadian e-Business Initiative, *Net Impact Study Canada: The SME Experience. A Preliminary Report*, November 2002, p. 1. Available online: <http://www.netimpactstudy.com/ca/pdf/canada-en.pdf>

<sup>10</sup> Industry Canada E-commerce Overview Series, *Private Sector Educational Services in Canada*, Industry Canada, February 2002. Available online: [http://strategis.ic.gc.ca/pics/ss/eservices\\_e.pdf](http://strategis.ic.gc.ca/pics/ss/eservices_e.pdf)

surveys were in French. Given an estimated potential sample of some 450 to 500, this represented a return rate in the range of 16 to 18%.

### ***The Survey Sample Responding***

The data reported in this survey are from a volunteer “sample of opportunity” representing 84 respondents from firms of varying sizes, the predominant being very small ones with less than 10 employees. As such the data cannot be subjected to statistical comparisons with other data sets derived on the basis of a statistical sampling algorithm (e.g., the Net Impact Study Canada<sup>11</sup>). The data are skewed towards very small firms (1 - 9 full-time employees) and towards firms located in Ontario. The results, therefore, reflect a snapshot of these firms which may or may not be representative of the larger population of private sector firms engaged in the delivery of education and training services in Canada. However, given the large sample of very small firms, the sample is probably quite representative of this sub-sector.

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<sup>11</sup> Canadian e-Business Initiative, *Net Impact Study Canada: The SME Experience. A Preliminary Report*, November 2002, p. 1. Available online: <http://www.netimpactstudy.com/ca/pdf/canada-en.pdf>

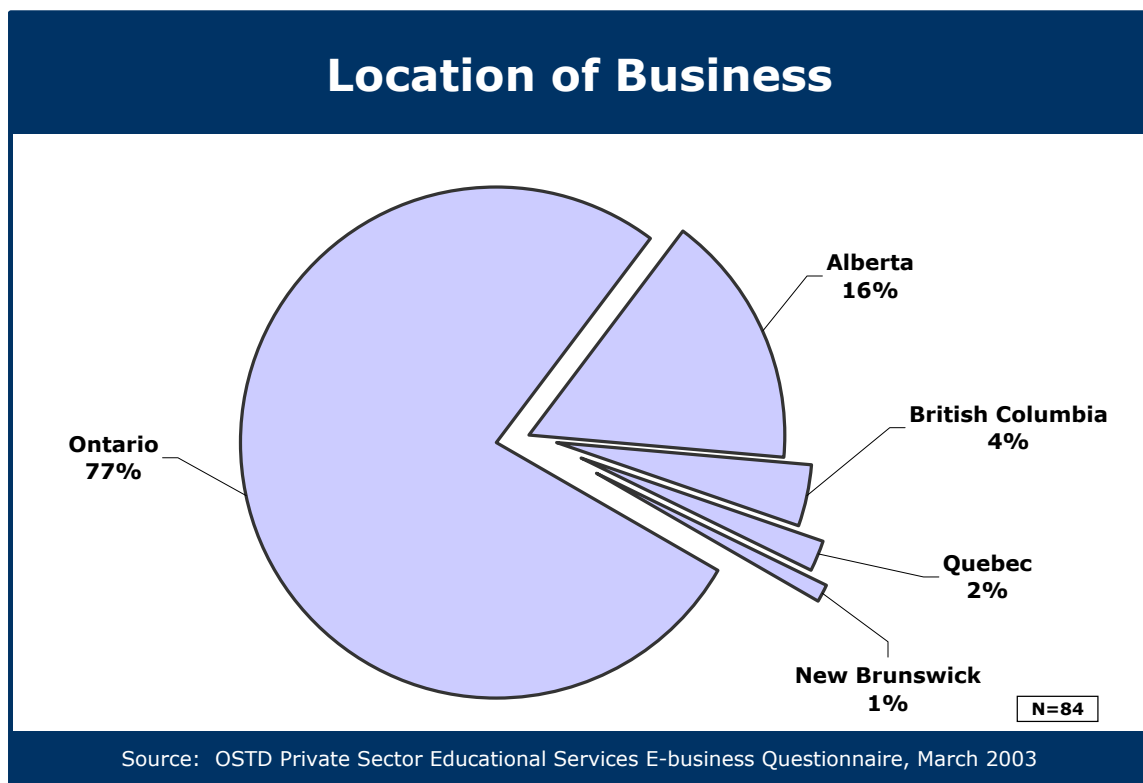
## A Profile of the Respondents and their Organizations

Eighty-eight percent of the respondents were owners or senior managers, the decision makers in their organization.

### *Location of Business*

Sixty-five of the respondents were from Ontario, thirteen were from Alberta, three were from British Columbia, two were from Quebec and one was from New Brunswick. Figure 1 illustrates the percentage distribution of the respondents.

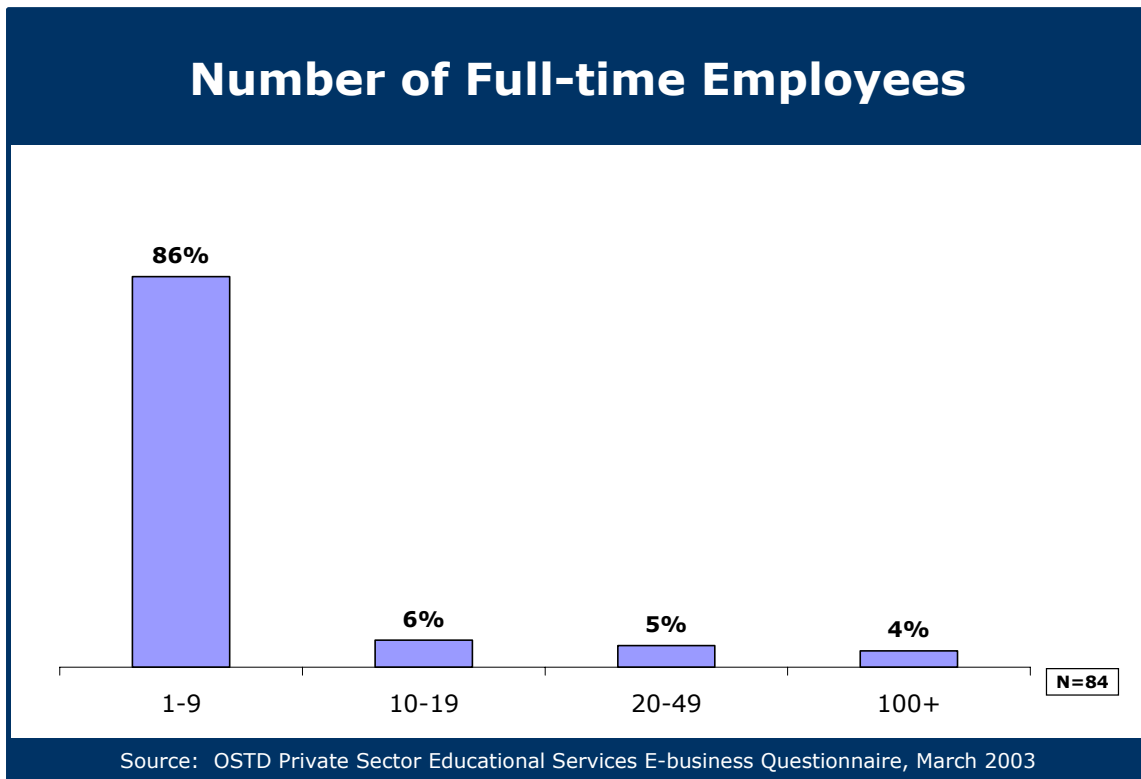
**Figure 1: Location of Business**



### **Number of Employees**

Eighty-six percent of the respondents represented organizations having from 1 to 9 full-time employees as shown in Figure 2. Six percent of the organizations had 10 – 19 full-time employees; 5% had 20 – 49; and, 4% reported having over 100 full-time employees.

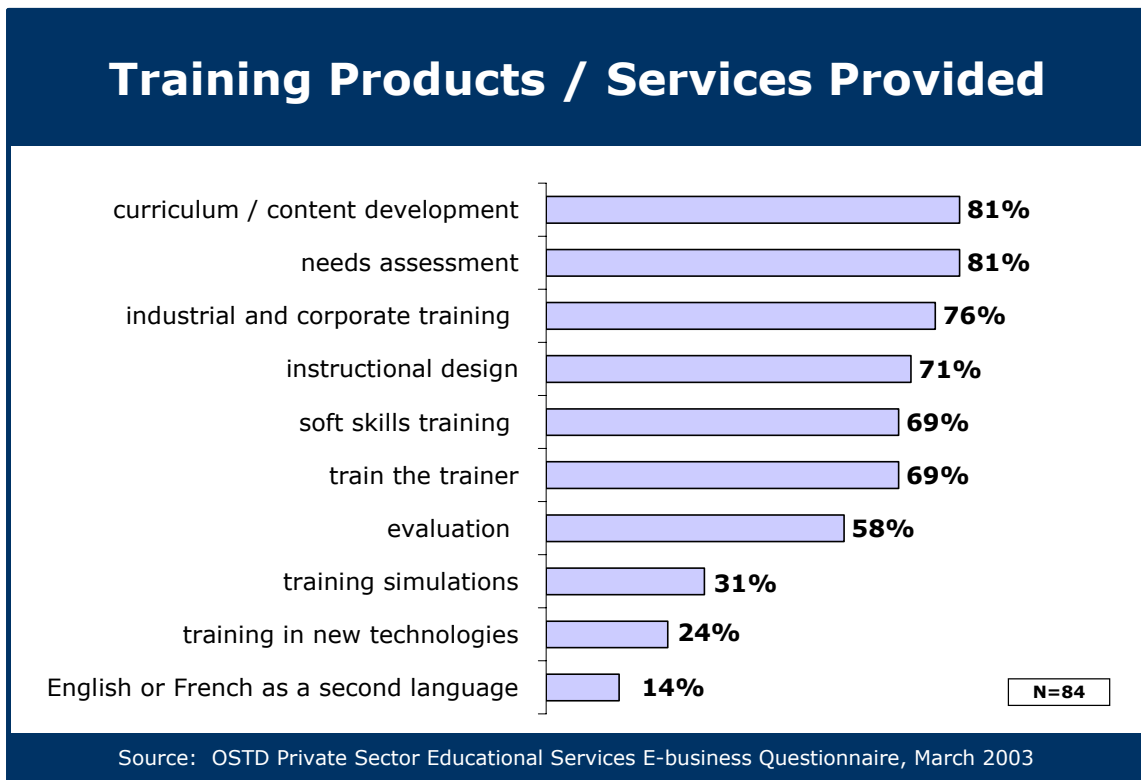
**Figure 2: Number of Full-time Employees**



### **Products and Services Provided**

A majority of the organizations offered a similar range of training products and services as indicated in Figure 3. Those offered by over 50% of the organizations included, in descending order of frequency, curriculum / content development (81%), needs assessment (81%), industrial and corporate training (76%), instructional design (71%), soft skills training (69%), train the trainer (69%), and evaluation (58%).

**Figure 3: Training Products and Services Provided**



### ***Other Training Products or Services Provided***

An open-ended question asked respondents to list any other product(s) or service(s) not listed above that their organizations offered. Some 48% of respondents listed a wide range of additional products and services indicating a considerable diversity in the specializations of the training and development sector. A summary of responses, classified in arbitrary categories, is provided in Table 1.

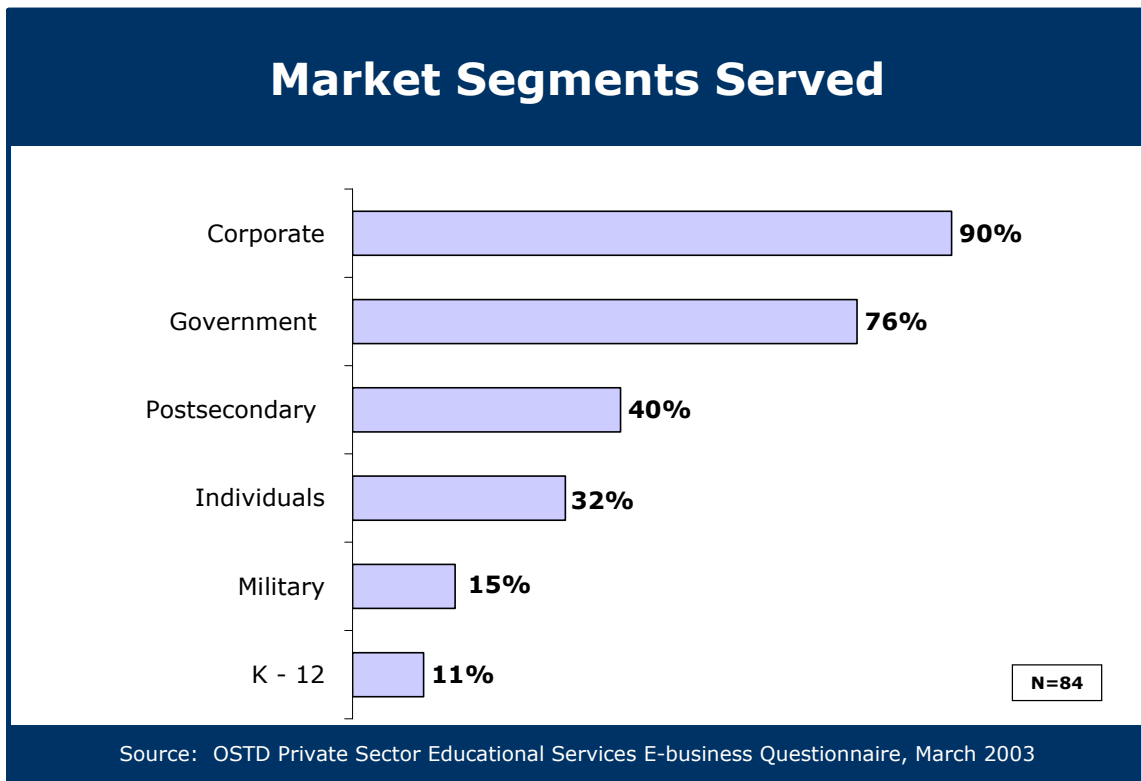
**Table 1: Other Training Products or Services Provided**

<b>Other Training Products / Services Provided</b>	<b>Number of Responses</b>
e-learning products / services	11
Miscellaneous single responses (e.g. Project management, Adult Literacy, testing, etc.)	8
Coaching / facilitation consulting / training	6
Organizational change / development	5
Human resource consulting / services	5
Management / leadership consulting / training	5
Strategic planning	4
Job task analysis	2
Performance management	2
Writing, technical manuals / documentation	2
Educational software development	2

### **Market Segments Served**

The corporate and government markets were indicated as the major markets (Figure 4) being served by 90% and 76% of respondents respectively. Forty percent indicated postsecondary as a market, 32% individuals, 15% the military and 11% the K-12 sector. Other markets mentioned by more than one respondent included, in descending order of frequency: not for profit, other training organizations, and hospitals/health care. Others mentioned were crown corporations, utilities, oil and gas and professional associations.

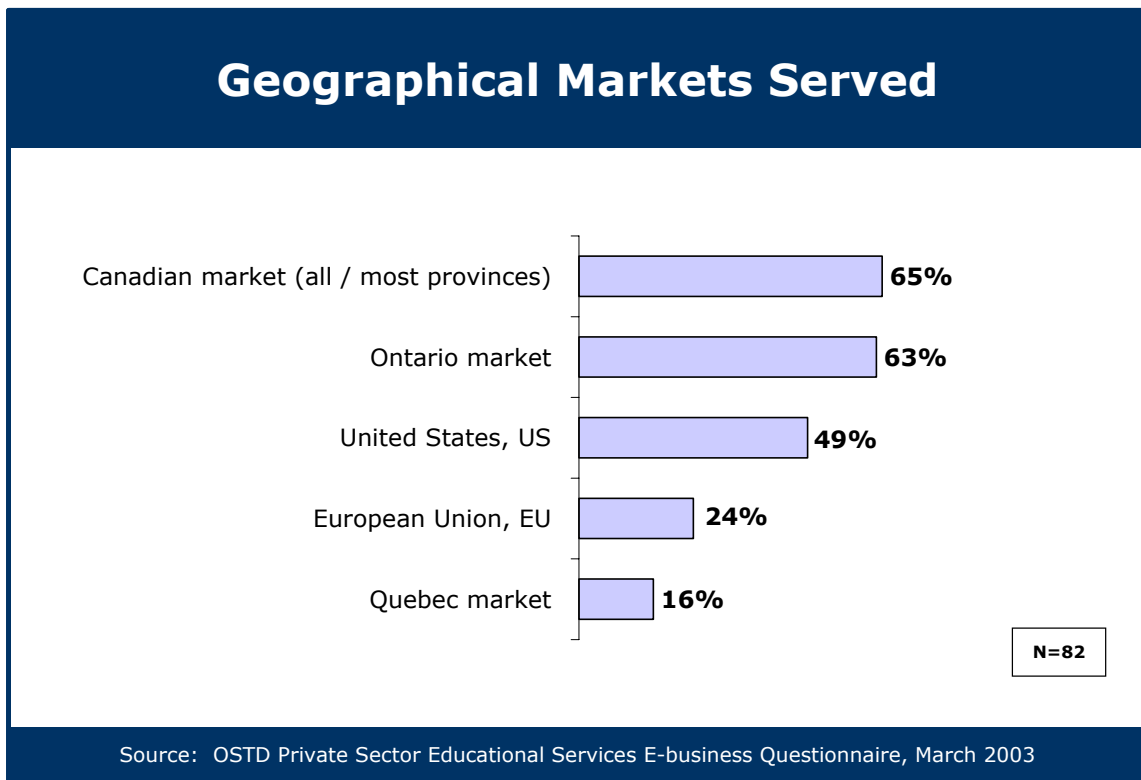
**Figure 4: Market Segments Served**



### **Geographical Market**

The Canadian and Ontario markets were indicated by some 65% and 63% of respondents respectively as their major market. This was followed by the United States (49%), European Union (24%), and Quebec (16%) as indicated in Figure 5. Other markets mentioned by fifteen of the respondents included, in descending order of frequency: Asian, Caribbean, Australia/New Zealand, and Alberta.

**Figure 5: Geographical Markets Served**

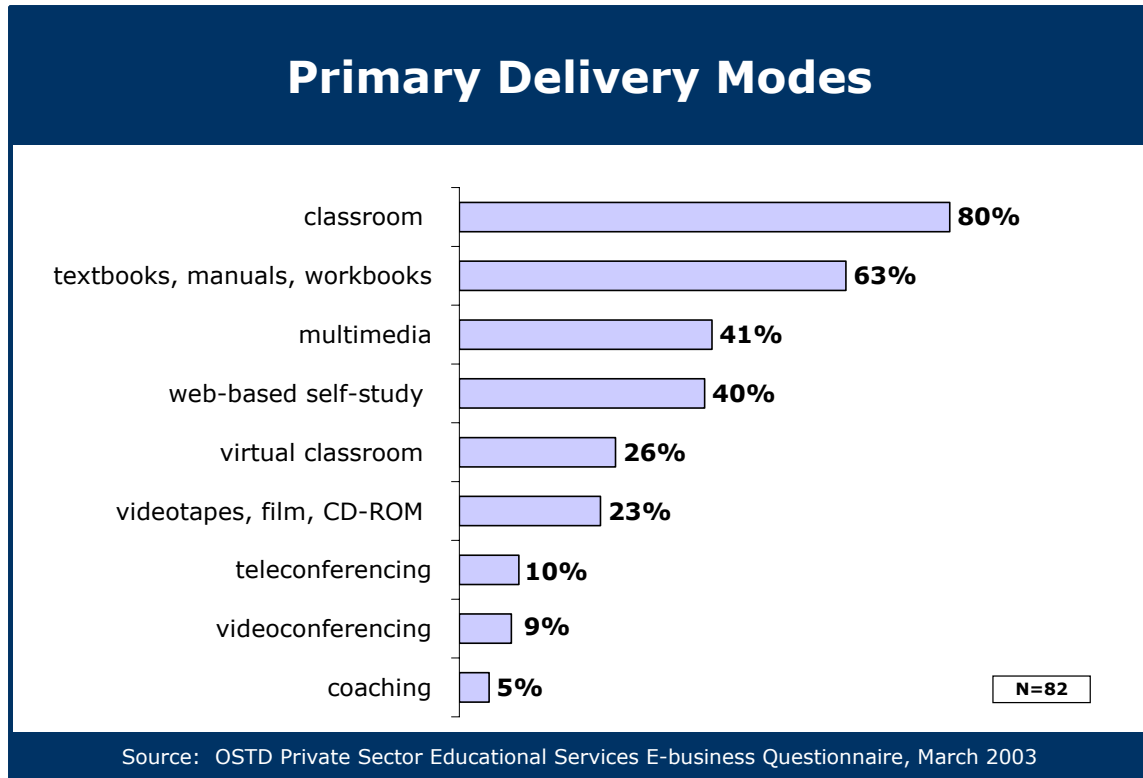




### **Primary Delivery Modes for Products and Services**

Instructor-led classroom training was the primary delivery mode indicated by some 80% of respondents (Figure 6). Textbooks, manuals, workbooks were second at 63% and followed by multimedia-interactive (41%), web-based self-study (40%), virtual classroom (26%), videotapes, CD-ROM, DVD (23%), teleconferencing (10%) and videoconferencing (9%).

**Figure 6: Primary Delivery Modes**

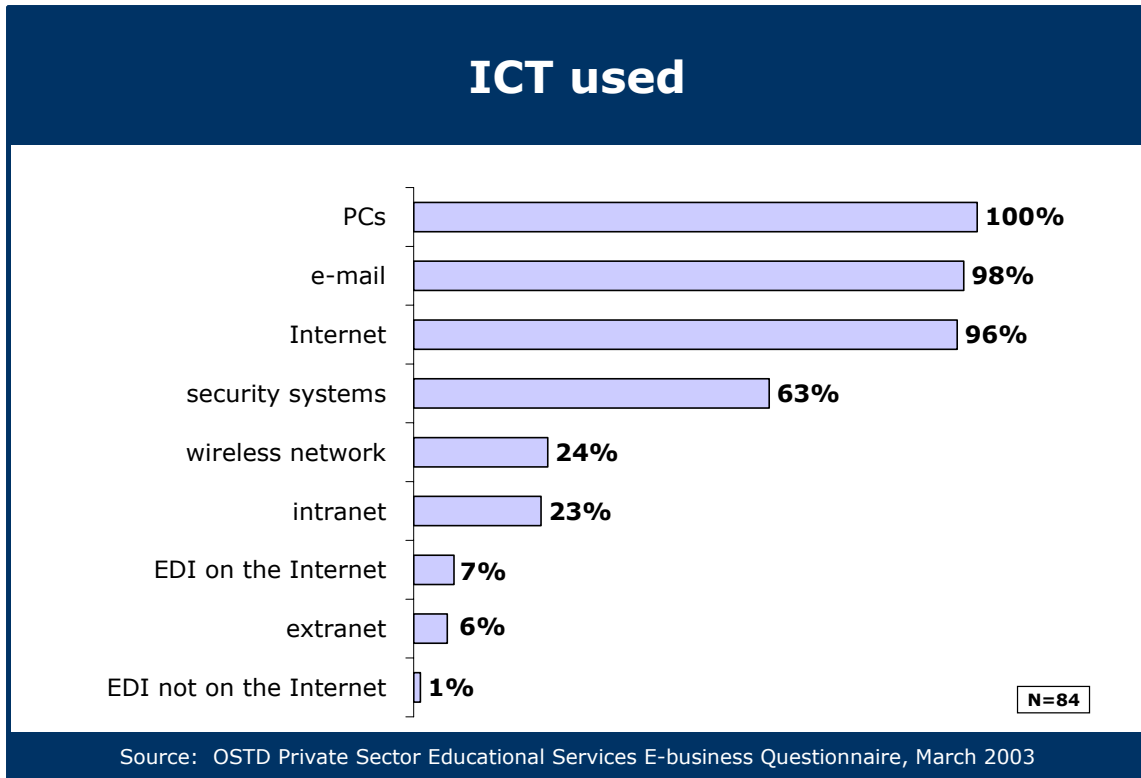


Twelve respondents indicated they used other delivery modes. Four respondents (5%) indicated coaching as a primary delivery mode (included in Figure 6). Others mentioned included: mentoring, workshops, satellite television, e-mail interaction and self-study.

### **Information and Communications Technologies (ICT) used**

All respondents reported using personal computers, 98% reported using e-mail and 96% using the Internet. Some 63% use network / information security technology. About one in four have a wireless network or intranet. Fewer than 10% of respondents report using Electronic Data Interchange (EDI) or having an extranet (Figure 7).

