Information Technologies and Training Practices amongst SME Managers

Final European Report (Ref. E1505 Rev. 0)

March 2001

INFORMATION TECHNOLOGIES AND TRAINING PRACTICES AMONGST SME MANAGERS.

FINAL EUROPEAN REPORT

San Sebastián, abril de 2001

Nº de proyecto: E1505

Versión: 0

ELABORADO POR: Iñigo ISUSI

APROBADO POR: Antonio CORRAL

FIRMA:

HOJA DE REVISIONES

INFORMATION TECHNOLOGIES AND TRAINING PRACTICES AMONGST SME MANAGERS.
FINAL EUROPEAN REPORT

Nº de proyecto: E1505

Versión: 0

Nº Versión	Fecha	Descripción de la Revisión
00	10/04/01	Informe final

INDEX

Page

INDEX

Page

INDEX

1. INTRODUCTION AND METHODOLOGY

1. INTRODUCTION AND METHODOLOGY

1.1. GENERAL INTRODUCTION TO THE RESEARCH

The European Action LEONARDO DA VINCI programme, conceived for the implementation of an European Community Vocational Training Policy Programme, sets as one of its main objectives the development of knowledge in the field of vocational training through the carrying out of surveys and analysis. These surveys can therefore help decision-makers and professionals in the setting-up and application of policies, means and actions at a European level (measure III.2.a).

The present research, namely '**Information Technologies and Training Practices amongst SMEs managers**' has been conceived under this stream with three main objectives:

- To examine minutely the current development of continuous training activities amongst SME managers/owners[1] within the management domain. Thus, the project is intended to provide valuable information on the main practices, problems and needs detected by SME managers/owners for the full development of training activities aimed at themselves.
- To investigate what is the current diffusion degree of Information and Communication Technologies (ICTs) in the management activities of SMEs and the use that SME managers/owners make of these ICTs for the purpose of their own training.
- To suggest successful strategies to both policy makers and the SME community in general in order to facilitate the access of SME managers both to training and to the new ICTs.

In this way, the project is designed in line with the fifth strategic priority defined in the current 1998 call for proposals for the LEONARDO DA VINCI programme, namely the *generalisation of access to skills through the information society tools in the*

[1] In many SMEs, specially amongst the smallest ones, management and ownership are concentrated in the same person(s). Therefore, this research is interested in analysing the training activities of the person(s) who are running the business, irrespectively of the fact that they own the business or are employed by it.

context of lifelong learning. Moreover, this research project is conceived to respond to one of the sub-priorities identified by the Spanish authorities within this fifth priority, this is, *the training and technical assistance to SME managers*[2].

Finally, it is important to point out that this research has been conceived to follow up a previous 1996 Leonardo study on Training Practices in SMEs which was carried out by Ikei (Instituto Vasco de Estudios e Investigación, SA) together with a team of 10 European partners[3].

1.2. CONCRETE OBJECTIVES AND GOALS OF THE RESEARCH

Given the general exposition just presented, this research has been envisaged to reach the following concrete goals:

a.) To identify the training practices developed by manufacturing SME managers/owners, this is, the concrete ways in which SME managers/owners cover their training requirements

Thus, the research will identify the existing demand for training amongst SME owners/ managers and the concrete ways in which SME managers satisfy their training needs. In this sense, special attention will be paid to the development of distance training as a commonly suggested solution for coping with SME managers' training requirements.

b.) To analyse the main problems and barriers that impede/render difficult the access of SME managers to training

For this purpose, a large set of barriers will be identified, basically under three main groupings, this is, 'internal-to-the-enterprise' barriers (i.e. satisfaction with previous experiences, difficulties to identify training needs, lack of interest, lack of time,...), 'external-to-the enterprise' barriers (i.e. suitability of training supply and public support structure, characteristics of the available

---

[2] See BOE nº 299 of 15th December 1997.