**Figure 7: Information and Communications Technologies Used**

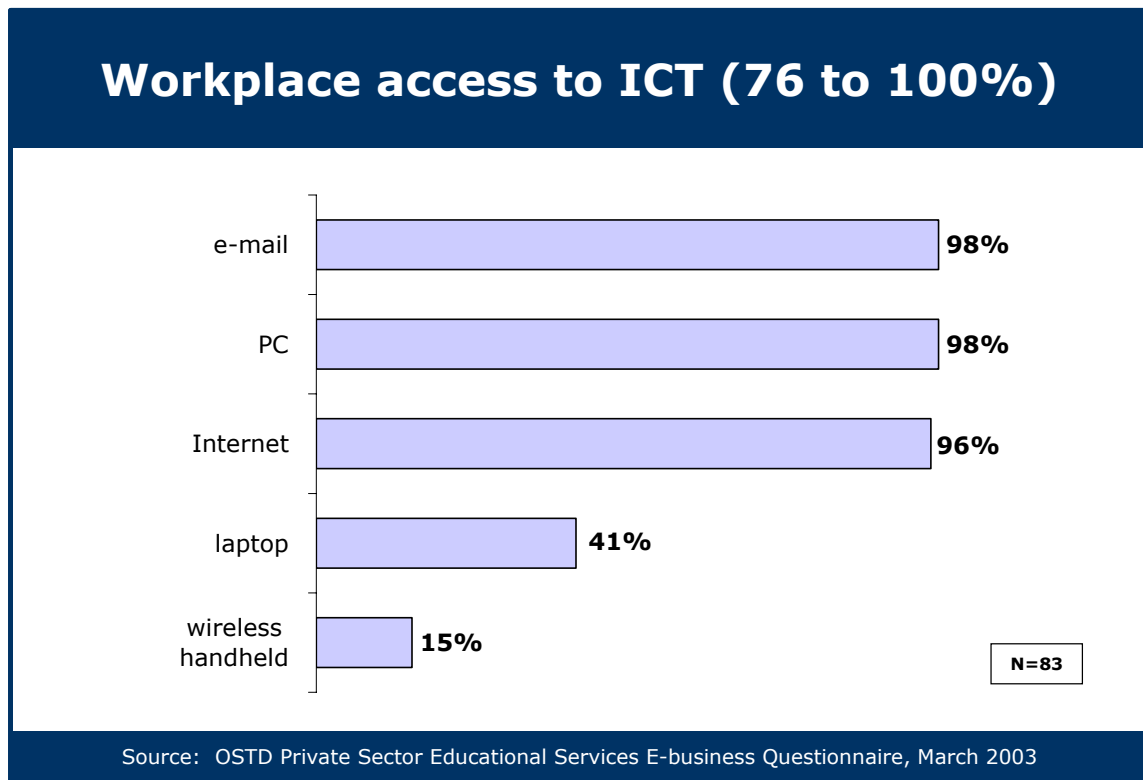


An open-ended question asked respondents to list any other ICT not listed above that their organization used. Six respondents replied. PDAs / handheld devices were mentioned by two respondents. Multimedia authoring applications, outsourced application services and a web site were mentioned by individual respondents.

### **Workplace Access to ICTs**

Employees with direct workplace access to PCs, e-mail and the Internet were reported to be almost all in the 76 – 100% range. Some 40% of respondents reported regular laptop usage by employees for work in the 76 to 100% range and 15% reported wireless usage in that range. Figure 8 shows the percentage of respondents reporting direct workplace access to the various ICT in the 76 – 100% range.

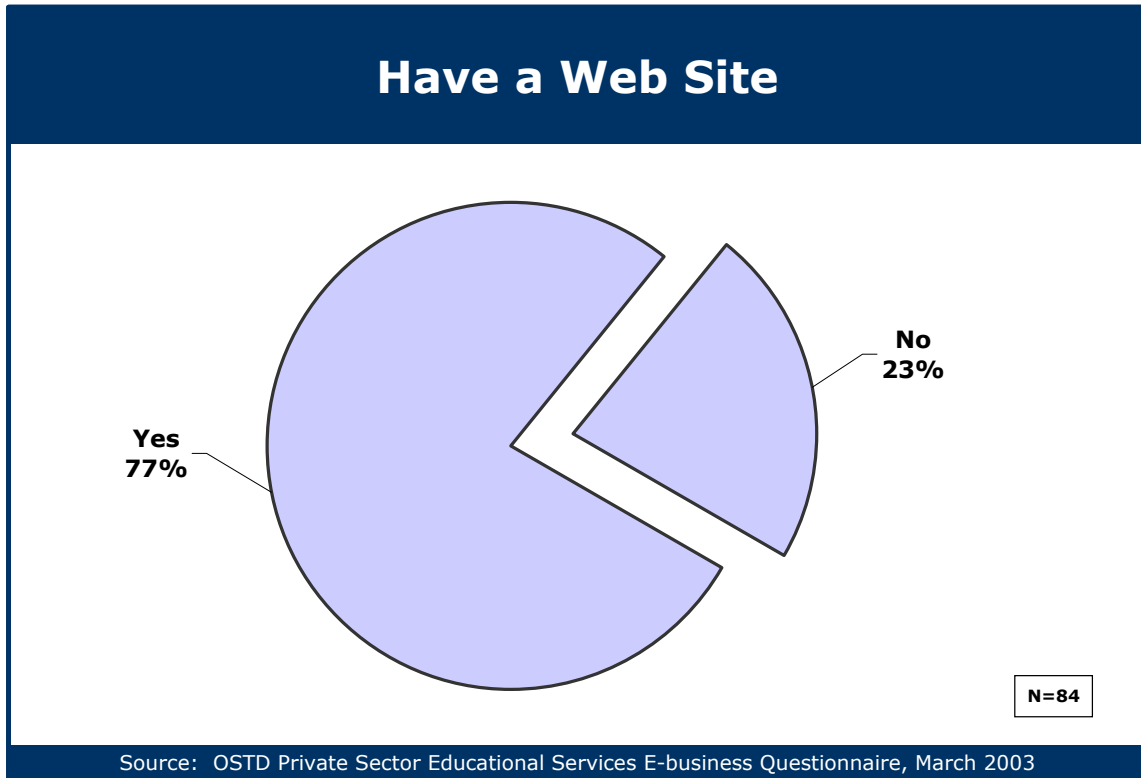
**Figure 8: Workplace Access to ICT in the 76 – 100% range**



### **Organizations with a Web Site**

Seventy-seven percent of respondents reported that their organization had its own web site (Figure 9).

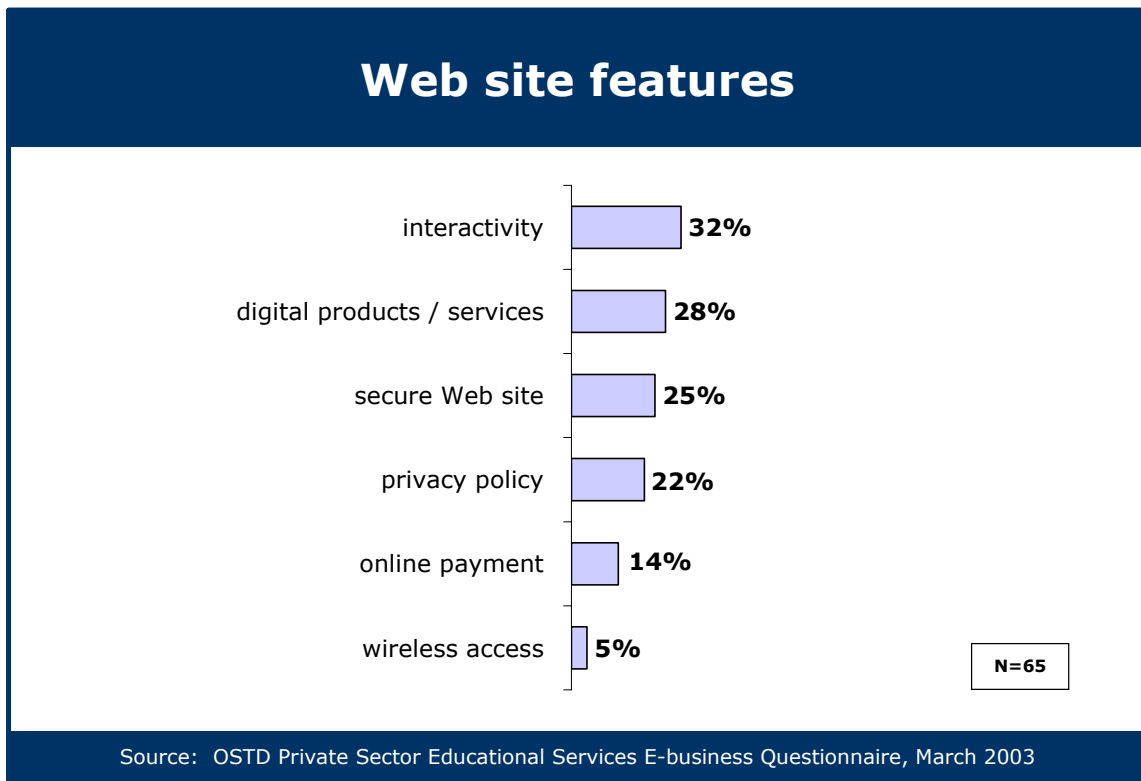
**Figure 9: Percent of Organizations with a Web Site**



## Web Site Features

Features offered on organizations' web sites included: interactivity (32%), digital products or services (28%), secure web site (25%), privacy policy statement (22%), online payment (14%) and wireless access (5%) as indicated in Figure 10. Fourteen respondents mentioned other features provided on their organizations' web sites including: secure client communication, product demonstrations, online newsletter, search engine, course registration, and online assessment.

**Figure 10: Web Site Features**

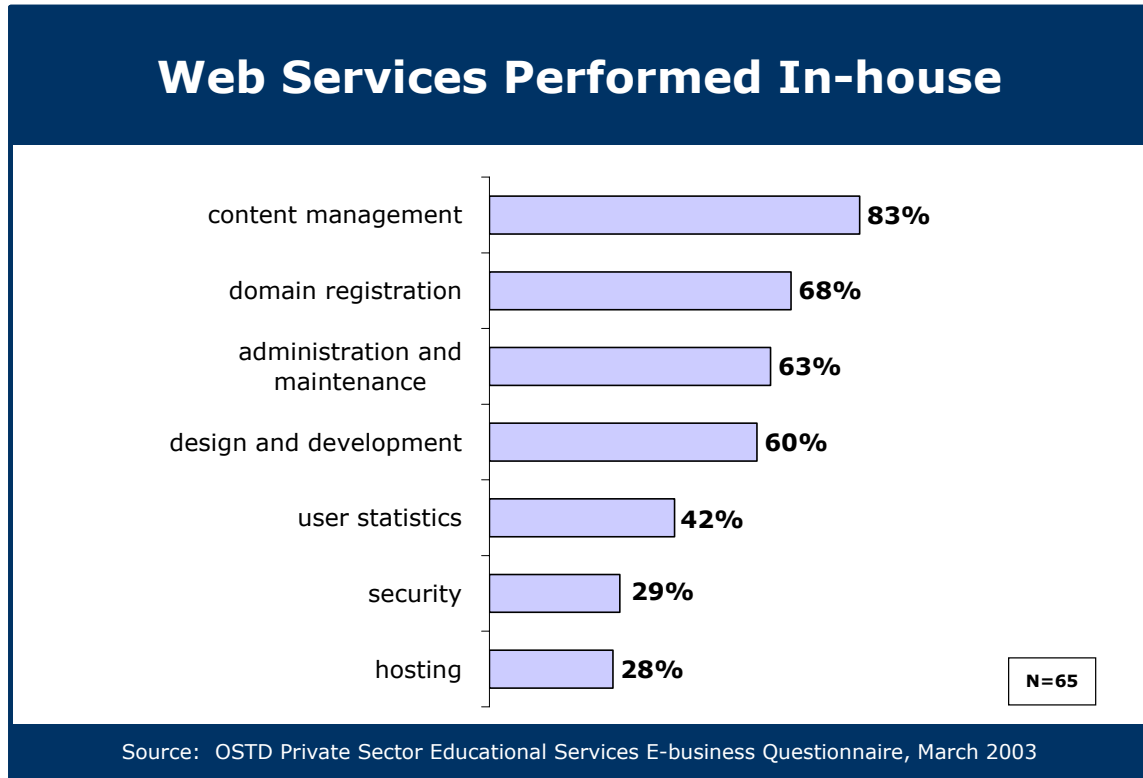


These results suggest that the majority of web sites are informational (electronic brochure) in nature and are not primarily designed with an e-commerce goal.

### **Web Services Performed In-house**

Figure 11 shows the percentage of respondents indicating various web services performed in-house.

**Figure 11: Web Services Performed In-house**



Note that most organizations (83%) do their own content management. Other functions performed in-house by more than 60% of respondents include domain name registration (68%), site administration and maintenance (63%), and web site design and development (60%). Only about 30% host their own web site.

### ***Costs of Designing and Developing a Web Site***

Respondents were asked to provide the approximate cost of designing and developing their organization's web site. Sixty-three percent of those respondents whose organization had web sites provided cost data. Costs reported varied dramatically from \$500 minimum to \$500,000 maximum. Table 2 provides a categorization of the data.

**Table 2: Costs for Designing and Developing a Web Site**

<b>Cost Range</b>	<b>Number of Respondents</b>
\$500 - \$5,000	23
\$5,001 - \$10,000	6
\$10,001 - \$20,000	5
\$20,001 - \$50,000	4
\$50,001 and greater	3

Twelve respondents provided a breakdown of costs. These have been categorized by type of expense together with the costs reported as follows (Note: the total costs for these are included in the above summary):

- design and development: \$800, \$2,500, \$3,200, \$4,000, \$5,000, \$5,000, \$11,000, \$14,000, \$17,000, \$25,000
- content development: 6,000, \$11,000, \$50,000
- domain registration: \$100, \$120, \$350
- domain hosting: \$350, \$1,000
- graphic design: \$2,000, \$6,000
- data base interface: \$5,000
- software / security software: \$800
- purchase of images: \$860

### ***Annual Costs of Operating a Web Site***

Seventy-one percent of respondents whose organizations had a web site reported costs, on an annual basis, for their organizations' web site operations. Costs ranged from \$250 - \$150,000 and are categorized in Table 3.

**Table 3: Annual costs of Operating a Web Site**

<b>Cost Range</b>	<b>Number of Respondents</b>
\$250 - \$2,500	30
\$2,501 - \$5,000	5
\$5,001 - \$10,000	4
\$10,001 - \$25,000	4
\$25,001 and greater	3

Sixteen respondents provided a breakdown of annual operating costs. These have been categorized by type of expense together with the costs reported as follows (Note: the total costs for these are included in the above summary):

- domain registration: \$30, \$50, \$50, \$75, \$100, \$180, \$300, \$300
- domain hosting / ISP services: \$160, \$180, \$200, \$300, \$300, \$300, \$300, \$350, \$360, \$600, \$600, \$750, \$1,000, \$1,200, \$3,800, \$5,000, \$6,000, \$7,200
- maintenance / updating: \$1,000, \$1,000, \$1,500, \$2,000, \$2,000, \$2,500, \$3,000, \$4000, \$6,500
- contract programming / technical support: \$1,800, \$5,000
- Shopsite Manager: \$480
- SSL Certificate: \$380
- mail list: \$180



### ***Reasons for not having a Web Site***

A follow-up question to those respondents who answered “no” to having a web site asked them to list the main reason(s) why their organization didn’t have a web site. Eighty-three percent responded. Their responses are summarized and categorized in Table 4 (Note: some respondents gave more than one reason.).

**Table 4: Reasons for not having a Web Site**

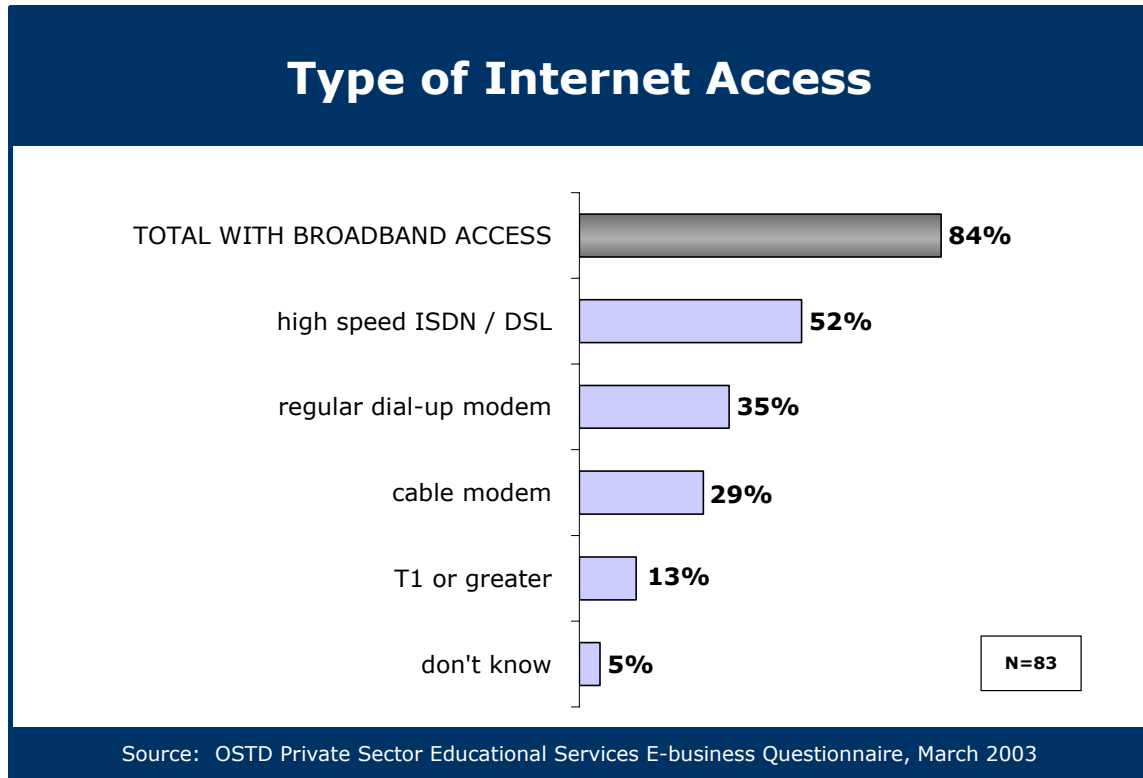
<b>Reason for not having a Web Site</b>	<b>Number of Respondents</b>
Don’t need / not necessary for my business	7
In planning / under development	6
Lack of time to develop	3
Cost / Cost vs. benefit unclear	2
Other single responses	4

It’s interesting to note that almost half of those responding didn’t see a need for their organization to have a web site.

### **Types of Internet Access**

Eighty-four percent of respondents reported having some type of high speed broadband access to the Internet with 52% having high speed ISDN / DSL, 29% cable modem and 13% having a T1 line or greater. Dial-up access was used by some 35% including a number who also reported having high speed access. Results are illustrated in Figure 12.

**Figure 12: Type of Internet Access**

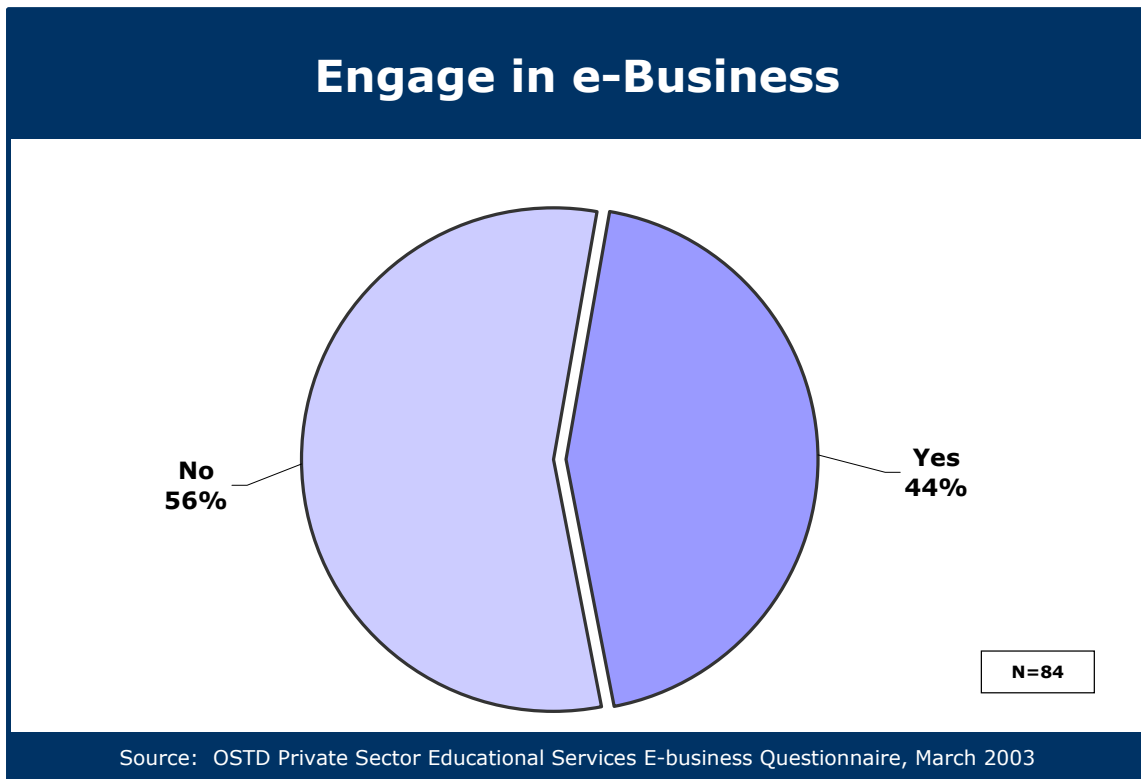


Only 22% of respondents indicated that their organization had its own information technology (IT) department or unit.

## e-Business and e-Commerce Involvement

Less than half of the respondents (44%) indicated that their organizations were involved in e-business defined as “using the Internet to conduct business” (Figure 13). Only 25% of the organizations involved in e-business reported having a formal e-business strategy or plan.

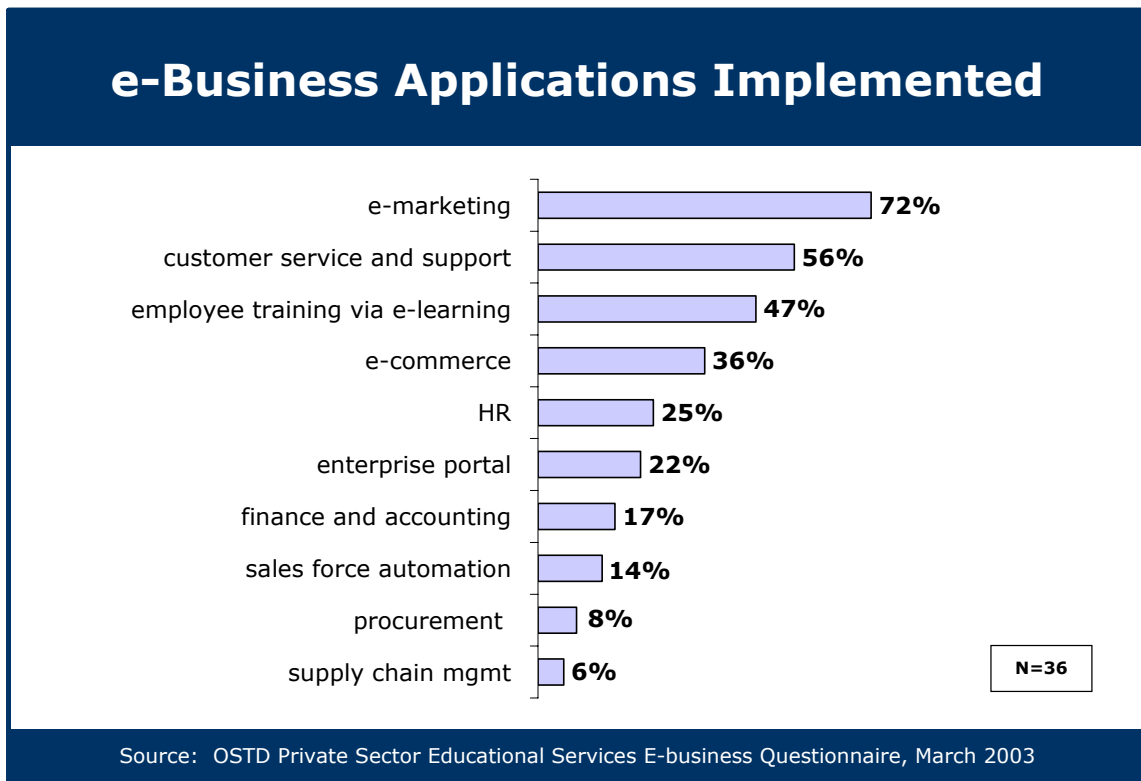
**Figure 13: Percent of Organizations that Engage in e-Business**



### ***e-Business Applications Implemented***

Customer development and e-marketing was the predominant e-business / Internet business solution (IBS) reported by 72% of the respondents. Customer service and support (56%) and employee training via e-learning (47%) were applications reported by about half of the respondents. Other applications reported (Figure 14) were e-commerce (36%), human resources (25%), enterprise information portal (22%), finance and accounting (17%), sales force automation (14%) and procurement and maintenance, repair and operation (8%).