[3] Project number (E/96/2/1232/EA/III.2.a./FPC).

courses, costs, availability of information, ...) and, finally, 'environmentally-related' problems (general negative attitude towards training, lack of training tradition amongst SME managers and owners, ...).

c.) To analyse the spread of ICTs in the management of SMEs and the subsequent use that SME managers make of these ICTs as a tool for their own training activities

Generally speaking, the new developments associated to the information society (Internet, multimedia software, e-mail) have opened up new opportunities in the domain of training for SME managers. Notwithstanding this, it is not yet clear whether managers have fully realised these opportunities, or even whether they have the ability (knowledge, expertise) to do so. Thus, the project will try to describe firstly to what extent ICTs are used as a managerial tool and, secondly, the current use of the ICTs in the domain of SME managers' training and the associated level of satisfaction with this kind of tools. Additionally, the project will identify what are the main barriers that impede the full exploitation of ICTs as a tool for management training, as well as the main (if any) advantages of these ICTs for managers' training purposes.

d.) To carry out a qualitative analysis of the existing supply of courses for SME managers/owners based on the use of Information Technologies

This part of the project is intended to analyse the existing supply of training courses based on the use of ICTs and from which the SME managers located in the surveyed regions can benefit from. For this purpose, a general picture of the existing supply within the different countries will be provided[4], identifying the state-of-the-art developments in this domain, the main similarities/differences within the different surveyed situations and the foreseen future routes of development of the supply.

[4] In the sense that the scope of the analysed courses will be regional or national at its most.

e.) To analyse the existing public policy schemes intended to support training activities for SME managers based on the use of the Information Technologies

This part of the project is intended to review the existing public support structure aimed at favouring the access of managers-owners to training activities based on the use (total or partial) of ICTs, and from which SMEs can effectively benefit.

f.) To conduct a comparative analysis of the situation in the different surveyed countries

Having in mind the results already collected within the framework of the previous five objectives, the research will try to provide distinctive features amongst the different surveyed country situations. These distinctions will allow the categorising of the different existing practices, together with the possible identification of 'best practices' amongst both SMEs and public support structures in the topic objective of this research.

g.) To make recommendations for the design and implementation of successful strategies of support which are more appropriate for the training of SME managers and the fully exploitation of the possibilities opened up by the ITs in this domain

As a final outcome of this research and based on its results, the study will provide several recommendations on the innovations required for removing the current obstacles associated to the training of SME managers and the use of ICTs for this purpose. These recommendations will be aimed at the different social agents involved in the topic, this is, SME managers, training suppliers and, finally policy makers.

1.3. STRUCTURE OF THE REPORT

This report is structured around six main chapters, including this introductory one. In this sense, chapter 1 is providing a general overview of the existing literature dealing with the issue of training activities amongst SME managers and, subsequently, on the current role that ICTs play in the training of SME managers. In addition to this, some information will be provided on the methodology used for conducting this research. Next, chapter 2 is looking into the existing training processes in the European[5] SMEs, paying special attention to the training practices held by SMEs focusing on their managerial staffs (both managers and/or owners).

Subsequently, chapter 3 is interested in analysing on the one hand the general availability of the new Information and Communication Technologies (ICTs) within the European SMEs and, on the other hand, the role that these ICTs are playing within the managers/owners' training domain.

Meanwhile, chapter 4 is analysing firstly the existing European supply of ICT based training aimed at SME managers/owners. Then, the chapter describes the SMEs' perceptions on the barriers and advantages derived from the use of these ICTs for managerial training purposes.

Next, chapter 5 is describing the existing public support intended to foster the use of ICT based training, both at EU level and at country level. Subsequently, an analysis of the use that SME managers/owners make of the existing public supports intended to foster training activities in general and ICT based training in particular will be held.

Finally, chapter 6 will provide a resumé of the main results obtained from the report. Additionally, suggestions and proposals for future action will be discussed, both in the SME managers/owners training domain and, specifically, in the role that ICTs may play in the future developments within this field.

[5] European refers to the five countries covered by this survey, this is, Austria, France, Norway, Spain and The Netherlands.

1.4. TRAINING ACTIVITIES AMONGST SME MANAGERS: A THEORETICAL APPROACH

Any entrepreneur, very often combining the position of owner and manager, plays a key and central role in the development of an SME[6]. Unfortunately enough, and despite this recognition in the SME literature, there is no much research information on the issue of training activities carried out by SME managers and owners for themselves, the reason being that, usually, continuing vocational training for employees draws most research attention.