**Figure 14: e-Business Applications Implemented**

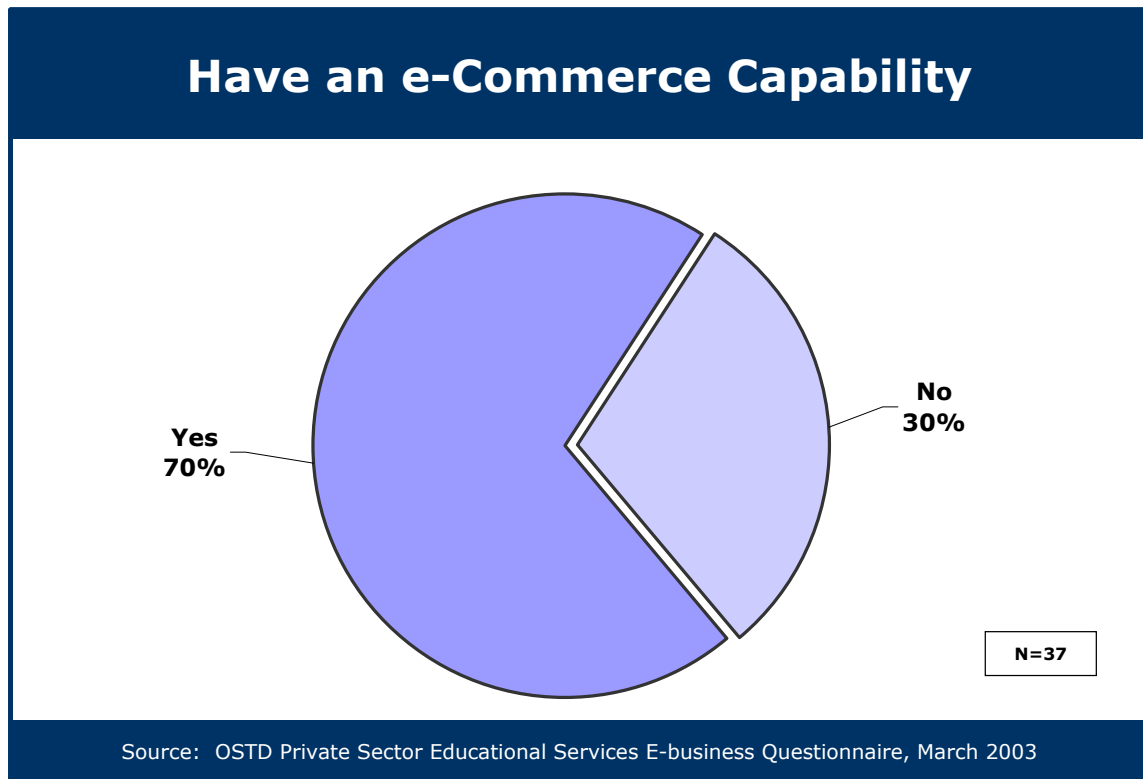


Six respondents answered a follow-up question asking them to list any other e-business or IBS applications. Those listed included: setting up and managing virtual project teams, web-based learning for customers, online ordering, online exams, e-learning tools, student records, school administration, and ministry compliance requirements.

## **e-Commerce**

Seventy percent of the respondents who reported that their organizations were engaged in e-business also reported that they had an e-commerce capability where e-commerce was defined as “the capability of selling goods and services over the Internet (Figure 15).

**Figure 15: Percent of Organizations Engaged in e-Commerce**



## **Goods and Services Sold via the Internet**

Eighty-five percent of the respondents who reported that their organizations were engaged in e-business provided information about the goods and services sold via the Internet. These are summarized and categorized in Table 5.

**Table 5: Goods and / or Services Sold via the Internet**

<b>Goods / Services Sold via the Internet</b>	<b>Number of Responses</b>
Training / training courses	7
Consulting / design services	5
e-learning / online courses	5
Training tools / materials / aids	5
Miscellaneous single items	4

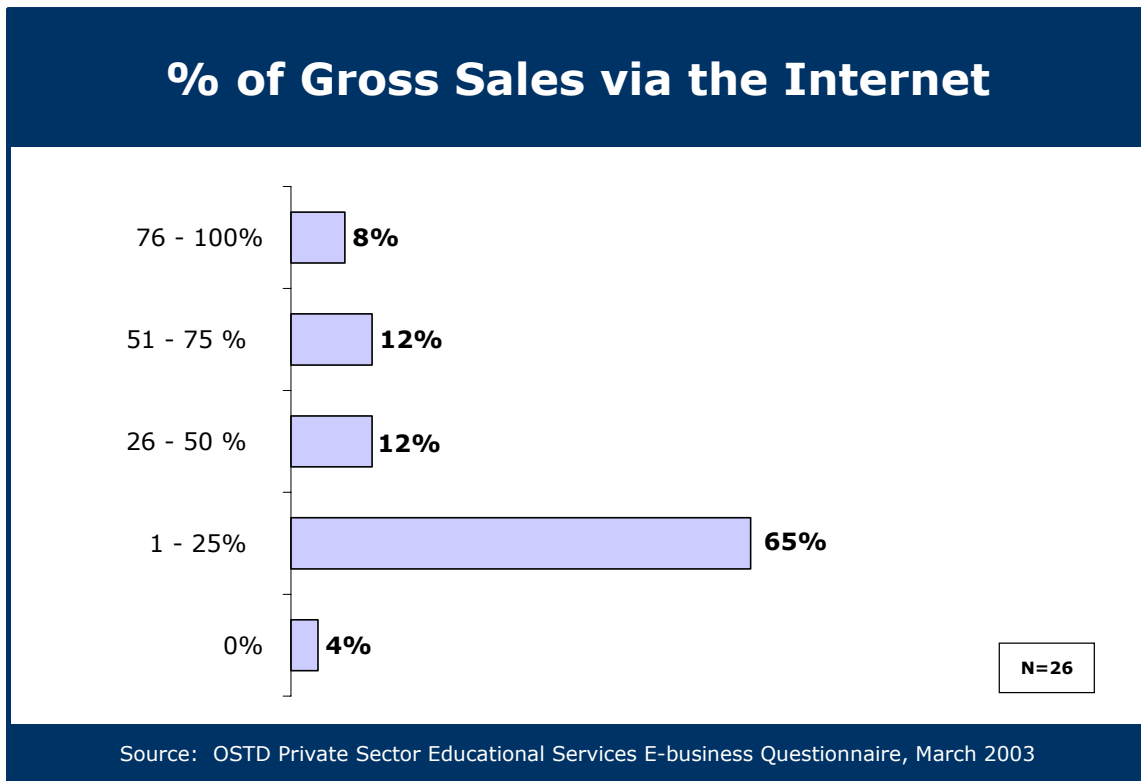
## **e-Commerce Sales**

Respondents who reported having an e-commerce capability (n=26) were asked to indicate the percentage of their organization's gross sales:

- via the Internet;
- directly to consumers; and,
- to customers located outside of Canada.

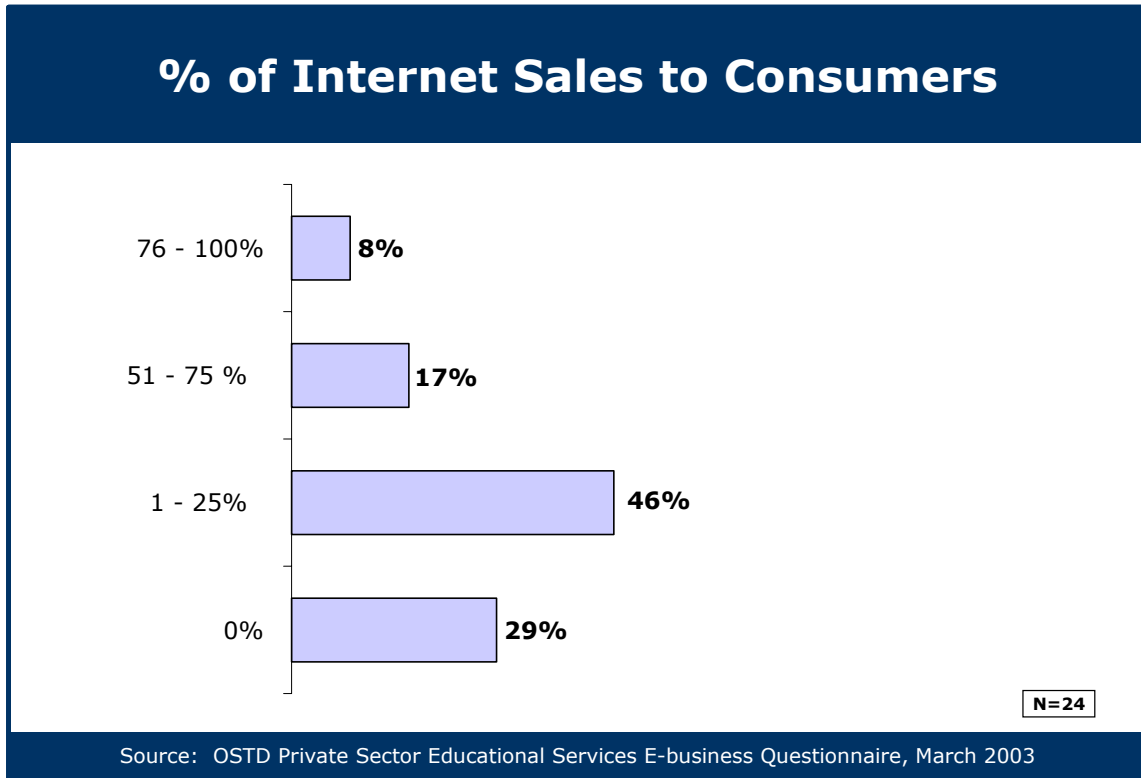
Their responses are summarized in Figures 16, 17 and 18 respectively.

**Figure 16: Percentage of Gross Sales via the Internet**



As indicated on Figure 16, the majority of organizations (65%) realize from 1 – 25% of their gross sales via the Internet. Some 20% of respondents report Internet sales of over 50% with 8% reporting that Internet sales account for 76 – 100% of their gross sales. Only 4% of organizations who report having an e-commerce capability have no Internet sales.

**Figure 17: Percentage of Internet Sales to Consumers**



Twenty-five percent of respondents report gross sales of over 50% directly to consumers. Of these, 8% indicate that sales to consumers represent most of their gross Internet sales (76 – 100%).

Twenty-nine percent of respondents report no Internet sales to consumers.

**Figure 18: Percentage of Internet Sales Outside of Canada**

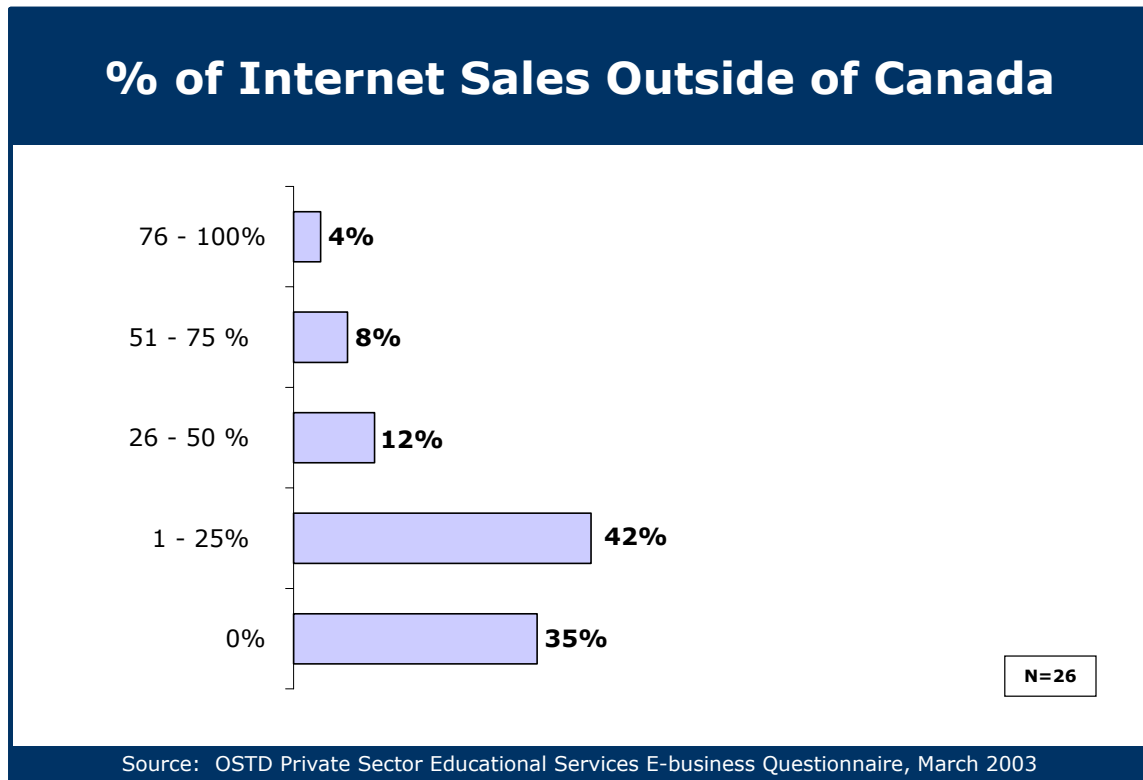


Figure 18 indicates that most Internet sales are made within Canada. Thirty-five percent of respondents report no Internet sales outside of Canada.

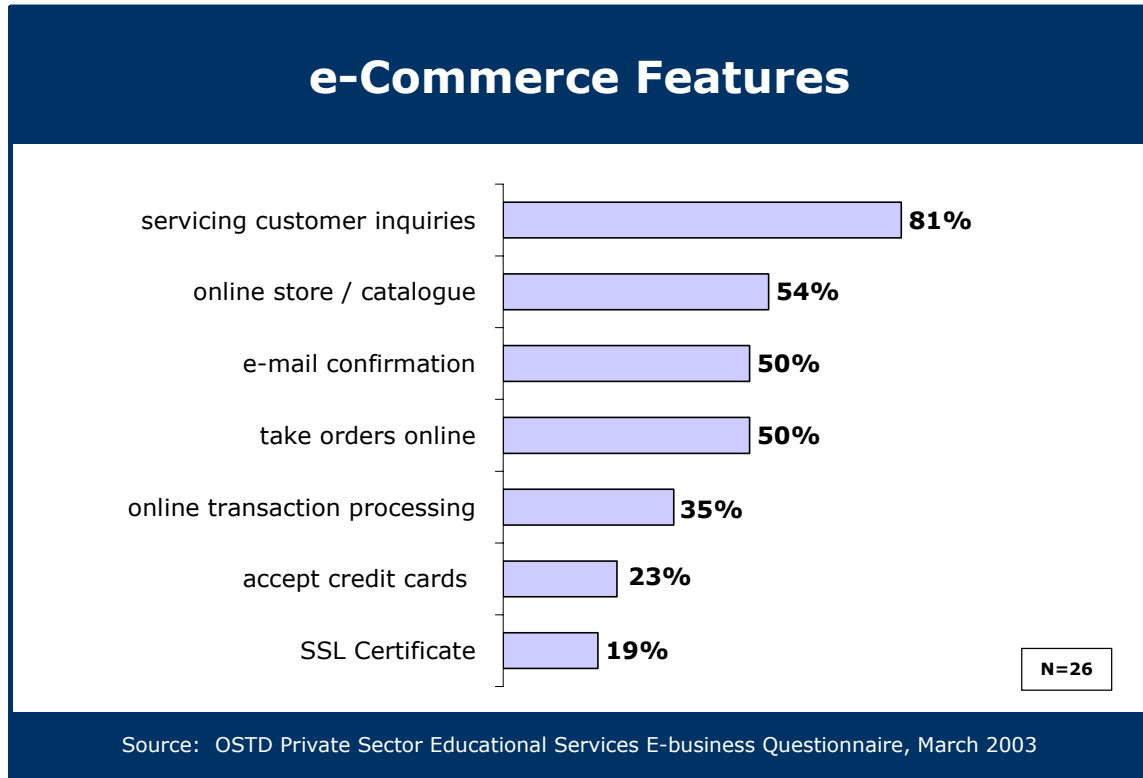
For those respondents reporting Internet sales outside of Canada, forty-two percent report from 1 – 25% of their sales, 12% report 26 -50%, 8% report 51 – 75% and 4% report 76 – 100%.



## **e-Commerce Features**

Figure 19 indicates those features that organizations reported as integral to their e-commerce capability.

**Figure 19: e-Commerce Features**



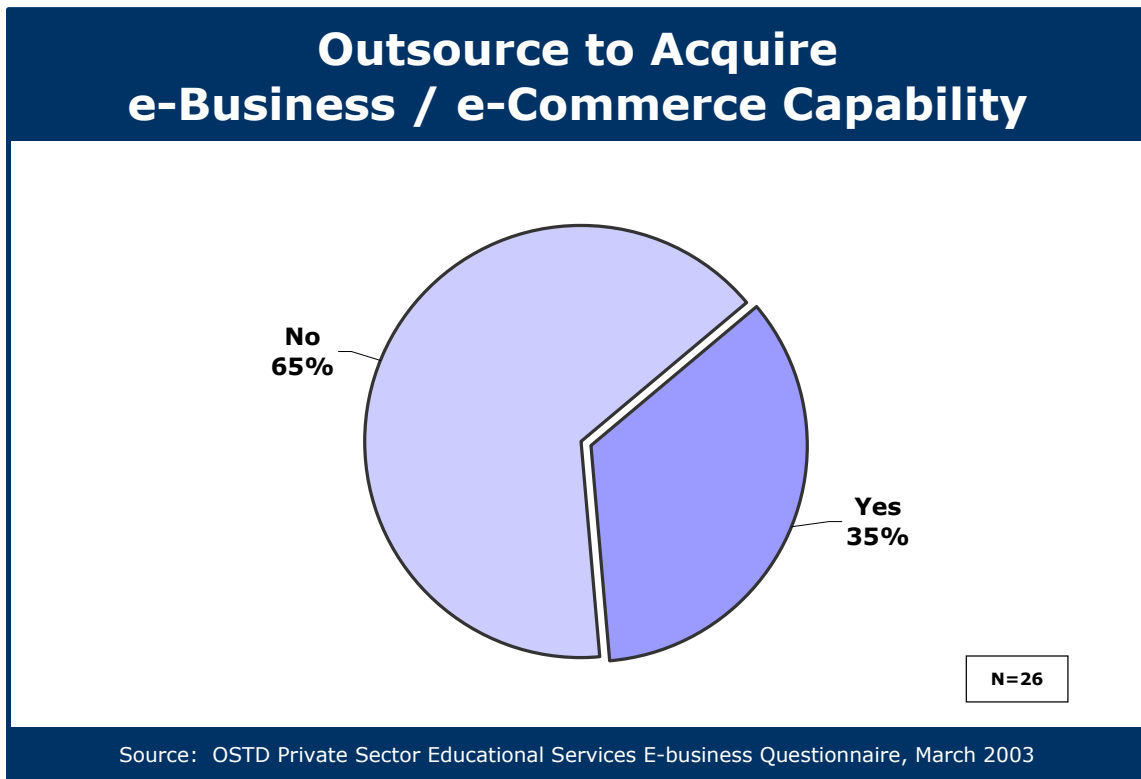
Servicing customer inquiries (81%) was the key use reported. A cluster of having an online store / catalogue, taking customer orders online, and e-mail confirmation of orders was reported by some 50% of respondents as key features of their e-commerce capability.

Another survey question asked only those respondents who reported having an e-commerce capability if their organization uses the Internet to purchase goods or services with or without online payment. All respondents (100%) indicated that they also used the Internet to purchase goods or services. This represents 31% of the total sample, but should be regarded as a minimum percentage as this question was not asked of the other respondents comprising the larger sample.

### ***Outsourcing to Acquire e-Business / e-Commerce Capability***

About 35% of respondents (Figure 20) indicated that they outsourced to acquire at least a part of their e-business / e-commerce capability. Two respondents indicated that they outsourced all of their capability.

**Figure 20: Percentage Outsourcing to Acquire e-Business / e-Commerce Capability**

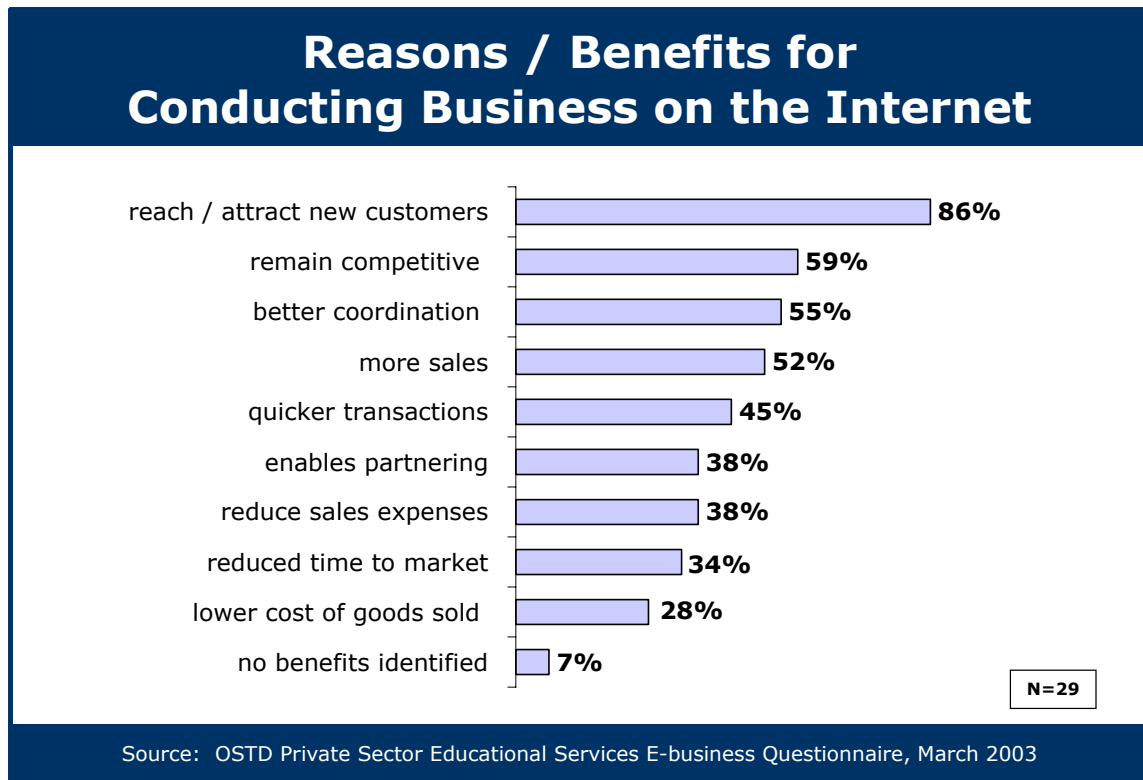


Respondents reported outsourcing web services, network services, credit card transactions, transaction processing and the shopping cart function among others.

### **e-Business Benefits**

Eighty-six percent of respondents indicated that their main reason for conducting business on the Internet (i.e., engaging in e-business) was to “reach / attract new customers”. A cluster of “remain competitive with other organizations”, “better coordination with customers / suppliers”, and “improved revenue / more sales” were given as reasons for conducting business over the Internet by 59%, 55%, and 52% of respondents, respectively. Other reasons / benefits reported by respondents included: takes less time to complete transactions (45%), enables partnering / collaboration with other organizations (38%), reduce sales, general and administrative (SGA) expenses (38%), reduced time to market (34%) and lower cost of goods sold (28%). Results are summarized in Figure 21.

**Figure 21: Reasons / Benefits for Engaging in e-Business**



Four respondents answered a follow-up question asking them to provide other reasons that their organization has for conducting business over the Internet. Responses were: development and application of new services; convenience and speed of transactions, provides us with a “presence” and adds credibility, and, *we’re in the business so we try hard to live by what we preach* (direct quote).

## ***Measuring the Success of e-Business Initiatives***

Respondents were asked what indicators / criteria were used by their organizations to measure the success of its e-business initiatives. Thirty-five percent of respondents provided data. Criteria reported are summarized and categorized in Table 6.

**Table 6: Criteria for Measuring the Success of e-Business Initiatives**

<b>Criteria for Measuring the Success of e-Business Initiatives</b>	<b>Number of Responses</b>
Sales / revenue	5
Number of visits to web site / number of inquiries	5
Cost of sales / sales vs. costs	2
Number of orders generated	2
Miscellaneous single responses	4

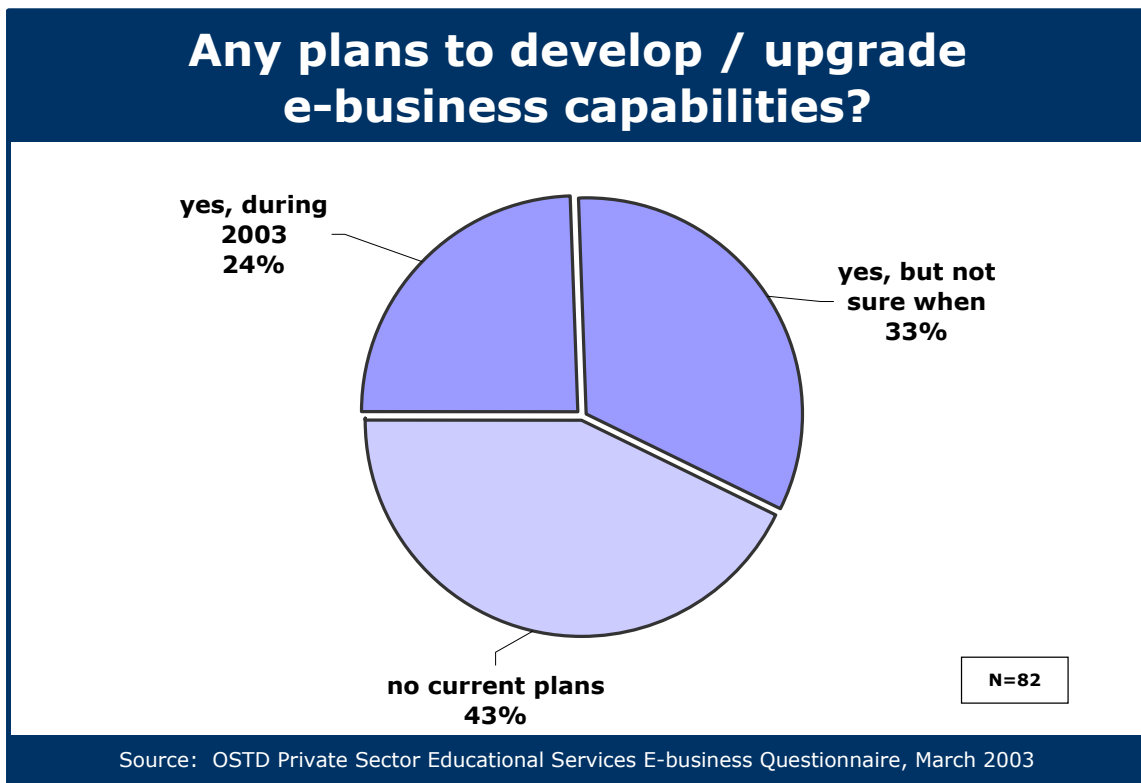
Single responses included:

- customer satisfaction measures;
- rate of e-newsletter subscriptions;
- responses to evaluations; and,
- partnering opportunities produced.

**Plans to Invest in additional e-Business / e-Commerce Capabilities**

Organizations' plans to invest in enhancing their e-business / e-commerce are indicated in Figure 22. Only about 1 in 4 organizations (24%) have plans to expand their capacity during 2003.

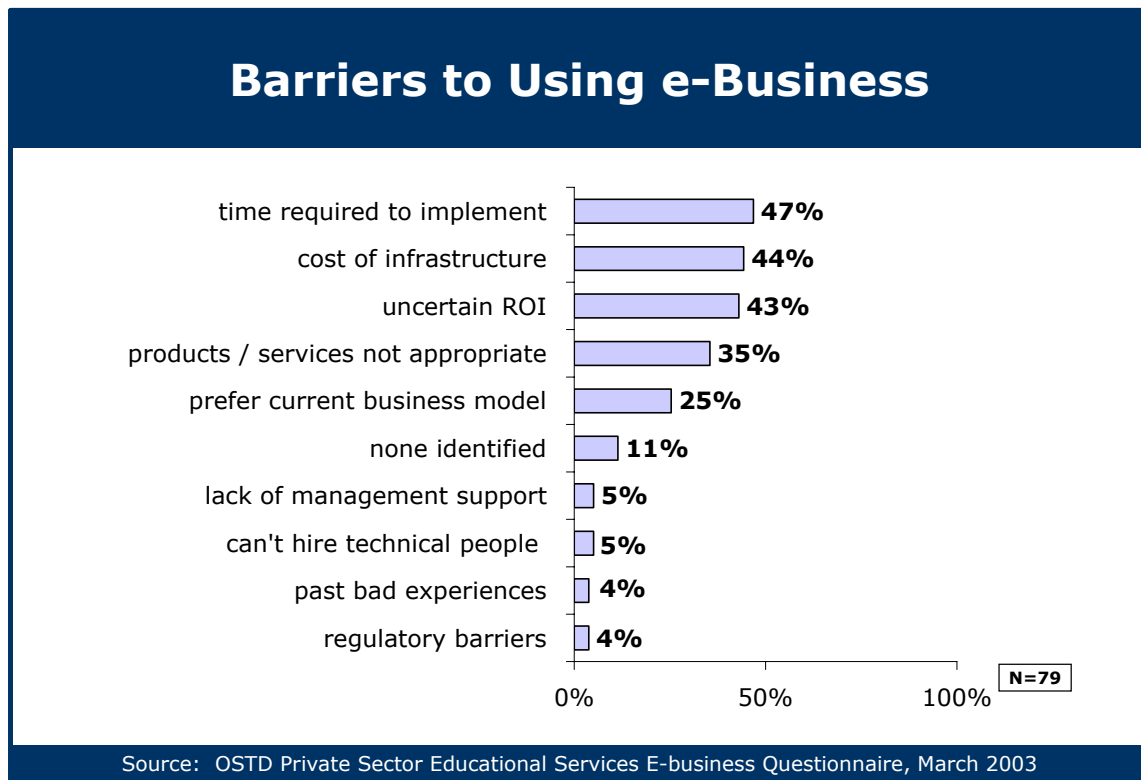
**Figure 22: e-Business / e-Commerce Plans**



## Barriers to using e-Business

Barriers to e-business are presented in Figure 23. Note that a cluster of three barriers, time required to implement e-business, cost of new infrastructure, and uncertain return on investment, are mentioned by 47%, 44% and 43% of respondents, respectively. Two other frequently mentioned barriers were products and / or services are not appropriate for e-business (34%) and prefer to maintain our current business model (24%).

Figure 23: Barriers to using e-Business



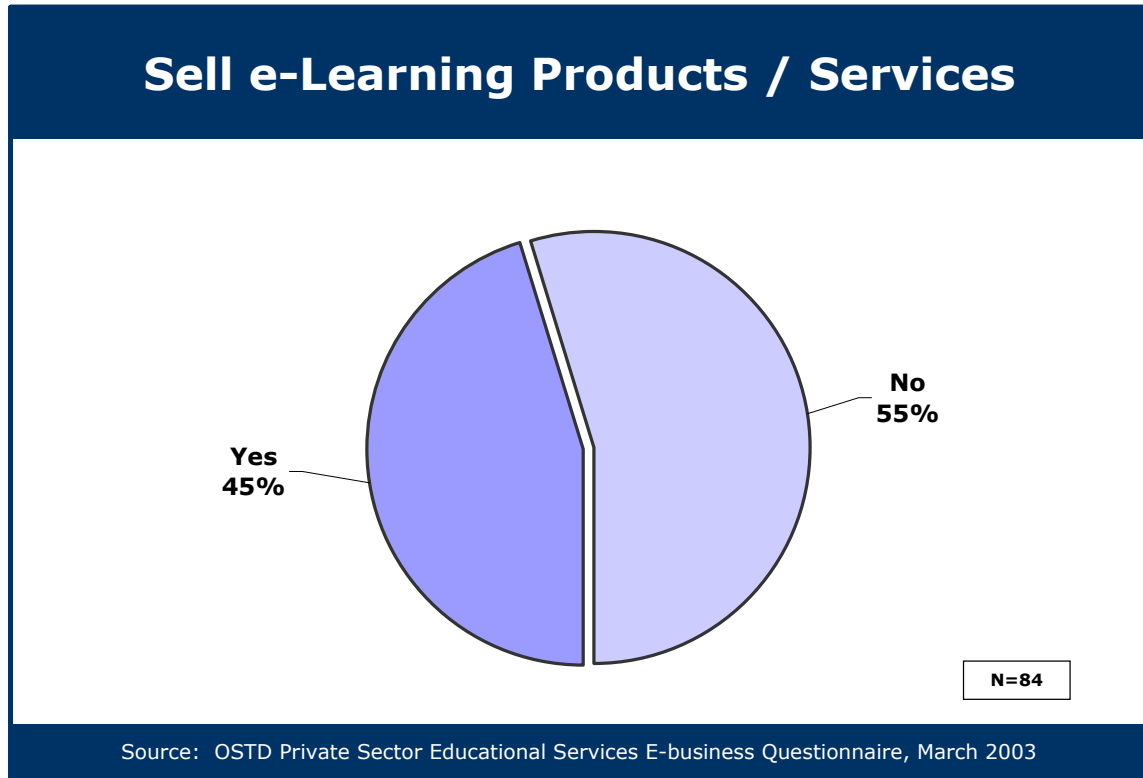
Other barriers (summarized), not listed above, were mentioned by five respondents:

- difficulties with having the bank accept charge card purchases over the Internet;
- cost to develop e-learning versions of workshops without knowing the market for them;
- legal and liability issues;
- the volume of business that needs to be generated to support an e-business infrastructure; and,
- had to abandon online transaction system because the costs far exceeded the revenues generated.

## Involvement in e-Learning

Forty-five percent of respondents reported that their organizations sold e-learning products and / or services (Figure 24).

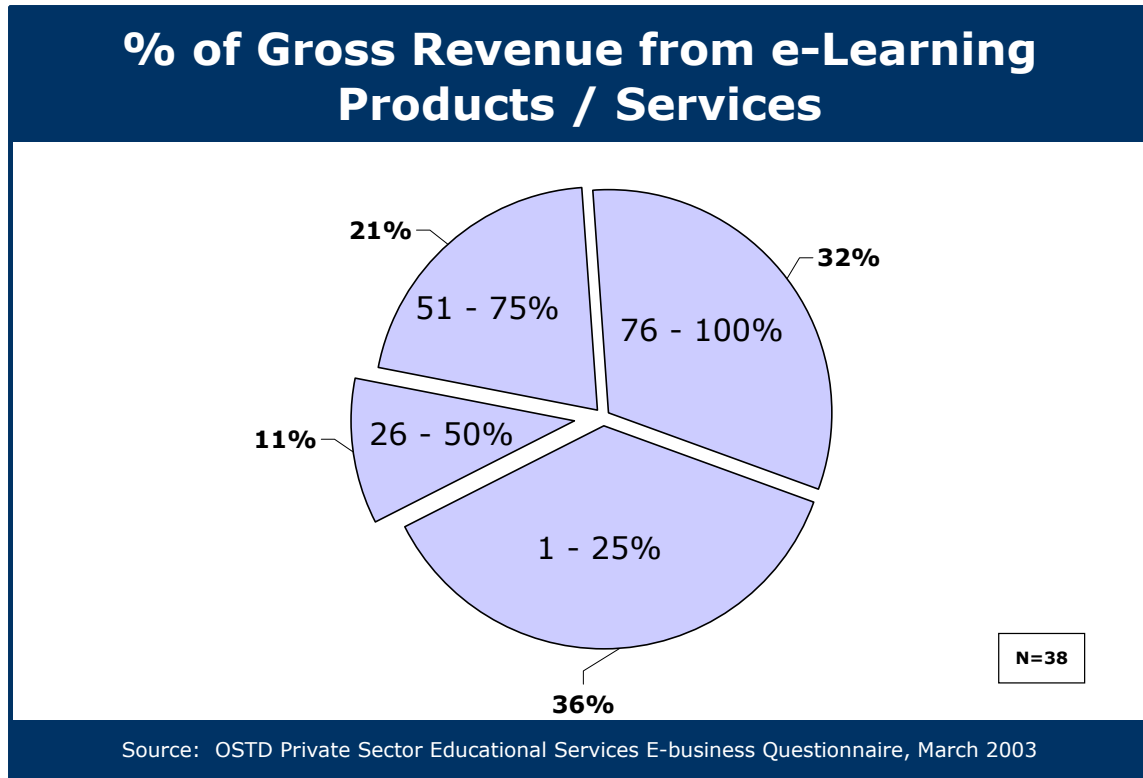
**Figure 24: Percentage Selling e-Learning Products / Services**



### **Percentage of Gross Revenue Derived from e-Learning**

Thirty-two percent of respondents involved in e-learning indicated that they received from 76 to 100% of their gross revenues from the sale of e-learning products and services, 21% reported gross revenues between 51 and 75%, 11% reported revenues in the range of 26 to 50%, and 36% indicated gross revenues of between 1 and 25% (Figure 25).

**Figure 25: Percentage of Gross Revenue Derived from e-Learning**



Those respondents reporting gross revenues from e-learning products and services of 50% or greater represent about 24% of the total sample.

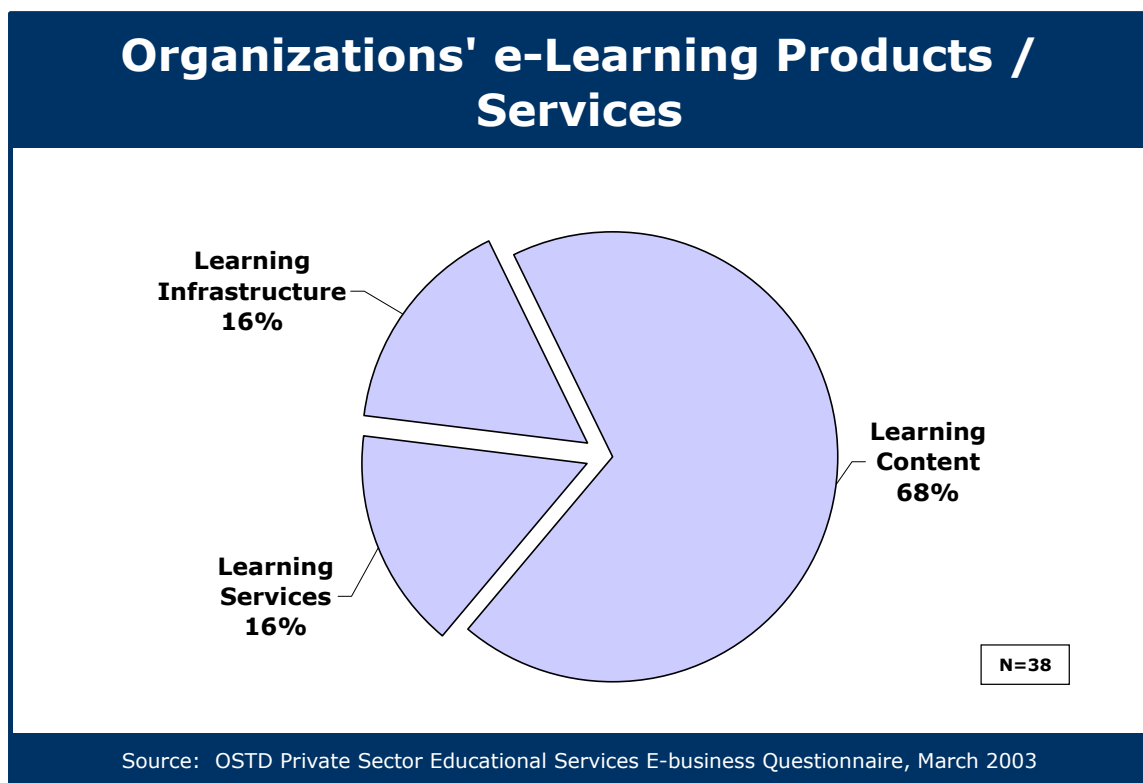


### **Type of e-Learning Products and Services**

Respondents were asked to choose the category that best described their e-learning products and services from among learning services, learning content and learning infrastructure solutions. Figure 26 indicates the results and shows that approximately 2 out of 3 organizations (68%) classify themselves as learning content providers while the remainder are equally divided between learning infrastructure and learning services providers (16% each).

Two respondents noted that their organization was a full-service e-learning provider that provided products / services across all of the categories listed.

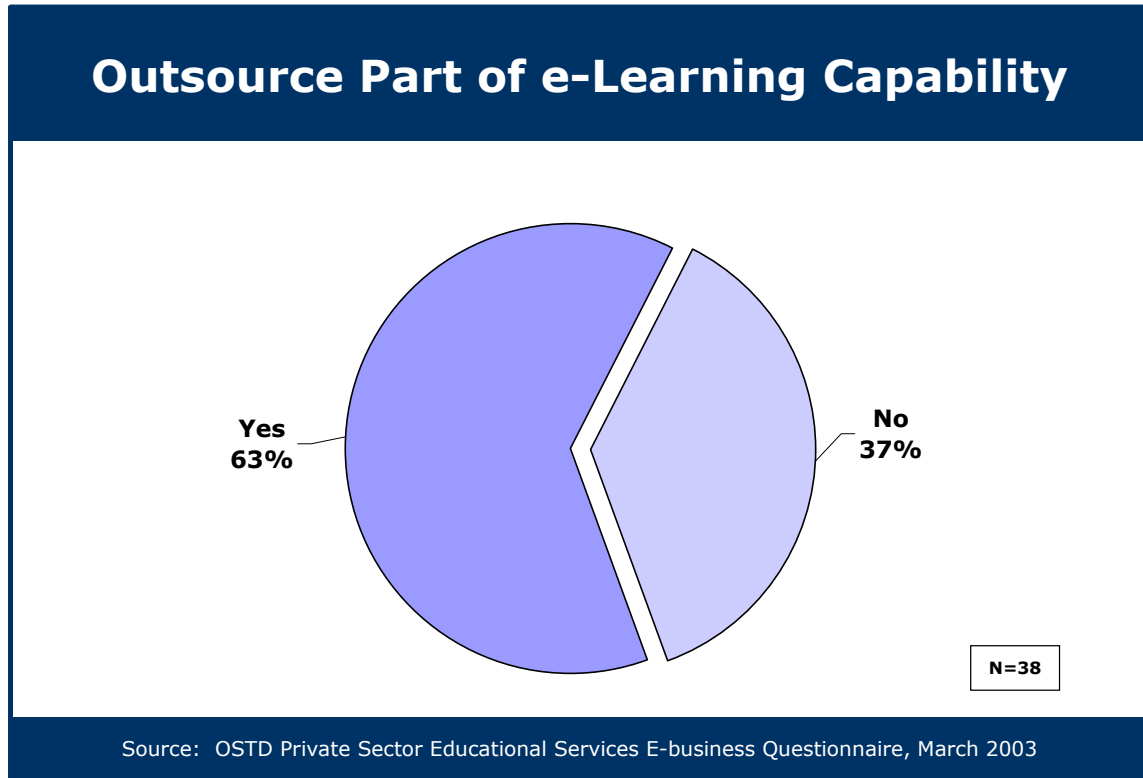
**Figure 26: Category of e-Learning Product / Service Offered**



### ***Outsourcing e-Learning Capability***

Sixty-three percent of respondents (Figure 27) indicated that their organization outsourced at least part of its e-learning capability.

**Figure 27: Percentage Outsourcing Part of e-Learning Capability**



Respondents were asked to list which part(s) of their organizations' e-learning capabilities are outsourced. Ninety-six percent of respondents who reported outsourcing responded. Results are summarized and categorized in Table 7.

**Table 7: E-Learning Capabilities Outsourced**

<b>E-Learning Capabilities Outsourced</b>	<b>Number of Responses</b>
Content & Content design / development / production	8
Hosting / e-learning infrastructure	6
Multimedia design / development / production	5
Web / software development	4
Graphic / visual design	4
Technical services	4
Instructional design	3
Miscellaneous single responses	3

Sixty-seven percent of respondents identifying their organizations as learning service providers reported outsourcing capabilities as listed:

- Software development, web-based software hosting.
- developing manuals and learning material
- online registration - delivery platforms - hosting services
- partner with other consultants, companies as need arises

Fifty percent of respondents identifying their organizations as learning infrastructure providers reported outsourcing:

- Instructional Design Content Development
- Content development
- Content and Design

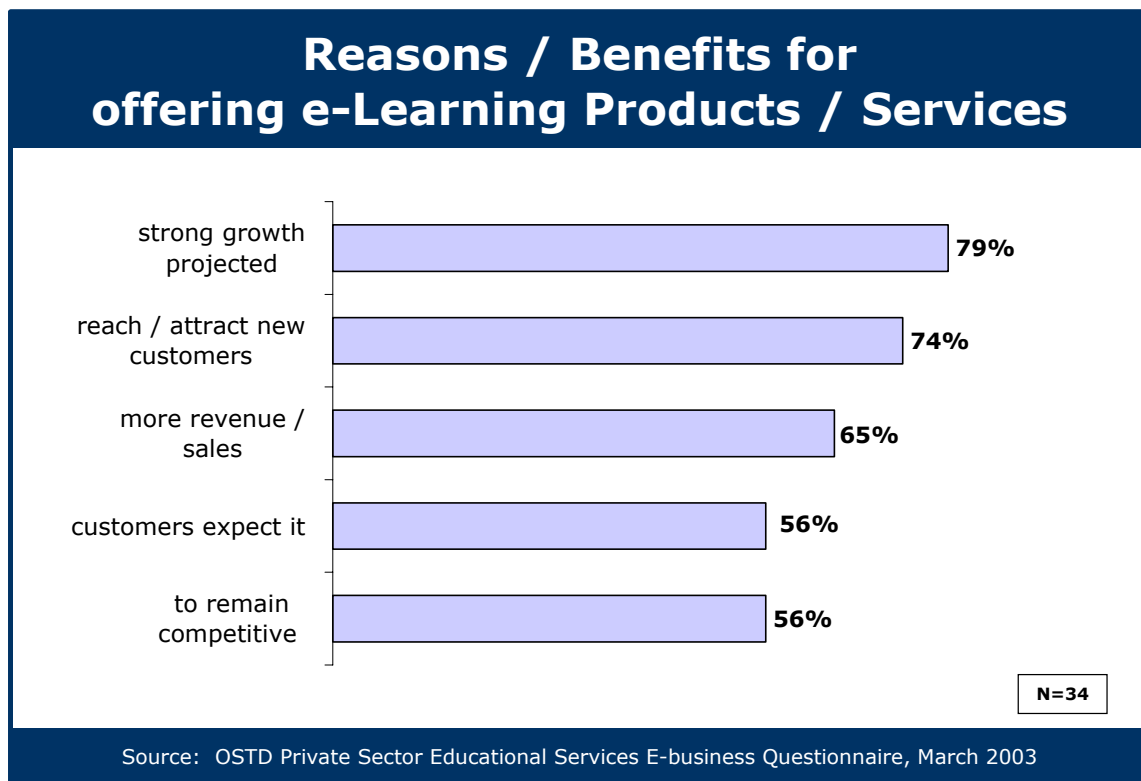
It is interesting to note that learning content providers tend to outsource learning services and learning infrastructure; learning services providers tend to outsource learning content and infrastructure; and learning infrastructure providers tend to outsource learning content.

### **Reasons / Benefits for Offering e-Learning**

Reasons / benefits for offering e-learning products and services provided by respondents (Figure 28) included:

- market for e-learning has strong projected growth (79%);
- reach / attract new customers (74%);
- improved revenue / more sales (65%);
- customers expect it (56%); and,
- to remain competitive with other organizations (56%).