Generally speaking, SME managers and owners have a positive attitude towards training for themselves, as it can be deducted from the results of this Leonardo survey. Moreover, evidence coming from national studies seems to confirm this positive attitude. Just to give some examples, Swiss managers support the view that continued training for management staff is of prime importance in the field of corporate management in order to reinforce or even improve existing strengths[7]. Meanwhile, 75% of the UK owner-managers believe that management training is important for the success of the business[8], whereas over half of a sample of Irish enterprises rate management training as important to the success of their business[9].

The existing literature provides several ideas about the special difficulties that SME managers/owners face in order to have access to training activities for themselves. These difficulties can be grouped in two main areas, this is, 'internal-to-the-enterprise' and 'external-to-the enterprise' barriers. Thus, and as far as the first ones are concerned, they include some of the following ones:

---

[6] For a discussion on this topic please refer to chapter 5 on management within the Fourth report of the European Observatory for SMEs.

[7] Aschoff, U, Nutzung Nutzung von Weiterbildungsangeboten und Implementierung von Weiterbildungsinhalten für KMU Führungskräfte im internationalen Vergleich (Use of continued training programmes for SME owner/managers- an international comparison, PhD study), University of St Gallen, 1995, quoted in page 158.

[8] Barclays Bank Small Business Survey, London, May 1998.

[9] Burke, T, Management Development: Final Report, EU Structural Funds Industry Evaluation Unit, Dublin, 1996.

- Due to the central role that most managers and owners play in their organisations, most of them face delegation and lack of time problems[10] since they can not be away from the enterprise too long (production is the primary goal for enterprises). This fact results in chronic overwork that raises questions with regard to time management. Moreover, it is possible to argue that these delegation and 'lack of time' problems are more important the smaller the enterprise is.

- SME owner-managers have a rather short-term attitude towards training, since they are interested in pursuing a training activity when they face concrete problems[11] and always provided that the obtained knowledge and results can be rapidly translated into daily working practice[12].

- SME owner-managers have a rather short-term attitude towards training, since they are interested in pursuing a training activity when they face concrete problems[13] and always provided that the obtained knowledge and results can be rapidly translated into daily working practice[14].

- Most SME managers and owners are subject to the uncertainty of how business will develop and the resulting impossibility of enrolling months in advance[15]. This aspect leads to an obvious demand for short and flexible courses, possibly carried out within the enterprise.

- SME entrepreneurs are interested also in other means than formal training to acquire knowledge and competencies, such as resort to external advise, net-

[10] Ducheneaut B., "Les dirigeants de PME" (SME leaders), Ed. Maxima, Paris 1996.

[11] O.V, Paßgenaue Konzepte sind gefragt, Institut der Deutschen Wirtschaft Köln, in: iwd Nr. 5 vom 4.2.1999.

[12] Aschoff, U, Nutzung Nutzung von Weiterbildungsangeboten und Implementierung von Weiterbildungsinhalten für KMU Führungskräfte im internationalen Vergleich (Use of continued training programmes for SME owner/managers- an international comparison, PhD study), University of St Gallen, 1995.

[13] O.V, Paßgenaue Konzepte sind gefragt, Institut der Deutschen Wirtschaft Köln, in: iwd Nr. 5 vom 4.2.1999.

[14] Aschoff, U, Nutzung Nutzung von Weiterbildungsangeboten und Implementierung von Weiterbildungsinhalten für KMU Führungskräfte im internationalen Vergleich (Use of continued training programmes for SME owner/managers- an international comparison, PhD study), University of St Gallen, 1995.

[15] Curran, J. et al. (1996) 'Establishing Small Firms Training Practices, Needs, Difficulties and Use of Industry Training Organisations', DfEE Research Studies RS17, HMSO.

working or, specially, entrepreneurs' clubs[16]. In this sense, owner-managers appreciate very much to learn from the exchange of experiences with other managers and colleagues, either from the same or from different branches[17].

- Some SME owners and general managers have important ‘mental’ barriers for fostering training activities for their directors. Thus, SME owners and general managers are very often reluctant to invest on concrete second-level managers, on the grounds that these managers may be likely to be ‘poached away’ by competitors[18]. Obviously, this reluctance is higher if the enterprise shows frequent changes among its personnel.
- SME managers and owners (specially amongst the smallest enterprises) perceive training as a cost rather than as an investment[19], basically due to the fact that the link between training and performance is difficult to be measured and realised, specially in the short run.