**Figure 28: Reasons / Benefits for Offering e-Learning Products / Services**



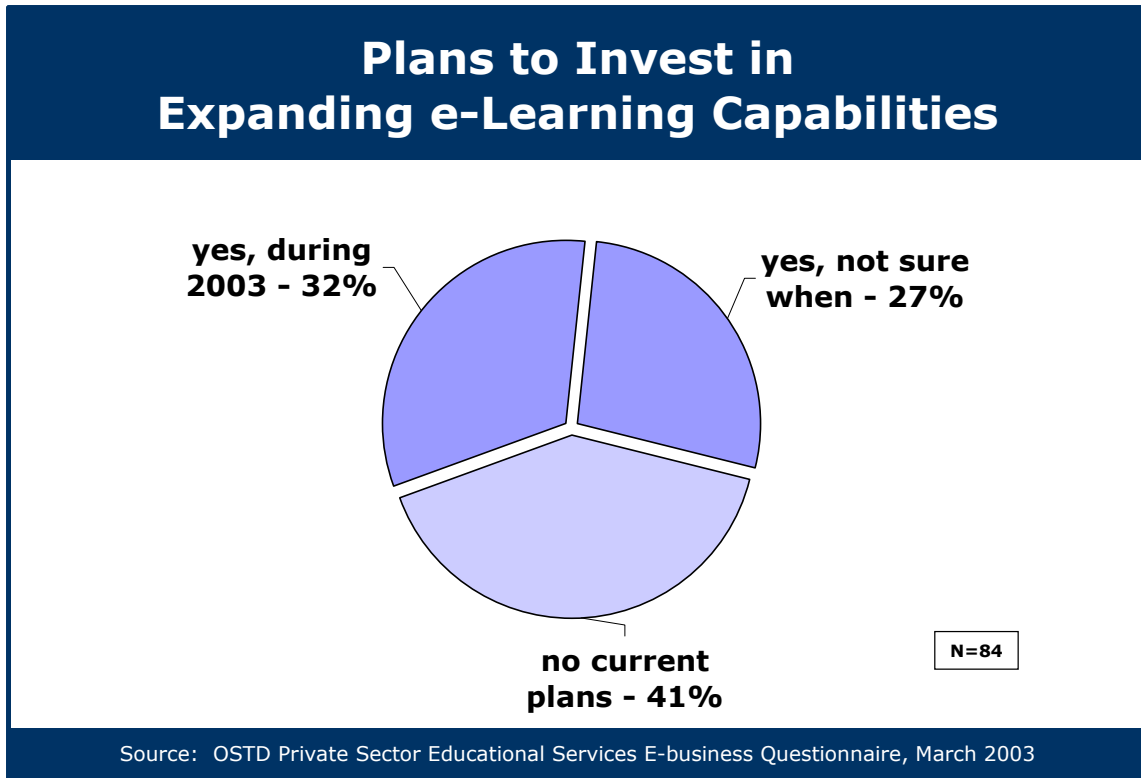
Thirty-two percent of respondents listed other reasons that their organizations' have for offering e-learning products / services. Results (summarized) were:

- e-learning is our core business competency (6 respondents)
- e-learning fits with our core service offerings (2 respondents)
- provides alternatives for / better reaches our clients (2 respondents)
- e-learning offers new ways to deliver our products (2 respondents)
- e-learning has the possibility of creating a new revenue path for our existing products

### ***Plans to Invest in Additional e-Learning Capabilities***

Thirty-two percent of respondents indicated that their organizations planned to expand their e-learning capabilities during 2003, 27% indicated that they planned to enhance capability, but were not sure when, and 41% indicated that they had no current plans for developing / expanding e-learning capabilities (Figure 29).

**Figure 29: Percentage with Plans to Develop / Upgrade e-Learning Capabilities**



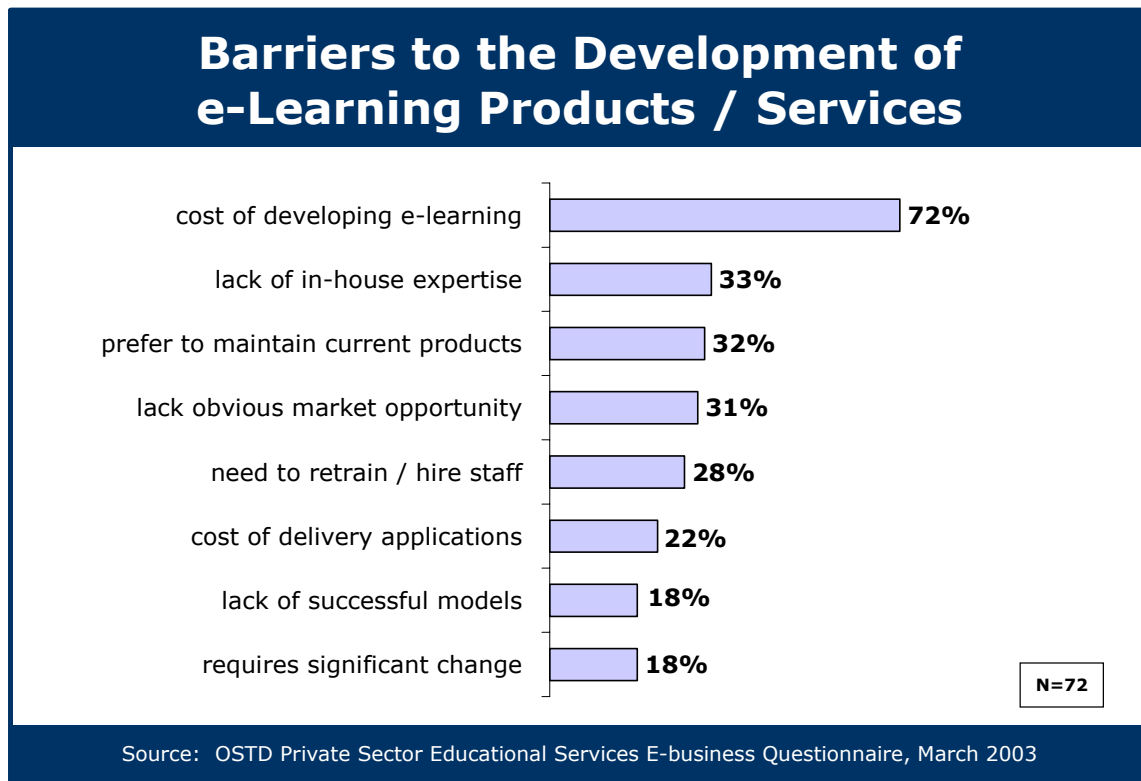
## **Barriers to Developing e-Learning Capabilities**

The cost of developing e-learning products or services was identified as the main barrier by 72% of respondents. Other barriers identified included:

- lack of in-house expertise (33%);
- prefer to maintain our traditional education / training products and services (32%);
- lack of an obvious market opportunity (31%);
- need to retrain existing staff or hire new staff (28%);
- cost / lack of affordable applications to facilitate delivery (22%);
- lack of successful models / best practices to build from (18%); and,
- requires significant organizational change (18%).

Results are summarized in Figure 30.

**Figure 30: Barriers to Developing e-Learning Capabilities**



Additional barriers, provided by five respondents, are summarized below:

- clients not interested (2 respondents);
- clients lack a source of funding for e-learning projects;
- costs related to legal issues; and,
- haven't yet figured out an appropriate use of e-learning for my business.

### ***Measuring the Success of e-Learning Initiatives***

Respondents were asked to list the indicators / criteria used by their organizations to measure the market success of their e-learning products and services. Twenty-six percent of respondents provided a response. Responses are categorized and summarized in Table 8.

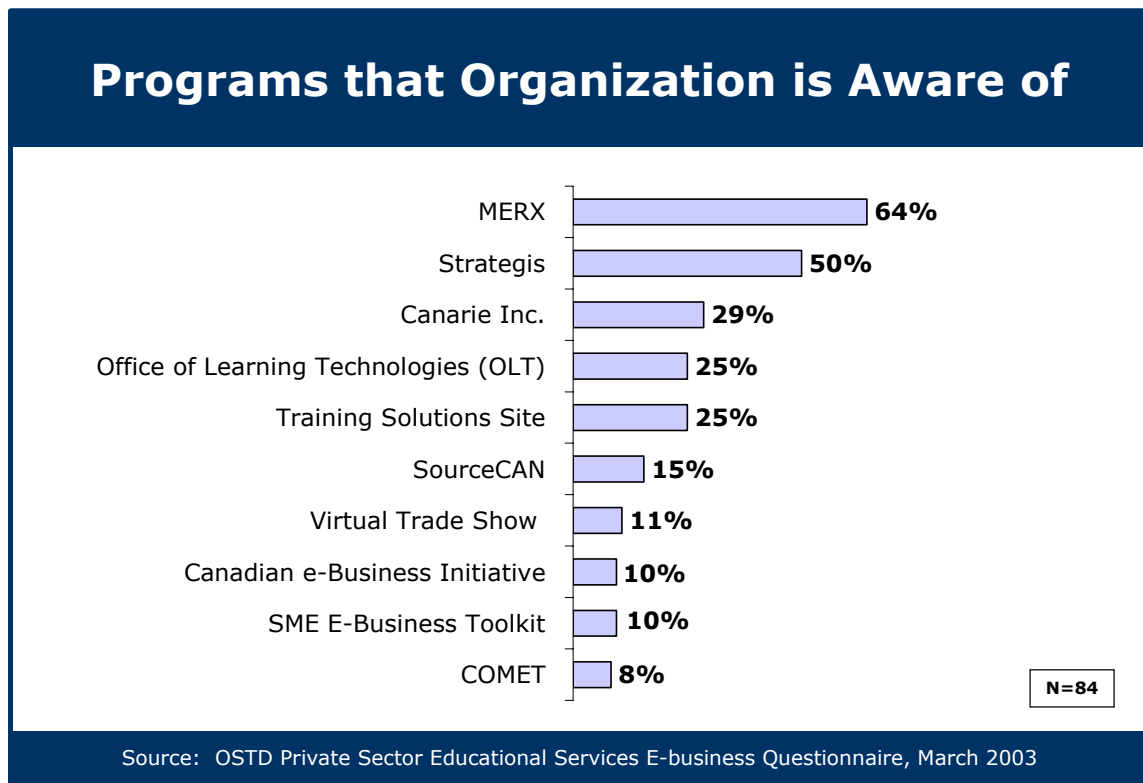
**Table 8: Indicators / Criteria used to Measure the Success of e-Learning Initiatives**

<b>Indicator / Criterion</b>	<b>Number of Responses</b>
Sales / Revenue	10
Customer / client satisfaction / feedback	7
Repeat business / referrals	3
Student / client retention	2
Requests for new courses / products	2
Employee performance	1

## Training and Development Sector Capacity Building Initiatives

Respondents were asked to indicate which resources / services / programs offered by the Government of Canada that they were aware of. MERX (64%) and Strategis (50%) were the two services most frequently mentioned by respondents (Figure 31). Canarie Inc., the Office of Learning Technologies (OLT), and Industry Canada's Canadian Training Solutions Site were known to about 1 in 4 respondents (25 – 29%). Only about 1 in 10 respondents were aware of SourceCAN, Virtual Trade Show for Education and Training, the Canadian e-Business Initiative, SME e-Business Information Toolkit, and COMET.

**Figure 31: Programs that Organization is Aware of**

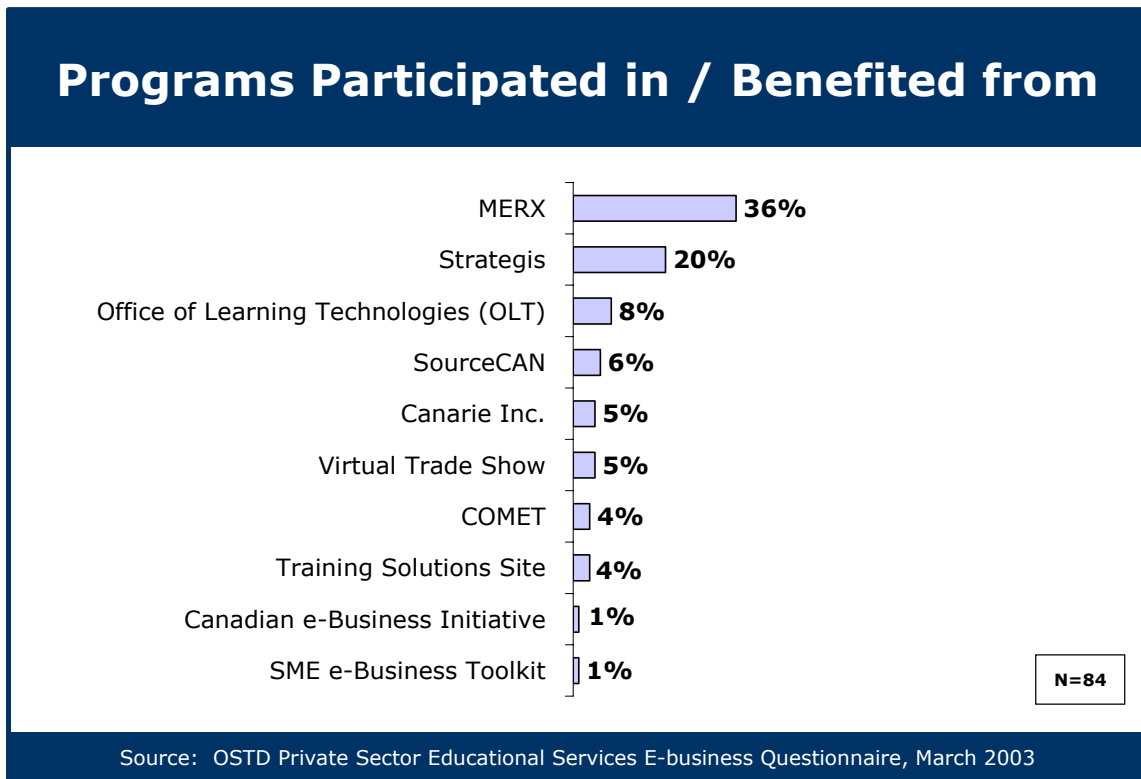




### **Programs Actually Participated in / Benefited From**

Thirty-six percent of respondents reported actually using / benefiting from MERX and 20% using / benefiting from Strategis. Fewer than 10% of respondents reported actually participating in or benefiting from any of the other programs listed (Figure 32).

**Figure 32: Programs Participated in / Benefited from**



### ***Other Resources / Services / Programs Mentioned by Respondents***

Other resources / services / programs which individual respondents reported participating in or benefiting from included:

- Federal Government's Treasury Board Secretariat Intranet Site of external training agencies
- Business Development Bank of Canada
- Smart Toronto
- Telefilm Canada's Multimedia Fund
- The eLearningBC Alliance - <http://elearningbc.ca/>
- OSTD
- a variety of unmoderated listservs focussing on specific issues within training, e-learning and about various tools.
- The National Research Council's Industrial Research Assistance Program (IRAP)
- Canadian Business Service Centres, Business Link

Respondents were asked to list any other programs provided by any level of government and available on a sector-wide basis. Responses included:

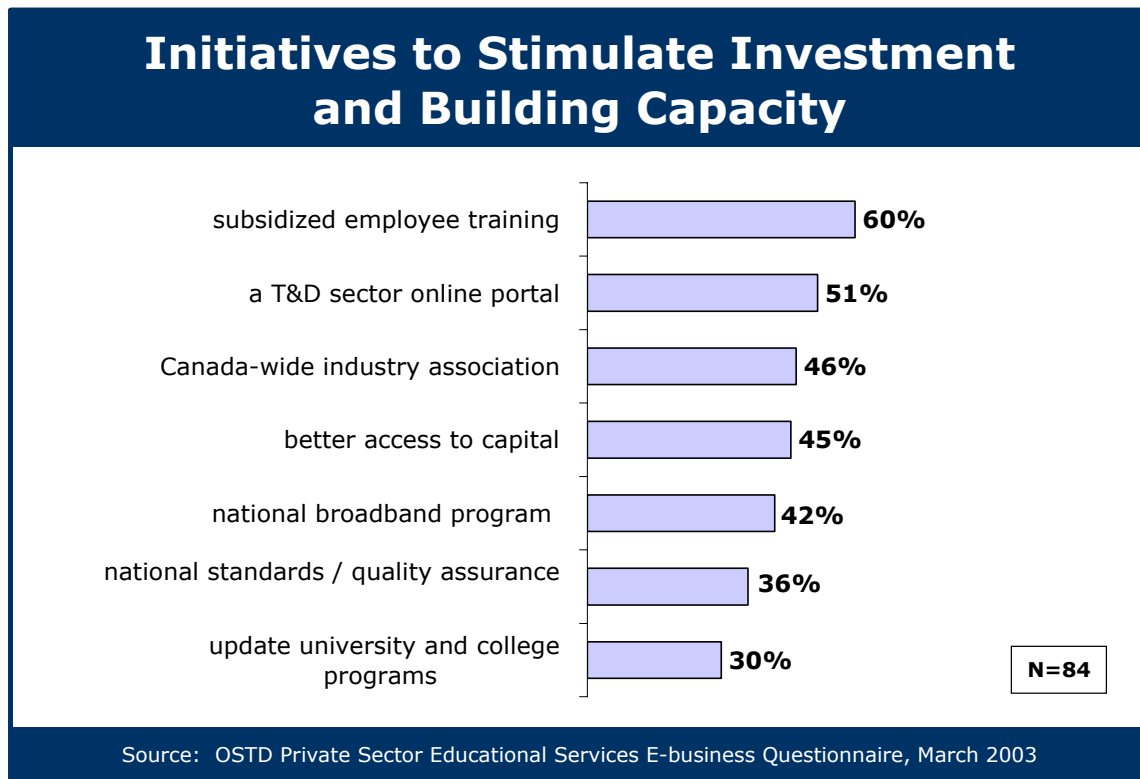
- Canadian Companies Capability System (CCC)
- Ottawa Centre for Research and Innovation (OCRI)
- Government Online Supply Arrangement List
- Ontario Media Development
- The Alberta Online Consortium

### **Initiatives to Stimulate Investment and Building Capacity**

Respondents were asked to select from a list of initiatives those that, in their opinion, would stimulate investment and building capacity by Canadian commercial education and training firms. The results are summarized in Figure 33.

Sixty percent of respondents selected “program(s) to subsidize employee training / retraining” and 51% selected “a Canadian commercial education and training sector online portal” as the initiatives that would stimulate investment and building capacity by Canadian commercial education and training firms. A Canada-wide industry association, better access to capital and a national broadband connectivity / infrastructure program were selected by 46%, 45% and 42% of respondents, respectively.

**Figure 33: Initiatives to Stimulate Investment and Building Capacity**



### ***Other Investment / Building Capacity Initiatives Suggested***

Respondents were asked to list any other initiatives that, in their opinion, would stimulate investment and building capacity for e-business and e-learning.

Individual responses (summarized) were:

- Access to consultants who can help set this up.
- An international on-line accessible system.
- Corporate education tax as has been done in Quebec to stimulate investment in Education and Training.
- Governments should continue to provide financial support to aggregators of workplace training needs (e.g., sector councils, professional associations) to develop e-learning products and offer e-learning training opportunities for their sector.
- Programs/ Grants to increase and enhance Internet access in the non-profit/public sector.
- Update university and college programs to produce more graduates with necessary e-business and e-learning knowledge and skills.

### ***Suggested Initiatives for the OSTD to Undertake***

Respondents were asked to list any activities / initiatives that they would like to see the OSTD undertake to increase e-business and e-learning deployment in the education and training sector.

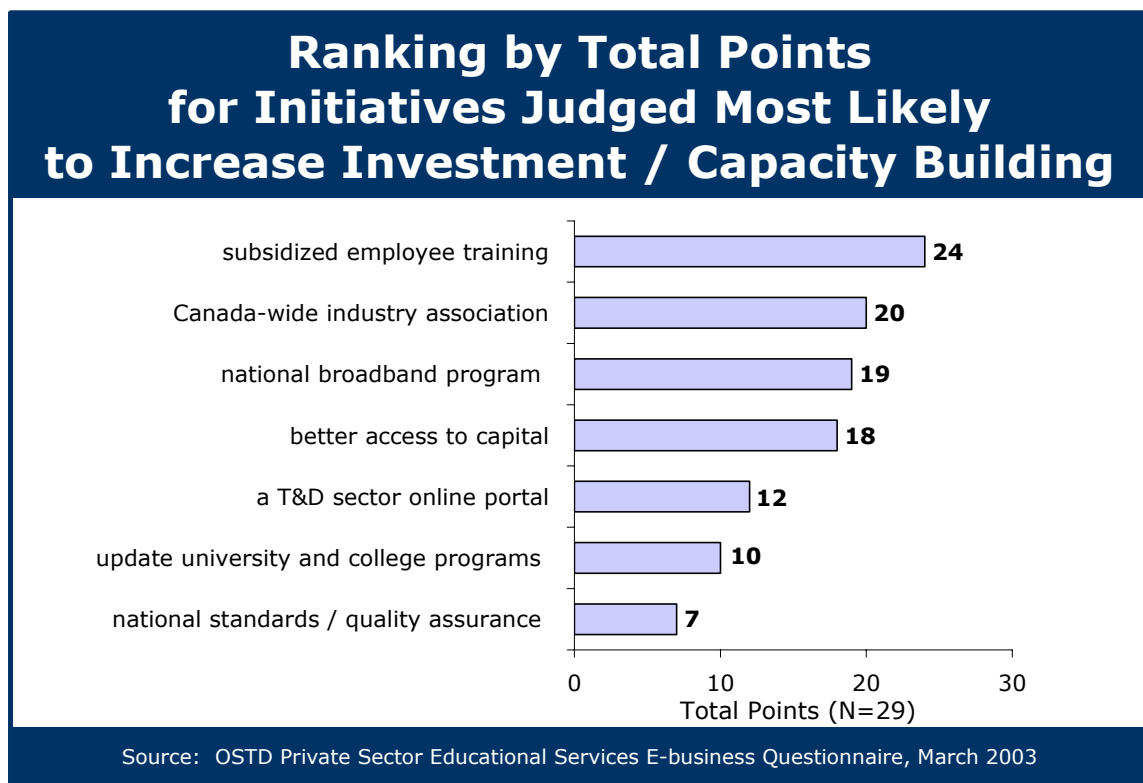
Individual responses (edited) were:

- A 'deal' for OSTD members on the price and / or access to high-end e-learning development / delivery software. The structure of this industry is such that independent consultants are hamstrung by the corporate focus and pricing for these tools, making them uneconomical for the small organization.
- Provide access to consultants.
- Provide access to Venture Capital.
- Create collaborative networks between the educational context and the corporate/service/industry sectors that work together to create career pathways.
- Find more funding sources.
- Provide information on how to get started together with the pros and cons.
- Lobby for government support for e-business / e-learning.
- Provide more hands-on e-learning professional development opportunities supported by training in advance.
- Publicize e-Learning and e-learning success stories.
- Provide seminars related to all aspects of e-learning, including marketing and business development
- Set up a portal on the OSTD site to allow /encourage partnering on projects and/or research that demonstrate ROI results using e-tools.
- Establish "best practice" examples that could be shared among developers and providers.
- Provide support for international marketing.
- Provide a way to match expertise required by organizations to expertise available among OSTD consultant members.

### **Initiatives Thought to have the Highest Probability of Success**

The final question asked respondents to “list up to three initiatives, in order of priority, from those provided ... that you think would have the greatest probability of stimulating investment and capacity building in the sector.” Thirty-five percent of the respondents provided from one to three suggestions each. First choices were assigned an arbitrary 3 points followed by 2 points for second choices and 1 point for third choices. Total points were tallied for each suggestion based on this point system. Results are summarized in Figure 34.

**Figure 34: Ranking by Total Points for Initiatives Judged Most Likely to Increase Investment / Capacity Building**



The results are consistent with respondents’ selections outlined in Figure 33 above although the order changes somewhat. The top choice in both cases is “subsidized employee training / retraining”. Because only a minority of respondents (35%) answered this question, the results summarized in Figure 33 provide a better indication of suggested initiatives as they represent the choices of the total sample of 84 respondents.

## **Discussion of Results**

### ***The Survey Sample Responding***

The data reported in this survey are from a volunteer “sample of opportunity” representing 84 respondents from firms of varying sizes, the predominant being very small ones. As such the data cannot be subjected to statistical comparisons with other data sets derived on the basis of a statistical sampling algorithm (e.g., the Net Impact Study Canada<sup>12</sup>). The data are skewed towards very small firms (1 - 9 full-time employees) and towards firms located in Ontario. The results, therefore, reflect a snapshot of these firms which may or may not be representative of the larger population of private sector firms engaged in the delivery of education and training services in Canada. However, given the large sample of very small firms, the sample is probably quite representative of this sub-sector.

### ***Sample Demographics***

The organizations represented in this survey are mainly very small (86% have 1 – 9 full-time employees), Ontario-based (77%), and serving the Canadian and Ontario markets (65% and 63%, respectively). The primary market segments served are the corporate (90%) and government (76%). Some 50% of the firms export products and services to the United States and about one in four export to the European Union.

A majority of the organizations offer a grouping of seven common training products and services:

- needs assessment (81%);
- curriculum / content development (81%);
- industrial and corporate training (76%);
- instructional design (71%);
- soft skills training (69%);
- train the trainer (69%); and,
- evaluation (58%).

However, there is a wide range of products and services provided beyond the common ones indicating a considerable diversity in the specializations of the firms represented.

The classroom is used as a primary delivery mode by 80% of the firms responding. Textbooks, manuals, and workbooks are used by 63%. Some 40% of firms report using multimedia and web-based self study and 26% use a virtual classroom as a delivery mode.