Meanwhile, and as far as the ‘external-to-the-enterprise’ barriers are concerned, the most important one is related to the existing lack of information by SME managers/owners to identify appropriate courses and effective providers[20]. Meanwhile, and as far as costs are concerned, this obstacle seems to be less relevant for SME managers and owners in comparison to other elements such as the duration, contents or location of the courses[21].

[16] Stanworth J and Gray, C (eds), Bolton 20 years On: The Small Firm in the 1990s, Paul Chapman Publishing london, 1991.
[17] The Foundation for Manufacturing and Industry, et al."The Middle Market - How They Perform: Education, Training and Development", a joint report by the Foundation for Manufacturing and Industry, Coopers & Lybrand and Warwick Business School, 1997.
[18] Curran J et al, ‘Employment and Employment Relations in the Small Service Sector Enterprise- A Report’, ESRC centre for Research on Small Service Sector Enterprises, Kingston Business School, 1993.
[19] CEREQ, "Les très petites entreprises. Pratiques et représentations de la formation continue" (Very small enterprises. Practises and representations in the field of continuous vocational training), Cereq Bref, September 1996.
[20] Storey and Westhead, ‘Management Training and Small Firm Performance: A Critical Review’, Warwick Business School Centre for SMEs, Working Paper No. 18, 1994.
[21] O.V. (1999): Nicht alle sind wissendsdurstig (Not all are Learning Organisations), Institut der Deutschen Wirtschaft Köln, in: iwd Nr. 13 vom 1.4.1999, Köln.

1.5. INFORMATION AND COMMUNICATION TECHNOLOGIES AS A TOOL FOR SME MANAGERS TRAINING: WHAT DOES THE EXISTING LITERATURE SUGGEST?

The development and the widening application of the so-called Information and Communication Technologies (ICTs) is perhaps one of the main characteristics of our current society. These ICTs include a wide array of different technological possibilities such as voice technologies, (real time, voice mail), video technologies (tapes, live telecasts, cable television, teleconferences), CD-ROMs and compact-disk interactive tools, computer aided technologies and, finally, Internet.

ICTs are deeply affecting the education and training domain in a number of ways:

- First, ICTs are changing the work organisation within enterprises and the structure of competencies and qualifications currently required by enterprises[22]. These changes are therefore requiring a permanent ability to learn from employers and employees within the so-called 'Knowledge-Society'[23].
- Second, ICTs are offering new possibilities as training tools not only in traditional classrooms but also in new learning environments such as distance learning. Examples of these new possibilities include collaborative and interactive learning through educational multimedia tools, the possibility to have access to large amounts of information world-wide through data networks[24], inter-active classes, constant updating of the training materials, distance exams, etc[25].

---

[22] European Commission, Building the European Information Society for us all. Final policy report of the high-level expert group, Brussles, April 1997.

[23] European Commission, *Towards a Europe of Knowledge*, COM(97)563 final, Brussels.

[24] European Commission, Working Document on the Social and Societal Aspects of the Information Society, Brussels, 1995. See also European Commission, Technologies for Knowledge and Skills Acquisition, Proposal for a Research Agenda, October 1997. This document can be found in http://www2.echo.lu/telematics/education/en/interact/bul_5th2.html#tech2.

[25] The possibilities opened by the new ICTs in the training domain have attracted the attention of the European Commission. Thus, the Commission has developed the Telematics Applications Programme within the Fourth Framework Programme for Research and Technological Development. One of its main action lines has been the Education and Training Sector, basically with the main aim of supporting the development of access to lifelong learning for educators, learners, trainers and trainees alike through the use of new technologies. Interestingly also, the Fifth Framework Programme (1998-2002) has set up a Key Action III, "Multimedia Content and Tools" with the same goals.

- Linked to the previous point, ICTs are currently viewed as a powerful training tool for those groups who find current modes of learning hard to access[26]. Examples of these groups include several: disabled people; sick people; house-bound and under qualified young people or people in remote areas[27]. Moreover, and from an SME perspective, ICTs may become useful training tools for those SME owners/ managers that lack the time for engaging themselves in training activities and travelling for this purpose.
- ICT based training may lead to a reduction of costs for two reasons. First, there arise no travelling costs for the trainee, and second, as the trainee stays at the company, he/she causes no or less absence costs[28]. However, this cost reductions are often not compensated by the higher costs derived from ICT based training courses.