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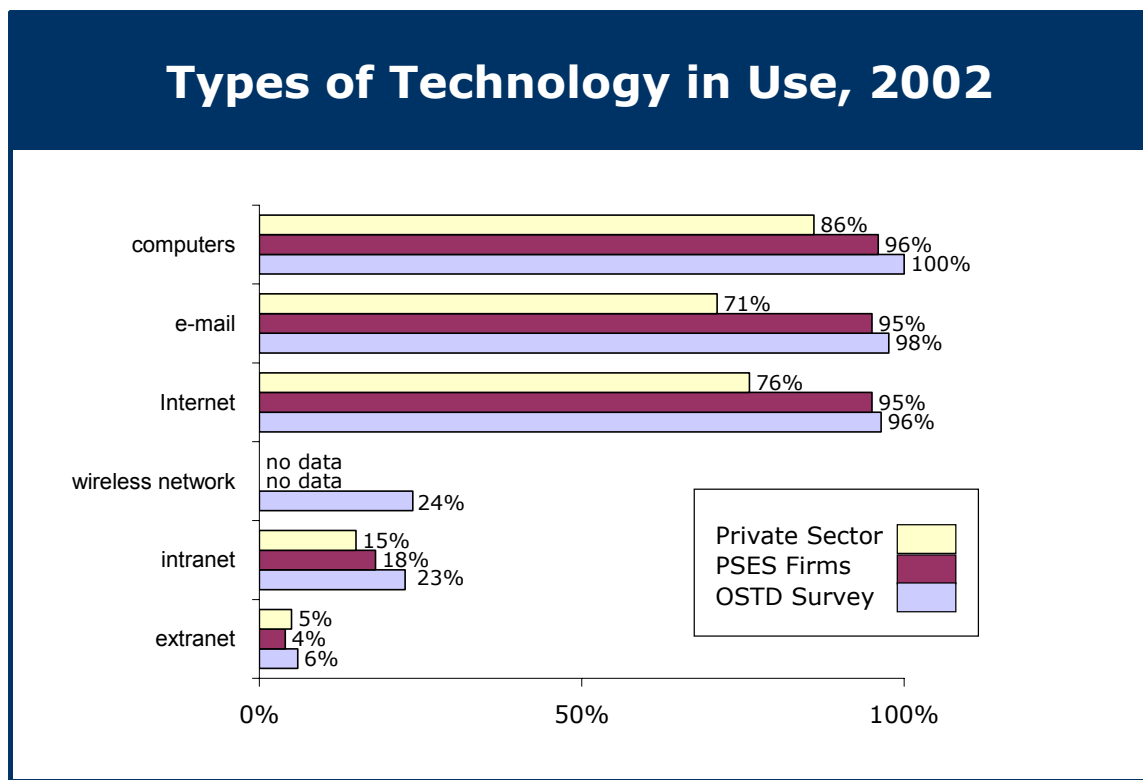
<sup>12</sup> Canadian e-Business Initiative, *Net Impact Study Canada: The SME Experience. A Preliminary Report*, November 2002, p. 1. Available online: <http://www.netimpactstudy.com/ca/pdf/canada-en.pdf>

### Use of Information and Communications Technologies (ICT)

The use of personal computers (100%), e-mail (98%) and the Internet (96%) is very high by the firms included in this survey. Workplace access to ICTs is correspondingly high, with access in the 76 – 100% range, reported by 98% of the respondents for personal computers and e-mail, and 96% for the Internet. Forty-one percent report workplace access to laptops in the 76 – 100% range. These results indicate that the firms make routine use of the most common workplace ICTs.

A comparison of results to Statistics Canada’s Electronic Commerce and Technology 2002 Survey<sup>13</sup> (Figure 35) indicates that this group of training and development firms’ utilization of ICT is slightly higher than that reported for the general PSES sector. An interesting point is that the use of wireless networks is reported by 24% of respondents. No comparable data is available for the private sector and PSES firms represented in the Statistics Canada data.

Figure 35: A Comparison of Technologies in use Across Different Sectors



<sup>13</sup> Statistics Canada, *E-Commerce and Technology 2002 Survey*, May 2003.

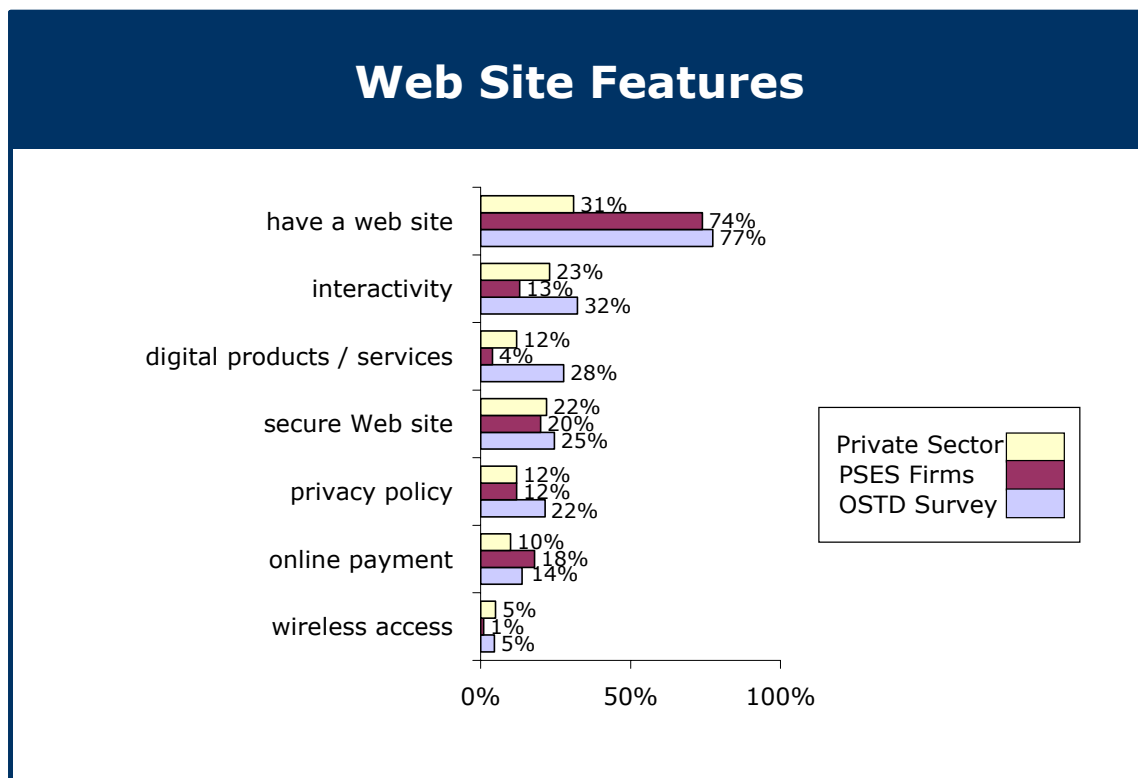


## Organizations with Web Sites and their Features

Seventy-seven percent of firms reported having their own web site. However, most web sites do not have e-commerce capabilities. Only 32% have interactivity, 28% offer digital products / services, 25% have a secure web site and 14% allow online payment.

Figure 36 compares this data with Statistics Canada's Survey of Electronic Commerce and Technology 2002<sup>14</sup> results.

**Figure 36: A Comparison of Web Site Features Across Different Sectors**



Note that the training and development firms represented in this study are ahead of those represented in the Statistics Canada survey in implementing all features except online payment where they fall between the PSES firms and the private sector. Digital products / services are offered by 28% of the firms compared to only 4% reported for PSES sector firms in the Statistics Canada survey.

The fact that 77% of firms have web sites indicates that these firms believe they need a web presence. It follows that they would likely be quite receptive to recommendations for enhancing the effectiveness of their web sites for e-business / e-commerce.

<sup>14</sup> Statistics Canada, *Survey of Electronic Commerce and Technology 2002*, Ottawa: April 2003.

### ***Costs of Developing and Operating a Web Site***

The costs reported by respondents for designing and developing their firm's web site varied from \$500 to well over \$50,000. Seventy-one percent of those reporting spent in the \$500 - \$10,000 range. Sixty percent reported doing their own design and development, 63% their own web site administration and maintenance, and 83% their own content management.

Annual operating costs were reported by 71% of respondents with web sites. These ranged from \$250 to over \$25,000. Sixty-five percent of those reporting spent in the \$250 - \$2,500 range.

These data indicate that the majority of firms do most of their web design, development, and maintenance in-house and on a relatively modest budget. It is perhaps not surprising that few of these web sites have e-commerce features. Given an apparent preference for low-budget, in-house deployed solutions, an off-the-shelf software package with a set of desirable e-commerce features would likely find a ready market with this group of firms.

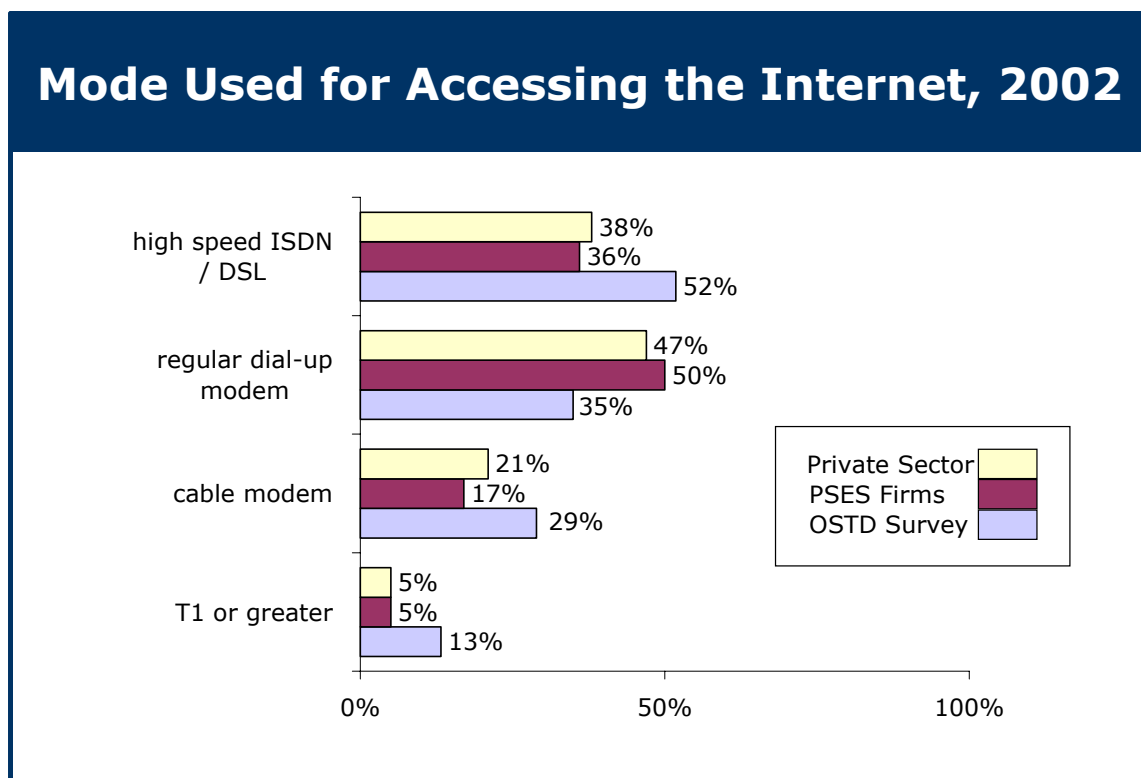
It's interesting to note that \$5,000 seems to be a threshold value in terms of what a majority firms are paying to develop a web site and \$2,500 the corresponding threshold value for annual operating costs.

## Type of Internet Access

An important result of this study is that 84% of the respondents report that their firms have broadband / high speed Internet access. A number of firms have more than one type of high speed connection and some also have dial-up connections in addition to high speed.

A comparison of the results of this study to Statistics Canada's Survey of Electronic Commerce and Technology 2002<sup>15</sup> results (Figure 37) indicates that this group of training and development firms' utilization of broadband / high speed Internet connections is considerably above that reported for the general PSES sector and the private sector. The use of regular dial-up modems is, by comparison, considerably lower.

Figure 37: A Comparison of Types of Internet Access in Different Sectors



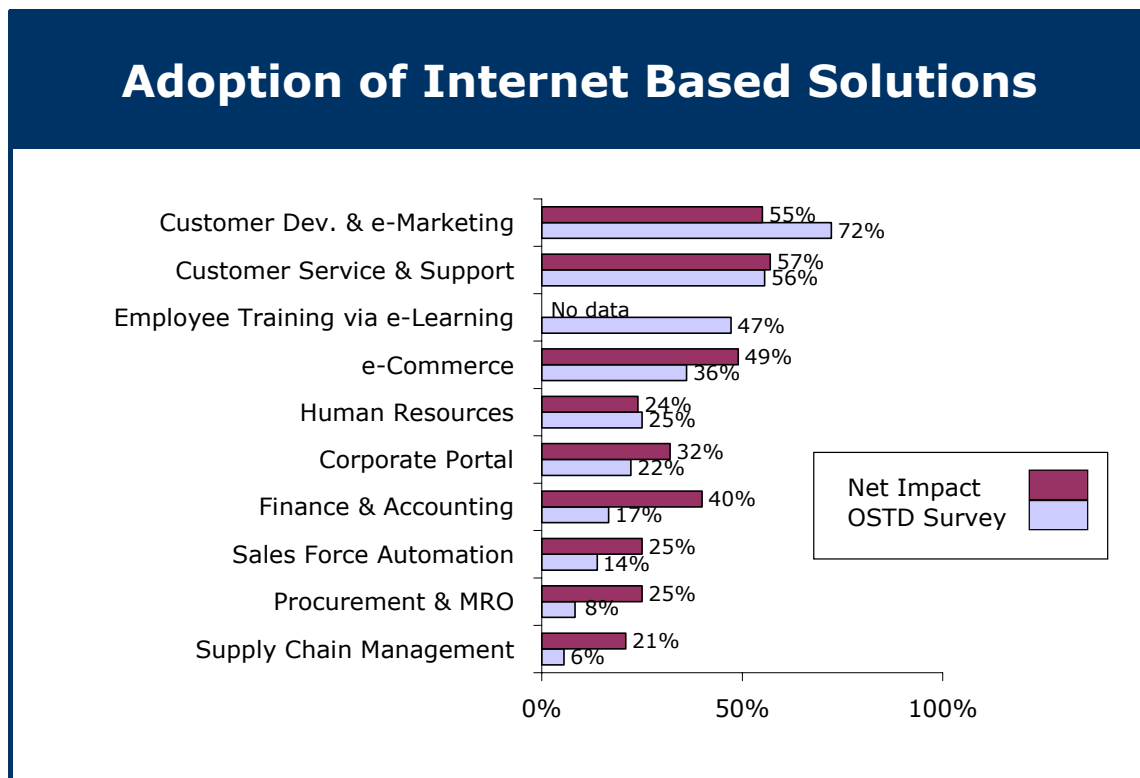
<sup>15</sup> *Survey of Electronic Commerce and Technology 2002*

### Use of Internet Based Business Solutions

Forty-four percent of respondents indicated that their firms engaged in e-business compared to 50% of the Net Impact study sample who indicated that they were currently using or implementing Internet business solutions (IBS). Of these, only 25% reported having a formal e-business plan, a widely acknowledged requirement for a successful e-business deployment strategy.

Customer development and e-marketing (72%) was the main IBS implemented followed by customer service and support (56%). Forty-seven percent reported implementing employee training via e-learning. A comparison of the adoption of various IBS between this sample and the small and medium-sized enterprises (SMEs) represented in the Net Impact Canada Study<sup>16</sup> is provided in Figure 38.

**Figure 38: A Comparison of the Adoption of IBS with SME Sector**



Given the small size of the majority of firms in this survey it is not surprising that IBS related to business processes, for example, human resources, sales force automation, are only implemented by a relatively small percentage of the firms.

<sup>16</sup> Net Impact Study Canada

### ***e-Commerce Capabilities***

Seventy percent of the respondents who reported that their organizations were engaged in e-business (31% of the total respondents) also indicated that their organization had an e-commerce capability where e-commerce was defined as the “capability of selling goods and services over the Internet.” This 31% rate of utilization of e-commerce is higher than the 21% reported in the Statistics Canada<sup>17</sup> data for 2002 for PSES firms and the 8% reported for private sector firms.

A majority of these organizations (65%) realize from 1 – 25% of their gross sales via the internet. Eight percent report that they realize 76 – 100% of their gross sales via the Internet. Twenty-five percent of this group report gross sales of over 50% directly to consumers. Most Internet sales are made within Canada.

All respondents (100%) who reported having an e-commerce capability indicated that they used the Internet to purchase goods and services compared to 46% of PSES firms and 32% of private sector firms as reported by Statistics Canada<sup>18</sup>. However, this represents only 31% of the total sample responding and no data are available from the larger sample as this question was not asked of all respondents.

### ***Reasons / Benefits for Engaging in e-Business***

The main reason for conducting business on the Internet was to “reach / attract new customers” (86%). Other reasons mentioned by a majority of respondents included:

- remain competitive with other organizations;
- better coordination with customers / suppliers; and,
- improved revenue / more sales.

### ***Barriers to Using e-Business***

The main barriers to using e-business reported were a cluster consisting of “time required to implement”, “cost of new infrastructure” and “uncertain return on investment.”

A comparison of results from this study to those obtained from the Net Impact<sup>19</sup> study for SME firms having from 50 – 99 employees is provided in Figure 39.

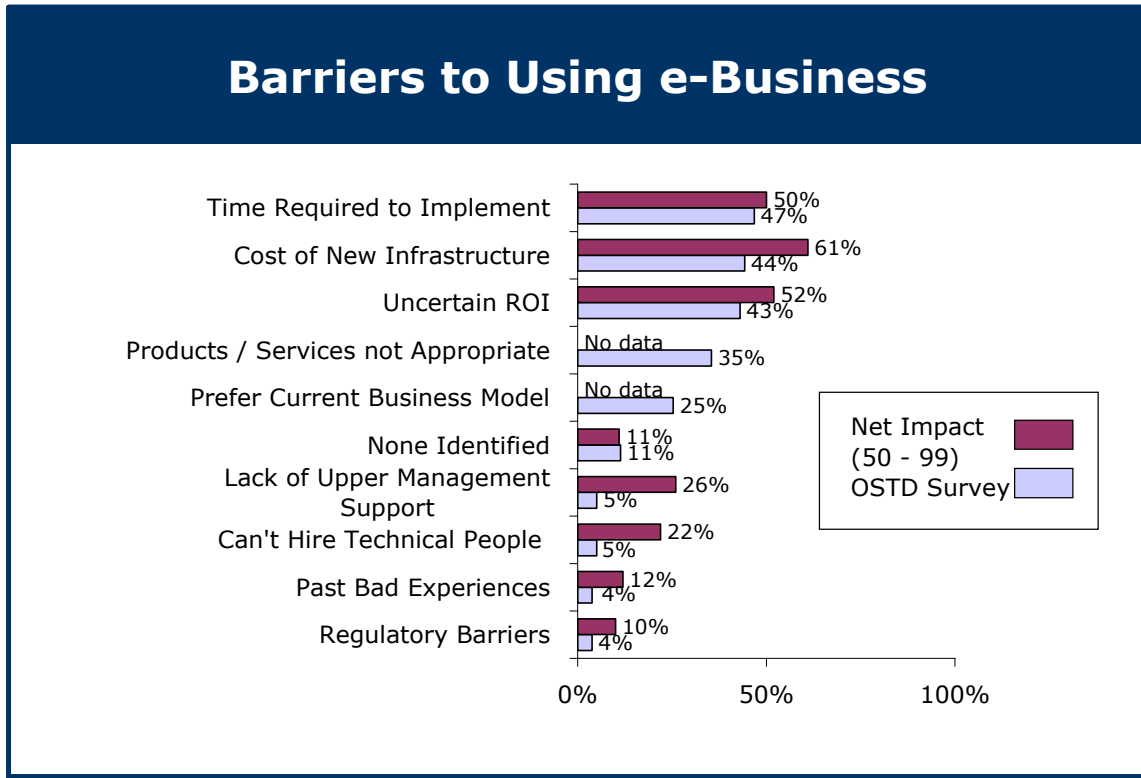
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<sup>17</sup> *Survey of Electronic Commerce and Technology 2002*

<sup>18</sup> *Ibid.*

<sup>19</sup> *Net Impact Study Canada*

**Figure 39: Comparison of Barriers to Using e-Business**

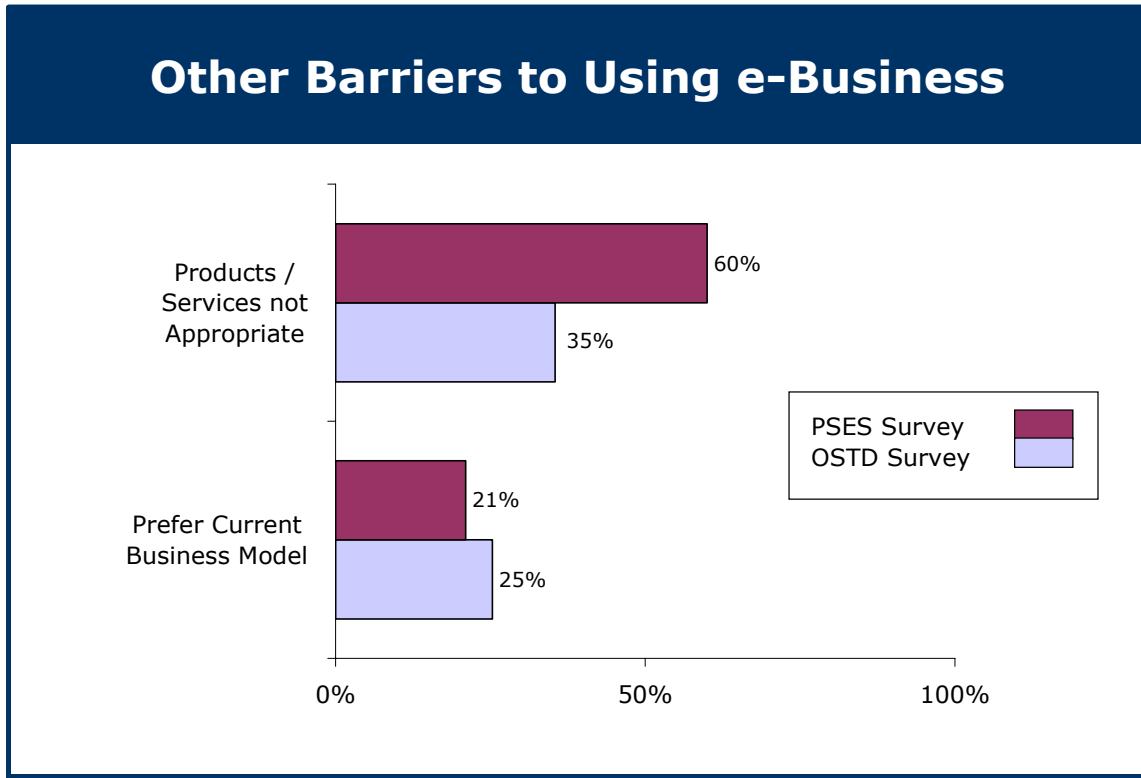


Note that the top three barriers are the same cluster for both groups.

No data was available from the Net Impact survey on the barriers “products / services not appropriate” and “prefer current business model.” Questions relating to these barriers were asked in the Industry Canada PSES survey<sup>20</sup>. A comparison with this data is provided in Figure 40.

<sup>20</sup> *Private Sector Educational Services in Canada*

Figure 40: Other Barriers to Using e-Business



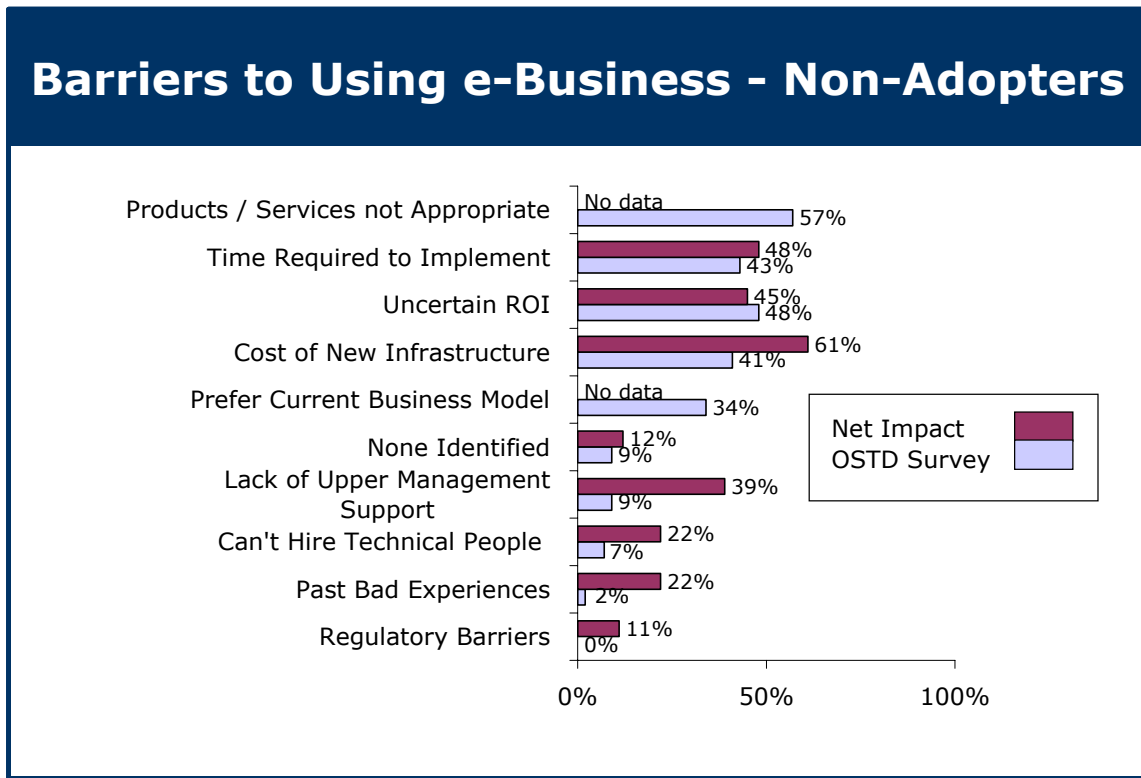
Note that only about half as many respondents (35%) identified “products / services not appropriate” as a barrier to the adoption of IBS in this study compared to 60% who indicated this as a barrier in the Industry Canada PSES Survey<sup>21</sup>.

The Net Impact Study<sup>22</sup> examined the *perceived* barriers to adoption of IBS by non-adopters compared to the *actual* barriers encountered by adopters during the implementation process. A comparison of data from this study with the Net Impact study is provided in Figures 41 and 42.

<sup>21</sup> *Private Sector Educational Services in Canada*

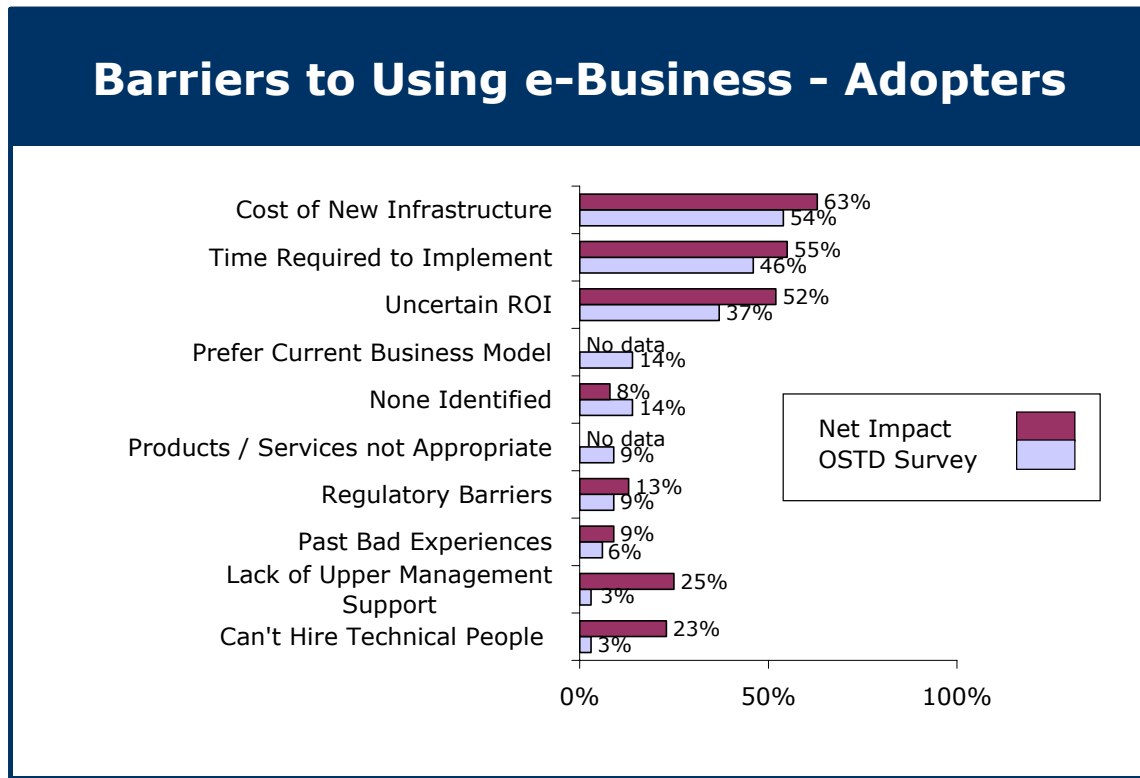
<sup>22</sup> *Net Impact Study Canada*

Figure 41: Barriers Perceived by non-Adopters





**Figure 42: Barriers Encountered by Adopters**



For non-adopters in the present study, the main barrier identified by 57% of respondents is the perception that their products and services offered are not appropriate for e-business / IBS. This is followed by the three barriers of time to implement, uncertain ROI, and cost of new infrastructure, which are also the top barriers identified for non-adopting SMEs in the Net Impact study<sup>23</sup>. The fifth barrier identified is that respondents prefer their current business model.

These results indicate that any program aimed at increasing the utilization of IBS among non-adopters in the training and development sector must directly address the perception that certain products and services are not amenable to IBS solutions as well as the perception that conventional business models will prevail in the future.

There is high agreement between the adopters in both this study and the Net Impact study<sup>24</sup> as both groups identify the same top three barriers of “cost of new infrastructure”, “time to implement”, and “uncertain ROI” in the same order. As indicated in the Net Impact Study<sup>25</sup> this indicates “a need to clarify the costs and benefits of IBS,” At the same time, there is an apparent need to develop a

<sup>23</sup> *Net Impact Study Canada*

<sup>24</sup> *Ibid*

<sup>25</sup> *Ibid*

template or model for a “standard” IBS implementation in the “typical” training and development firm.

Two barriers identified in the Net Impact study<sup>26</sup> and not found to be of much concern in this study are “lack of upper management support” and “can’t hire technical people”. This is not surprising given that most of the respondents were the senior management in their firms and the firms themselves were mostly very small.

### ***Measuring the Impact of IBS***

In common with the Net Impact study<sup>27</sup>, this study found that only a few firms used tangible metrics to measure the performance of IBS. The most common were:

- number of sales / comparison of online sales with other sales;
- number of visits to the web site;
- calls / e-mails from potential clients;
- number of online orders; and,
- customer satisfaction measures.

This indicates an apparent need to develop performance measures as part of any IBS implementation model or template and to make such measures an integral part of the implementation.

### ***Future Plans to Invest in IBS***

Forty-three percent of respondents indicated that they have no current plans to invest in developing e-business / e-commerce capabilities (Figure 22). Another 33 % are thinking about investing, but are not sure when. This means that 3 out of 4 firms that responded have no immediate plans to increase or develop their e-business capabilities. As stated in the Net Impact Study,

The challenge is to demonstrate that IBS adoption makes good business sense and that it is critical to Canada’s economic well-being, by providing evidence of bottom-line impact on firms<sup>28</sup>.

This appears to be particularly true for SMEs in the training and development sector.

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<sup>26</sup> Ibid

<sup>27</sup> Ibid

<sup>28</sup> *Net Impact Study Canada*, p. 1

### ***Firms Involved in e-Learning***

Forty-five percent of respondents indicated that their organizations sold e-learning products and services. Of these, 53% reported receiving more than 50% of their gross revenues from the sale of these products and services indicating that these firms are mainly to exclusively involved in offering e-learning products and services. This represents about 24% of the firms responding.

Sixty-eight percent of the organizations classified themselves as “learning content providers” while the remaining 32% were divided evenly between “learning services” and “learning infrastructure solutions” with 16% each.

An interesting finding is that some 63% of respondents reported outsourcing part or all of their e-learning capability with each of the specialty areas typically outsourcing to acquire capabilities in the other two areas. This result suggests that there is an opportunity to develop mutually beneficial relationships among the firms in this sector. What would appear to be needed is a mechanism for identifying and matching the complimentary capabilities among these training and development firms on a project by project basis. The New Brunswick Training Group Inc. (<http://www.nbtraining.org/en/index.html>) is one example of such a mechanism.

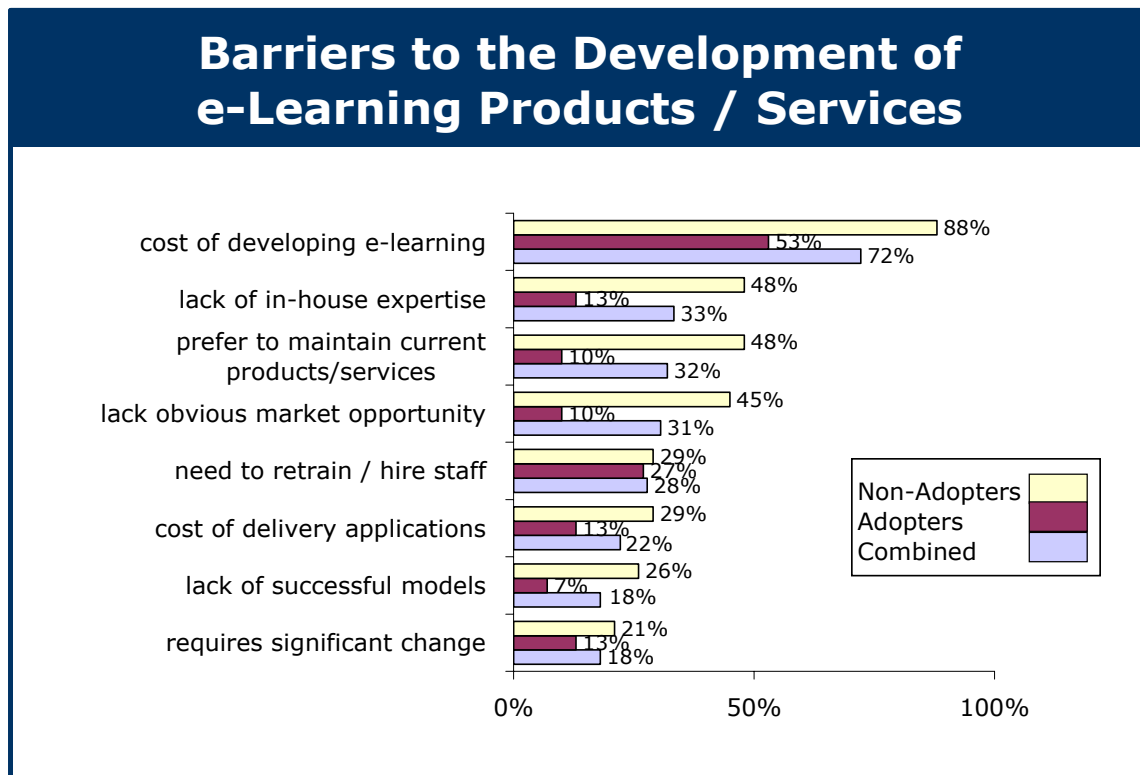
The top three reasons / benefits reported for offering e-learning products and services were:

- market for e-learning has strong projected growth (79%);
- reach / attract new customers (74%); and,
- improved revenue / more sales (65%).

### Barriers as Reported by Adopters and Non-Adopters of e-Learning

Seventy-two respondents (86% of the total sample) responded to the question that asked them to check all the barriers to the development of e-learning products and / or services that their organization has identified. Of these 30 responses were from firms that were adopters and 42 were from non-adopters of e-learning. Figure 43 summarizes the differences between the two groups and also indicates the results of the combined responses.

Figure 43: Barriers reported by Non-adopters and Adopters of e-Learning



For adopters, the top two actual barriers are *cost of developing e-learning* (53%) and *need to retrain / hire staff* (27%). All other barriers were mentioned by less than 15% of adopters.

Eighty-eight percent of non-adopters perceive the *cost of developing e-learning products / services* as the greatest barrier to becoming involved in e-learning. Other barriers perceived as important by some 50% of respondents include:

- lack of in-house expertise (48%);
- prefer to maintain current products / services (48%); and,
- lack obvious market opportunities (45%).

Other perceived barriers were:

- need to retrain / hire staff (29%);
- cost of delivery applications (29%);
- lack of successful models (26%); and,
- requires significant change (21%)

The top ranking barrier for both groups is the cost to develop e-learning capacity. The need to hire / retrain staff is the second most important barrier for adopters while the complementary lack of in-house expertise is viewed as the second most important barrier by non-adopters. A preference to retain their current business model and the lack of obvious market opportunity are other high ranking barriers perceived by non-adopters.

Sixty-eight percent of those responding have no immediate plans to increase or develop their e-learning capabilities. As with e-business adoption, the main challenge appears to be to clearly show the benefits and potential return on investment from developing e-learning products and services. This is a necessary, but not sufficient condition because the cost of developing e-learning products and services is perceived as a major barrier by both adopters and non-adopters. Some type of financial incentive to invest in developing e-learning products and services needs to be considered to address this issue as part of any capacity building initiative for the training and development sector. As well, there is an apparent need for both training initiatives for existing staff and educational programs to provide a pool of potential employees with e-learning qualifications, both of which might be subsidized in some way to allow small firms to participate in / benefit from them.

It also appears that any information plan aimed at promoting adoption of e-learning should emphasize the market opportunities and growth in very explicit ways including the use of case studies from firms that have successfully added e-learning products and services to their offerings.

### ***Awareness of Government of Canada Programs / Services***

The Government of Canada provides or sponsors a number of programs designed to build capacity in the SME and PSES sector. Based on the results of this survey, only a few of these are well known to small firms in the training and development sector. MERX and Strategis were known to 64% and 50% of respondents, respectively. Canarie Inc., Office of Learning Technologies, and the Training Solutions site were known to about 1 in 4 respondents. Only 35% of respondents have actually participated in / benefited from MERX and only 20% have used Strategis. Fewer than 10% have used any of the other services / resources available.

These results indicate a need for additional awareness and educational programs targeting this sector to make these small firms more aware of the range of programs that are available to potentially assist them with capacity building and business development activities. For example, the Ontario Society for Training & Development (OSTD) might add a section on these programs to its web site as is currently done with the MERX Spotlight feature and include more workshops dealing with capacity building in its professional development programs.

### ***Initiatives to Stimulate Investment and Capacity Building***

All respondents (n=84) responded to a question to select from a list of initiatives those that, in their opinion, would stimulate investment and building capacity by Canadian commercial education and training firms. Results, listed in descending order, were:

- program(s) to subsidize employee training / retraining (60%);
- a Canadian commercial education and training sector online portal (51%);
- a Canada-wide industry association (46%);
- better access to capital (45%); and,
- a national broadband connectivity / infrastructure program (42%).

Fifteen respondents provided suggestions for what the OSTD might do to promote e-business and e-learning. Suggestions provided can be classified broadly as *facilitate access to funding, tools and expertise* and *provide a vehicle for information sharing / dissemination, partnering and marketing*.

Thirty-five percent of respondents provided a ranking of initiatives that they thought would have the highest probability of success for capacity building. The top five initiatives listed in rank order were:

- subsidized employee training;
- Canada-wide industry association;
- national broadband program;
- better access to capital; and,
- a training and development sector online portal.

Viewed together, the results of these three questions indicate a clear direction for capacity building initiatives based on a high degree of consensus among respondents.

## Conclusions and Recommendations

It is rather startling that 76% of the education and training firms responding to this survey have no immediate plans to develop / enhance their e-business capabilities and 68% have no current plans to develop / enhance their e-learning capabilities. This is an obvious challenge that must be addressed by initiatives aimed at increasing awareness and building capacity for this sector.

Removing barriers and creating incentives are the main challenges that need to be addressed to encourage education and training firms to develop or enhance their e-business and e-learning capacity.

Results of this study provide an indication of what the main barriers are. They also indicate initiatives that respondents think would promote capacity building for e-business and e-learning.

### ***e-Business***

A key barrier for the non-adopters of e-business strategies was the perception that their products / services are not appropriate. This perception combined with the cluster of *cost of new infrastructure, time required to implement e-business, and, uncertain return on investment* delineate the major issues to be addressed in any communications and information strategy to promote adoption.

Creating incentives / motivation to adopt e-business strategies is the more positive aspect of the issue. Almost 9 in 10 respondents state that their main reason for conducting business on the Internet was to *reach / attract new customers*. Other reasons selected by a majority of respondents included:

- remain competitive with other organizations;
- better coordination with customers / suppliers; and,
- improved revenue / more sales.

Documenting these perceived benefits through case studies profiling firms in the training and development sector would likely have a positive impact. Similarly, case studies demonstrating the positive financial returns to be derived from implementing Internet business solutions (IBS) in the sector as outlined in the Net Impact Canada study<sup>29</sup> might motivate firms to take action.

### ***e-Learning***

The main barrier to be addressed in encouraging firms to become involved in e-learning is the real and perceived cost of developing e-learning products and services which was mentioned by a majority of adopters and non-adopters alike. The pair of *lack of in-house expertise* and *the need to hire / retrain new staff* are

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<sup>29</sup> *Net Impact Canada Study*

other important barriers for non-adopters as is the *lack of obvious market opportunity*. Almost half of the non-adopters give as a reason for not becoming involved in e-learning the fact that they *prefer to maintain current products / services*. In other words, “if it ain’t broke, then why fix it”, one of the most common objections encountered in trying to promote organizational change initiatives. These are the main barriers to be addressed in any strategy to promote adoption of e-learning products and services in the education and training sector.

Positive factors promoting the adoption of e-learning are those mentioned by adopters that include:

- market for e-learning has strong projected growth;
- reach / attract new customers;
- improved revenue / more sales;
- customers expect it; and,
- to remain competitive with other organizations.

Documenting these factors using case studies featuring small education and training firms would likely have a positive impact, especially for ones showing increased numbers of customers and more sales. This sector needs some well-publicized success stories to rekindle the interest in e-learning that has suffered from the bubble-burst in the general information and communications technology (ICT) sector.

This study has given voice to a sector of SMEs that has not been well-represented in larger surveys, namely small private sector firms engaged in the delivery of education and training services. The results illuminate a sector that is very advanced in its use of ICT in general, but not generally willing or able to make significant commitments to developing or enhancing its e-business and e-learning capabilities under present conditions.

## **Recommendations**

### ***Recommendation 1***

*It is recommended that the Canadian Society for Training & Development (CSTD) take a leadership role, in cooperation with Industry Canada and other stakeholders, in finding ways to advance the implementation of the following initiatives in the Canadian private sector educational services (PSES) sector:*

- *program(s) to subsidize employee training / retraining;*
- *a Canadian commercial education and training sector online portal;*
- *a Canada-wide industry association;*
- *better access to capital; and,*
- *a national broadband connectivity / infrastructure program.*



Five initiatives to stimulate investment and capacity building by the sector received strong support by respondents to the survey:

- program(s) to subsidize employee training / retraining;
- a Canadian commercial education and training sector online portal;
- a Canada-wide industry association;
- better access to capital; and,
- a national broadband connectivity / infrastructure program.

Each of these will be discussed briefly.

### ***Program(s) to subsidize employee training / retraining***

Sixty percent of respondents selected *programs to subsidize employee training / retraining* as an initiative that would stimulate investment and capacity building in the sector. This initiative was ranked first by respondents in terms of initiatives most likely to succeed.

Recommendation four of the Canadian e-Business Initiative's *Fast Forward 4.0*<sup>30</sup> report which "recommends that the federal government and the private sector commit to meet the human resource needs of SMEs by expanding programs like eCorps and in-house training" (p. 11) is consistent with this initiative.

### ***A Canadian commercial education and training sector online portal***

A Canadian commercial education and training sector online portal was described in the survey as including the following features; products and services showcase, news, press releases, virtual meeting tools, etc. Fifty-one percent of respondents selected this as an initiative to stimulate capacity building.

New Brunswick Training Group Inc. (<http://www.nbtraining.org/en/index.html>), Alliance numériqueQC (<http://www.numeriqc.ca/>) and eLearningBC (<http://www.elearningbc.ca/>) are examples of provincially-based initiatives to develop industry sector portals. The Canadian eLearning Enterprise Alliance, CeLEA, (<http://www.celea.ca/>) is a new organization representing Canada's eLearning industry. The essential elements of these and other models should be incorporated into a national online portal that is inclusive of the entire Canadian training and development sector.

### ***A Canada-wide industry association***

The creation of a Canada-wide industry association was chosen as an initiative to stimulate capacity building by 46% of respondents and ranked second overall when they were asked to choose those initiatives most likely to succeed.

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<sup>30</sup> Canadian e-Business Initiative, *Fast Forward 4.0: Growing Canada's Digital Economy*, May 2003. Available Online: <http://cebi.ca/Public/Team1/Docs/ff4.pdf>

This initiative has already been acted upon. Effective July 1, 2003, the OSTD was transformed into a new, national association of training and development professionals, the Canadian Society for Training and development, CSTD (<http://www.cstd.ca/index.html>). CSTD aims to help boost the productivity and profitability of Canadian businesses by encouraging better training and professional development of employees and executives across the country.

The Canadian e-Business Initiative's *Fast Forward 4.0*<sup>31</sup> report "recommends that industry associations and government work in partnership to develop sectoral assessments and action plans tailored to sectoral needs" (p. 12).

### ***Better access to capital***

Better access to capital was selected by 45% of respondents and ranked fourth in terms of initiatives most likely to stimulate capacity building. However, there was no follow up question that asked for specific recommendations.

It's worth noting that *cost of new infrastructure* was indicated by respondents who were adopters as the major barrier to adopting e-business strategies and to developing e-learning products and services. This was also the top barrier identified in the Net Impact survey<sup>32</sup>.

The Canadian e-Business Initiative's *Fast Forward 4.0*<sup>33</sup> report notes that

*Tax and regulatory policies have an enormous effect on a firm's investment decisions. Canada must continue to create an environment that encourages SMEs to innovate and adopt technology by meeting their financing needs (p. 15).*

### ***A national broadband connectivity / infrastructure program***

Evidence of the importance of broadband access to this sector is the fact that 84% of respondents reported having some type of broadband Internet access. Broadband access is a critical precondition to the adoption of Internet business solutions (IBS) as well as to the widespread deployment of e-learning products and services.

The Canadian e-Business Initiative's *Fast Forward 4.0*<sup>34</sup> report states the case well.

*...Broadband will play an extremely important role in future e-business development and will be a key enabler for SME adoption of IBS.*

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<sup>31</sup> *Fast Forward 4.0: Growing Canada's Digital Economy*

<sup>32</sup> *Net Impact Study Canada*

<sup>33</sup> *Fast Forward 4.0: Growing Canada's Digital Economy*

<sup>34</sup> *Ibid.*

*Ubiquitous and affordable access to broadband networks will permit more efficient use of time spent online and will allow firms to develop more innovative and sophisticated business applications. A broadband telecom infrastructure must become the universal platform that consumers and businesses use to access the Internet. Within this context, SME e-business adoption strategies are a critical aspect to economically sustainable broadband deployment (p. 19).*

## **Recommendation 2**

*It is recommended that a series of firm-level case studies of e-business and e-learning adopters be conducted as a follow-up to this survey to provide a more in-depth look at some of the key findings with a view to determining how to encourage more PSES firms to adopt e-business and e-learning solutions.*

As discussed above, documenting the actual benefits to PSES firms that have adopted e-business and / or e-learning strategies through case studies profiling a sample of these firms would likely encourage the adoption of these strategies by other firms in this sector.

## APPENDIX A

### Private Sector Educational Services E-Business Questionnaire

#### Survey Objective

This study will assess the extent to which e-business and e-learning strategies have been adopted by the Canadian commercial education and training community to achieve their business objectives and to identify factors that influence the use / non-use of these approaches.

#### Background

This project is being conducted by the Ontario Society for Training and Development (OSTD).

Your responses are confidential and the results of this questionnaire will be reported as aggregate data only. No individual or organization will be identified in the results.

We are asking for your name and contact information in order to be able to verify the validity of the data reported should the need arise.

Words marked with an asterisk\* are defined in the attached **Definitions** section.

Please complete and return this questionnaire by January 31, 2003.

#### A. Contact Information

Name \_\_\_\_\_

Title/Position \_\_\_\_\_

Organization \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_ Postal Code \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_ e-mail \_\_\_\_\_

#### B. Nature of Organization / Business

1. Canadian commercial education and training firms are privately owned or operated, either incorporated or not, and primarily engaged in providing education and training programs, products and services. Does your organization fit this definition?
  - a. \_\_\_ yes – Please continue with this questionnaire.
  - b. \_\_\_ no – Please **do not** complete this questionnaire. Thanks for your interest.

2. Approximately how many full-time employees does your organization have?
  - a.  0 b.  1-9 c.  10-19 d.  20-49 e.  50-99 f.  100-299
  - g.  300-499 h.  500+
  
3. Which of the following education / training products and services does your organization provide? Check all that apply.
  - a.  needs assessment
  - b.  instructional design
  - c.  curriculum / content development
  - d.  train the trainer
  - e.  industrial and corporate training
  - f.  training in new technologies
  - g.  soft skills training
  - h.  training simulations
  - i.  evaluation
  - j.  English or French as a second language
  
4. Please list any other product(s) or service(s) not listed in question 3 that are offered by your organization.
  
5. Which market segments does your organization sell to? Check all that apply.
  - a.  K - 12
  - b.  Postsecondary (colleges and universities)
  - c.  Corporate (private sector businesses)
  - d.  Government (public sector - various levels)
  - e.  Military
  - f.  Individual (Consumer, B2C\*)
  
6. Please list any other market segment(s) not listed in question 5 that your organization sells to.
  
7. What are the geographical markets that your organization sells to? Check all that apply.
  - a.  Canadian market (all / most provinces)
  - b.  Ontario market
  - c.  Quebec market
  - d.  United States, US
  - c.  European Union, EU
  
8. Please list any other geographical market(s) not listed in question 7 that your organization sells to.
  
9. What is / are the primary delivery mode(s) for your organization's products and services? Check all that apply.
  - a.  classroom (instructor-led, face-to-face)
  - b.  multimedia - interactive CBT, CD-ROM, DVD
  - c.  textbooks, manuals, workbooks
  - d.  teleconferencing / interactive telephone training
  - e.  videoconferencing / interactive video training
  - f.  videotapes, film, CD-ROM (non-interactive)
  - g.  virtual classroom with instructor (scheduled, web-based e-learning)
  - h.  web-based self-study e-learning with / without asynchronous conferencing

10. Please list any other delivery mode(s) not listed in question 9 that your organization uses.

### C. Technology Profile

11. Which of the following information and communications technologies does your organization currently use? Check all that apply.
- a.  personal computers, workstations or terminals
  - b.  e-mail\*
  - c.  wireless network\*
  - d.  Internet\*
  - e.  intranet\*
  - f.  extranet\*
  - g.  Electronic Data Interchange (EDI)\* not on the Internet
  - h.  Electronic Data Interchange (EDI)\* on the Internet
  - i.  network / information security technology (e.g., firewall, anti-virus software, access control)
12. Please list any other information and communications technology(ies) not listed in question 11 that your organization currently uses.
13. What percentage of the people in your organization have direct access to a personal computer / workstation / terminal for their work?
- a.  0 % b.  1 - 25% c.  26 - 50 % d.  51 - 75 % e.  76 - 100%
14. What percentage of the people in your organization have direct access to e-mail\* for their work?
- a.  0 % b.  1 - 25% c.  26 - 50 % d.  51 - 75 % e.  76 - 100%
15. What percentage of the people in your organization have direct access to the Internet\* for their work?
- a.  0 % b.  1 - 25% c.  26 - 50 % d.  51 - 75 % e.  76 - 100%
16. What percentage of the people in your organization regularly use a laptop\* / notebook\* computer for their work?
- a.  0 % b.  1 - 25% c.  26 - 50 % d.  51 - 75 % e.  76 - 100%
17. What percentage of the people in your organization regularly use a wireless handheld device\* (e.g., BlackBerry) for their work?
- a.  0 % b.  1 - 25% c.  26 - 50 % d.  51 - 75 % e.  76 - 100%
18. Does your organization have its own web site\*?
- a.  Yes. **Please go to question 20.**
  - b.  No. **Please answer question 19.**
19. Please list the main reason(s) why your organization does not have its own web site. Then, **please continue with question 25.**

20. Which of the following does your organization's web site offer? Check all that apply.
- a.  online payment\* (complete transaction and payment online)
  - b.  interactivity\* (two-way communication)
  - c.  digital products or services\*
  - d.  secure Web site\*
  - e.  privacy policy statement
  - f.  access via wireless mobile device\*
21. Please list any feature(s) or capability(ies) of your organization's web site not listed in question 20.
22. Which of the following services involved in setting up and operating a Web site are performed in-house by people in your organization? Check all that apply.
- a.  domain name registration
  - b.  web site design and development
  - c.  web site administration and maintenance
  - d.  web site content management
  - e.  web site hosting
  - f.  web site security
  - g.  web site user statistics
23. What was the approximate cost of designing and developing your organization's web site to the point of going "live" on the Internet? Please itemize specific cost components if possible.
24. What is the approximate cost, on an annual basis, for your organization's ongoing web site operations? Please itemize specific cost components if possible.
25. Which of the following methods does your organization use to access the Internet? Check all that apply.
- a.  regular dial-up telephone with a standard modem
  - b.  cable modem\*
  - c.  high speed ISDN\* / DSL\* line
  - d.  T1 line\* or greater
  - e.  do not know
26. Does your organization have its own IT\* (Information Technology) department or unit?
- a.  yes
  - b.  no

#### **D. E-Business / E-Commerce**

27. E-business\* is defined as using the Internet to conduct business. Does your organization engage in e-business?
- a.  yes
  - b.  no – **Please go to question 44.**
28. Does your organization have a formal e-business strategy or plan?
- a.  yes
  - b.  no

29. What types of e-business applications or Internet business solutions\* (IBS) has your organization implemented? Check all that apply.
- customer development and e-marketing\*
  - customer service and support\*
  - e-commerce\* (including B2B\*)
  - finance and accounting\*
  - human resources\*
  - procurement and maintenance, repair and operation (MRO)\*
  - sales force automation\*
  - supply chain management\*
  - enterprise information portal\*
  - employee training via e-learning\*
30. Please list any e-business applications or Internet business solutions (IBS) not listed in question 29 that your organization has implemented.
31. E-commerce\* can be defined as the capability of selling goods and services over the Internet. Does your organization use the Internet for selling goods or services with or without online payment?
- yes
  - no – **Please go to question 44.**
32. Please list the goods and / or services that your organization sells over the Internet.
33. What percentage of your organization's gross sales is conducted over the Internet with or without online payment?
- 0 %
  - 1 – 25%
  - 26 – 50%
  - 51 – 75 %
  - 76 – 100 %
34. What percentage of your organization's Internet sales is directly to consumers (B2C\*)?
- 0 %
  - 1 – 25%
  - 26 – 50%
  - 51 – 75 %
  - 76 – 100 %
35. What percentage of your organization's Internet sales is to customers located outside of Canada?
- 0 %
  - 1 – 25%
  - 26 – 50%
  - 51 – 75 %
  - 76 – 100 %
36. Which of the following features are integral to your organization's e-commerce capability? Check all that apply.
- capability for a customer to order goods / services online
  - online transaction processing
  - SSL Certificate, which encrypts data and prevents hacking
  - accept credit cards for online sales
  - online store / catalogue, where your goods / services are listed with or without a "shopping cart"
  - servicing customer inquiries
  - separate e-mail confirmation of all online transactions
37. Please list any features not listed in question 36 that are part of your organization's e-commerce capability.



38. Does your organization use the Internet to purchase goods or services with or without online payment?
- yes
  - no
39. Does your organization outsource\* to acquire any part of its e-business / e-commerce capability?
- yes – **Please answer question 40.**
  - no – **Please go to question 41.**
40. Please list which part(s) of your organization's e-business / e-commerce capability are outsourced.
41. What are the reasons / benefits why your organization is conducting business over the Internet? Check all that apply.
- better coordination with customers / suppliers
  - improved revenue / more sales
  - lower cost of goods sold (COGS)
  - reach / attract new customers
  - reduce sales, general and administrative (SGA) expenses
  - reduced time to market
  - remain competitive with other organizations
  - takes less time to complete transactions
  - enables partnering / collaboration with other organizations
  - no benefits identified to date
42. Please list any other reasons / benefits not listed in question 41 that your organization has for conducting business over the Internet.
43. What indicators / criteria does your organization use to measure the success of its e-business initiatives?
44. Is your organization planning to invest additional resources in developing / upgrading / expanding its e-business / e-commerce capabilities?
- yes, during 2003
  - yes, but not sure when
  - no current plans to invest in developing / upgrading / expanding
45. What barriers to the use of e-business have been identified by your organization? Check all that apply.
- cost of new infrastructure
  - time required to implement e-business
  - can't hire people with necessary technical skills
  - regulatory barriers
  - bad experiences in the past
  - lack of upper management support / organizational inertia
  - uncertain return on investment
  - products and/or services offered are not appropriate for e-business
  - prefer to maintain our current business model
  - none identified
46. Please list any other barriers to the use of e-business not listed in question 45 that your organization has identified.

## E. E-Learning

47. Does your organization sell e-learning\* products and / or services?
- yes
  - no – **Please go to question 55.**
48. What approximate percentage of your organization's gross revenues is derived from the sale of e-learning products and services?
- 0 %
  - 1 – 25 %
  - 26 - 50 %
  - 51 – 75 %
  - 76 – 100 %
49. Which category best describes your organization's e-learning products and services?
- Learning Services - services including educational consulting, technical consulting, mentoring, facilitating, and other related tasks in support of e-learning enterprises and their customers
  - Learning Content – a content provider that captures and transforms knowledge and expertise content into courseware and learning objects, and markets and delivers the courses and course modules
  - Learning Infrastructure Solutions – including authoring tools, learning management systems, collaborative tools, and other related e-learning development / management tools
50. If there is another category that better describes your organization's e-learning products and services, please describe it.
51. Does your organization outsource\* to acquire any part of its e-learning capability?
- yes – **Please answer question 52.**
  - no – **Please go to question 53.**
52. Please list which part(s) of your organization's e-learning capability are outsourced.
53. What are the reasons / benefits why your organization offers e-learning products and / or services? Check all that apply.
- improved revenue / more sales
  - reach / attract new customers
  - remain competitive with other organizations
  - customers expect it
  - market for e-learning has strong projected growth
54. Please list any reasons / benefits not listed in question 53 related to why your organization offers e-learning products and / or services.
55. Is your organization planning to invest additional resources in developing / upgrading / expanding its e-learning capabilities?
- yes, during 2003
  - yes, but not sure when
  - no current plans to invest in developing / upgrading / expanding
56. What barriers to the development of e-learning products and / or services has your organization identified? Check all that apply.
- need to retrain existing staff or hire new staff

- b. \_\_\_ cost of developing e-learning products or services
- c. \_\_\_ prefer to maintain our traditional education / training products and services
- d. \_\_\_ lack of an obvious market opportunity
- e. \_\_\_ lack of in-house expertise
- g. \_\_\_ requires significant organizational change
- h. \_\_\_ lack of successful models / best practices to build from
- i \_\_\_ cost / lack of affordable rentable applications to facilitate delivery

57. Please list any other barriers to the development of e-learning products and / or services not listed in question 56 that your organization has identified.

58. What indicators / criteria does your organization use to measure the market success of its e-learning products and services?

## **F. PES Sector-wide Initiatives**

59. The Government of Canada offers / sponsors a number of resources / services / programs to help organizations on a sector-wide basis. Please check all of the following that you are aware of.

- a. \_\_\_ Industry Canada's Canadian Training Solutions Site  
<<http://strategis.ic.gc.ca/SSG/bp00416e.html>>
- b. \_\_\_ SourceCAN  
<<http://www.sourcecan.com/>>
- c. \_\_\_ Virtual Trade Show for Education and Training, a SourceCAN service that allows members to profile themselves and their products  
<<https://www.sourcecan.com/E/sb1410.cfm>>
- d. \_\_\_ Strategis, Canada's business and consumer site  
<<http://strategis.ic.gc.ca>>
- e. \_\_\_ COMET, online information service for Education & Training Providers  
<<http://strategis.ic.gc.ca/comet>>
- f. \_\_\_ Canarie Inc., Canada's Internet development organization  
<<http://www.canarie.ca>>
- g. \_\_\_ Office of Learning Technologies (OLT)  
<<http://olt-bta.hrdc-drhc.gc.ca>>
- h. \_\_\_ SME E-Business Information Toolkit  
<<http://strategis.ic.gc.ca/SSG/ee00237e.html>>
- i. \_\_\_ Canadian e-Business Initiative  
<<http://www.cebi.ca>>
- j. \_\_\_ MERX  
<<http://www.merx.bmo.com>>

60. Which of the resources / services / programs listed in question 59 has your organization actually participated in / benefited from?
- Industry Canada's Canadian Training Solutions Site
  - SourceCAN
  - Virtual Trade Show for Education and Training, a SourceCAN service that allows members to profile themselves and their products
  - Strategis, Canada's business and consumer site
  - COMET, online information service for Education & Training Providers
  - Canarie Inc., Canada's Internet development organization
  - Office of Learning Technologies (OLT)
  - SME E-Business Information Toolkit
  - Canadian e-Business Initiative
  - MERX
61. Please list any other resources / services / programs not listed in question 60 that your organization has participated in / benefited from.
62. Are there any other programs provided by any level of government and available on a sector-wide basis that you are aware of? Please list them.
63. In your opinion, which of the following initiatives would stimulate investment and building capacity for e-business and e-learning by Canadian commercial education and training firms? Check all that apply.
- Canada-wide Canadian commercial education and training Industry Association
  - national broadband\* connectivity / infrastructure development program
  - expanded / better access to capital for business development
  - program(s) to subsidize employee training / retraining
  - national standards / quality assurance program for e-business / e-learning
  - update university and college programs to produce more graduates with necessary e-business and e-learning knowledge and skills
  - a Canadian commercial education and training sector online portal including some of the following features: products and services showcase, news, press releases, virtual meeting tools, etc...
64. Please list any other initiatives that, in your opinion, would stimulate investment and building capacity for e-business and e-learning by Canadian commercial education and training organizations.
65. Please list any activities / initiatives that you would like to see the OSTD undertake to increase e-business and e-learning deployment in the education and training sector.
66. List up to three initiatives, in order of priority, from those provided in questions 70, 71, and 72, that you think would have the **greatest probability** of stimulating investment and capacity building in the sector.

***Thank you for taking the time to complete this questionnaire.***

***The results of this survey will be summarized on the OSTD web site in late spring 2003. You will receive e-mail notification if you have given us your e-mail address.***

## APPENDIX B - Definitions<sup>35</sup>

### **Broadband / High Speed Internet Connection**

A [high-speed](#), high-capacity data transmission [channel](#) that sends and receives information on [coaxial cable](#) or [fiber-optic](#) cable (which has a wider [bandwidth](#) than conventional telephone lines), giving it the ability to carry video, voice, and data simultaneously.

### **B2B (Business-to-Business)**

B2B is an [acronym](#) that describes business-to-business relationships or [applications](#). Many Web sites focus on B2B [solutions](#) that cater to a vertical market, such as healthcare or automotive. These sites are for businesses (think wholesale), and only other businesses can access them or make purchases.

### **B2C (Business-to-Consumer)**

An [acronym](#) that describes the thousands of [e-commerce](#) Web sites which sell products directly to the public (the consumer market). B2C is different from the [B2B](#) sector, and this distinction is important when comparing [Web sites](#). Each approach has its own business model, strategy, execution, and fulfillment.

### **Cable Modem**

A cable modem plugs into a cable TV network to provide Internet access, typically for homes or small businesses. It receives Internet data over the same type of cable that cable television uses. Cable modems provide more bandwidth than regular modems.

### **Customer Development and e-Marketing<sup>36</sup>**

Marketing applications automate activities such as marketing campaign management and planning, campaign execution, customer segmentation, list management, database marketing, direct marketing, telemarketing, marketing encyclopedia, electronic catalog, Web activity analysis, Web advertising, and personalization functions.

### **Customer Service and Support<sup>37</sup>**

A combination of technological development (the Internet being a primary factor), call centers and the Internet medium to maximize customer calls and requests to handle multiple modes of communication such as fax, email, and Internet in both live agent and automated formats, often integrated with customer databases.

### **Digital Products or Services<sup>38</sup>**

The Internet offers a wide variety of goods and services. Some goods and services can be ordered and delivered directly to your computer over the Internet. Such goods and services are called digital products and include products such as music, videos, gameware, computer software, online newspapers, consulting services, etc.

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<sup>35</sup> All definitions, except where otherwise noted, are taken from *NetLingo™: the Internet Dictionary*, Available Online: <http://www.netlingo.com/>

<sup>36</sup> Canadian e-Business Initiative, *Net Impact Study in Canada: the SME Experience*, A Preliminary Report, Nov. 2002. Available Online: <http://www.netimpactstudy.com/ca/pdf/canada-en.pdf>

<sup>37</sup> Ibid.

<sup>38</sup> Statistics Canada, *Electronic Commerce and Technology 2001 (Questionnaire)*. Available online: [http://www.statcan.ca/english/sdds/instrument/4225\\_Q1\\_V2\\_E.pdf](http://www.statcan.ca/english/sdds/instrument/4225_Q1_V2_E.pdf)

### **DSL (Digital Subscriber Line)**

DSL is a telecommunications service that uses the copper telephone wiring found in almost every home and office to provide a fast, always-on connection to the Internet. Special hardware attached at both ends of the line allows data to transmit at a far greater speed than standard telephone wiring can.

### **Domain name**

The [address](#) or [URL](#) of a particular [Web site](#), it is the [text](#) name corresponding to the numeric [IP address](#) of a computer on the Internet.

### **E-Business**

Any business that is deriving revenue at least in part from something "[electronic](#)," usually on the Internet. It also refers to a strategy or service that enables a business to do more business because of Internet-related technology.

### **E-Commerce**

Put simply, it means conducting business online. Selling goods and services, in the traditional sense, is possible to do electronically because of certain software programs that run the main functions of an e-commerce Web site, including product display, online ordering, and inventory management. The definition of e-commerce includes business activities that are business-to-business (B2B) and business-to-consumer (B2C).

### **E-Learning<sup>39</sup>**

E-learning is an umbrella term to describe the act of learning online. It refers to the use of Internet technologies to deliver a broad array of solutions that enhance knowledge and performance. It is based on three fundamental criteria:

1. E-learning is networked, which makes it capable of instant updating, storage/retrieval, distribution and sharing of instruction or information.
2. It is delivered to the end-user via a computer using standard Internet technology.
3. It focuses on the broadest view of learning – learning solutions that go beyond the traditional paradigms of training.

### **Electronic Data Interchange (EDI)**

EDI refers to the transfer of data between two or more companies, using networks and / or the Internet. EDI is an increasingly important and easy mechanism used by companies to buy, sell, and trade information. A standard format for exchanging business data, EDI saves messages as a [string](#) of data elements, each of which represents a singular fact (such as price or product model number). The parties who exchange EDI transmissions are called trading partners.

### **E-mail**

E-mail is mail that's electronically transmitted by your computer.

### **Enterprise Information Portal<sup>40</sup>**

An Enterprise Information Portal integrates access to information and applications from the company's IT systems and presents it to the user (employees, partners, suppliers) in a Web browser interface.

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<sup>39</sup> Marc J. Rosenberg, *e-Learning: Strategies for Delivering Knowledge in the Digital Age* (Toronto: McGraw-Hill, 2002), p. 28

<sup>40</sup> Canadian e-Business Initiative, *Net Impact Study in Canada*

## **Extranet**

An extranet is the (secure) connecting of two or more intranets. If you think of an intranet as a company's internal Web site which allows users inside the company to communicate and exchange information, now imagine connecting that virtual space with another company's intranet, thus allowing these two (or more) companies to share resources and communicate over the Internet in their own virtual space. This technology greatly enhances business to business communications.

## **Finance and Accounting<sup>41</sup>**

This refers to Internet-enabled enterprise resource planning applications that enable enterprises to manage financial and accounting information across the organization and interact with business partners, suppliers, and customers.

## **Human Resources<sup>42</sup>**

This refers to Internet-enabled enterprise resource planning applications that enable enterprises to manage human resource information across the organization.

## **Interactivity**

Interactivity allows a [user](#) to manipulate the outcome of certain events (for instance, by completing and submitting a form, ordering a product, or taking an [online](#) survey) within a two-way communications system that supports direct and continual responses.

## **Internet (the Net)**

The most important technological innovation of our generation, the Internet is actually a network of networks. It is a system of linked computer [networks](#), international in scope, that facilitates [data](#) transfer and communication services, such as remote login, file transfer ([FTP](#)), electronic mail ([e-mail](#)), [newsgroups](#), and the [World Wide Web](#). The Internet greatly extends the reach of each connected computer.

## **Internet Business Solutions (IBS)<sup>43</sup>**

Internet business solutions are defined as initiatives that combine the Internet with networking, software and computing hardware technologies to enhance or improve existing business processes or to create new business opportunities. These Internet business solutions are characterized as:

- Customer Development and e-Marketing
- Customer Service and Support
- E-Commerce
- Finance and Accounting
- Human Resources
- Procurement and Maintenance, Repair and Operation (MRO)
- Sales Force Automation
- Supply Chain Management
- Enterprise Information Portal

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<sup>41</sup> Canadian e-Business Initiative, *Net Impact Study in Canada*.

<sup>42</sup> Ibid.

<sup>43</sup> Canadian e-Business Initiative, *Net Impact Study in Canada*

**Intranet**

A private [network](#), within a company or organization, that serves shared [applications](#) intended for internal use only (although some may be found on the public Internet). As the [Internet](#) continues to become more popular, many of the [tools](#) used on it are also used in private networks. For example, companies now have Web servers that are available only to employees.

**ISDN (Integrated Services Digital Network)**

ISDN is one of the fastest commercially available, always-on, connections to the Internet. It is a set of communications standards that enables a single wire (or optical fibre) to carry voice, data, and video. It gives a user up to 56K of data bandwidth on a phone line (when also used for voice) or up to 128 Kbps if the line is only used for data.

**IT (Information Technology)**

An all-encompassing term that refers to the devices used for creating, storing, using, or exchanging information, and to the design and practical application of the devices themselves.

**Laptop (Notebook computer)**

A portable computer that is smaller than a desktop computer. It weighs less and is easier to carry around, you can work on it on your lap.

**Online Payment**

Online payment is the ability to complete a financial transaction over the Internet. It does not include purchases of goods or services ordered or requested over the Internet and paid for by completing the transaction over the telephone or by mail.

**Outsource**

To outsource is to hire an independent contractor or consultant, from outside of the company, to perform a particular task or project (instead of using internal personnel).

**Procurement and Maintenance, Repair and Operation (MRO)<sup>44</sup>**

This application involves a range of solutions which use the Internet to manage internal procurement processes and maintenance and repair operations, such as authorization and billing, and order generation and management of external suppliers.

**Sales Force Automation<sup>45</sup>**

Internet-enabled sales automation applications help the sales professional organize and collect information about territories, customers, products, competitors, marketing campaigns, and pricing. Features include some combination of a customer database, lead qualification, integrated word processor, report writer, address and phone card system. In addition, many products now offer an opportunity management system, sales order or sales configuration tools, marketing encyclopedia, reporting and forecasting, and some kind of Internet or Web access, allowing rapid and global information sharing within a company and between companies.

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<sup>44</sup> Canadian e-Business Initiative, *Net Impact Study in Canada*.

<sup>45</sup> Ibid



**Secure Web Site<sup>46</sup>**

A Web site that has policies and technologies to secure transactions and / or information (e.g., SSL, PKI, password or password generation system, digital signature, certificate authorities, smart cards / tokens).

**Supply Chain Management (SCM)<sup>47</sup>**

SCM solutions are organized around the specific business processes, technologies and physical architectures that connect an organization to its suppliers and trading partners using Internet technologies.

**T1**

A T1 line is an Internet backbone connection capable of carrying data at a very high speed of 1,544,000 bits per second (1.544 [Mbps](#)).

**Web site**

A place on the World Wide Web that's comprised of files organized into a hierarchy. Each file or document contains text or graphics that appear as digital information on a computer screen. A site can contain a combination of graphics, text, audio, video, and other dynamic or static materials. As a form of media, Web sites are similar to motion pictures, television, or print magazines, which also create and manipulate digital pictures and text. But a Web site is also a communications medium.

The main difference between a Web site and traditional media is that a Web site is on a computer [network](#) (the Internet) and is [coded](#) in such a way that allows users to [interact](#) with it. Once you're on a site, you can make purchases, do searches, send messages, and other interactive activities.

**Wireless Network**

A wireless [network](#) transmits information over public airwaves (the same used by television, radio, and [cell phones](#)). The signal transmissions actually occur through air rather than through copper or [fiber-optic cables](#).

**Wireless Handheld / Mobile Device (Handheld)**

This can refer to any one of several electronic devices that essentially fit in your hand and are [mobile](#). These include a [palmtop](#), a [pager](#), a [cell phone](#), and a [PDA](#). "Handheld" is the most recent name for PDAs, which are [converging](#) with [cell phone](#) technology to become all-around communication devices.

In addition to making telephone calls, these handhelds can send and receive short text-based messages (SMS) and e-mail, and can even browse the Web.

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<sup>46</sup> Statistics Canada, *Electronic Commerce and Technology 2001 (Questionnaire)*. Available online: [http://www.statcan.ca/english/sdds/instrument/4225\\_Q1\\_V2\\_E.pdf](http://www.statcan.ca/english/sdds/instrument/4225_Q1_V2_E.pdf)

<sup>47</sup> Canadian e-Business Initiative, *Net Impact Study in Canada*