Having in mind these developments, it is not strange the 'explosion' in the supply of multimedia products and services for education and training that has taken place in the last years[29].

From an SME perspective, there seems to be very little published information on the use of ICTs in SMEs for training purposes, where most of this information can be labeled as 'theoretical'[30]. Nevertheless, it is possible to identify several studies that have dealt with the topic from an empirical perspective. The results of this evidence suggest the following:

[26] UNEVOC, Vocational Education and Training in Europe on the Threshold of 21st Century, UNESCO, Berlín, 1999.
[27] Racine, 'Nouvelles formes et nouveaux contenus de formation' (New forms and new contents of training activities), Paris, March 1999.
[28] Wirtschaftsförderungsinstitut der Wirtschaftskammer (WIFI) Wien (2000): Electronic Business. Vienna
[29] SCIENTER, "Multimedia Educational Software Observatory (MESO) Final Report–European Overview", DGXXII, Brussels, 1998.
[30] Some of this information can be found in Straka G & Stöckl M, New Learning Formats and Venues in the Context of Information and Communication Technologies, in CEDEFOP, Vocational Education and Training –The European Research Field, Background report, Thessaloniki, 1998.

- The use of ICTs for distance and self-training purposes is directly related to the enterprise size, where the larger the enterprise is the more the use of ICTs for training issues[31] is. This size effect is partially explained by the fact that the small business sector is deficient in its use of ICTs as a general support tool[32].

- SMEs may consider Computer based Training (CBT) on a theoretical basis, although few of them appear to use them in practice. Thus, evidence coming from Austria suggests that 74% of the surveyed SMEs are interested in CBT (mainly due to the advantages identified for distance training), although only 18% of the sample have already used CBTs and only 7% of them have already used CBTs within their premises[33].

- Austrian evidence also suggests that ICT based training is less used by people high in the enterprise hierarchy (who prefer traditional training classes that may help them to develop social and co-ordinating skills). Additionally, ICT based training is preferably used for closing knowledge gaps in the fields of computer, technical and language skills. Finally, only around 5% of all training hours are provided through ICTs, where these technologies are viewed as an additional tool for traditional courses[34].

[31] Information technology for training purposes in private enterprises, carried out by IFKA for Centre for Technology Supported Learning, February 1999. The questionnaire study covers a representative selection of Danish private enterprises.
[32] For a further discussion on this topic see the chapter 8 on Information Technologies in SMEs within the Fourth Report of the European Observatory for SMEs, 1996.
[33] Unpublished report “Tele-Lernen” (Distance Training), December 1996 – November 1997, project telelearning, p 11
[34] Schlager, K. (1998): Computerunterstützte Bildungskonzepte – Wegweiser zu einer neuen Lernkultur (Computer Aided Education Concepts), Diplomarbeit, Vienna

However, the introduction of CBT is subject to several important barriers such as[35]:

- Limited access and knowledge of technical skills by students and trainers for successfully using these ICTs. In the case of trainers, this problem is aggravated by the fact that the role of the trainer is changing. Thus, tele-learning-trainer do get the role of a tutor, who supports people during the learning phase, and not so much being in the position of teaching in the conventional way. Therefore, new technical and pedagogical know-how is required in order to be able to guide people through a satisfactory learning experience. Meanwhile, and in the students' case, they also need special skills related to typewriting or ability to successfully communicate in writing.
- In the case of some special groups (i.e. older workers), they may have important barriers to accept and use computers.
- Problems of social isolation and lack of personal contacts. This point is important, since one of the main advantages linked to the new information and communication technologies is linked to the expectancy that the form, extent and radius of potential social contacts should widen. However, it remains to be seen whether face-to-face interactions can be replaced by 'parasocial interactions' through the new media[36].
- Difficulties in differentiating and qualifying the existing providers, with a wide array of quality standards. In any case, this problem is expected to be reduced, as the market may become more developed and professional.

[35] These barriers are quoted in the following studies:
- ✓ Howard, K. 'IT Means Business? A Survey of Attitudes in Smaller Businesses to Information and Technology', Institute of Management, 1997.
- ✓ Kailer, Norbert (ed.), Innovative Weiterbildung durch Computer Based Training – Ergebnisse einer europaweiten Studie, Vienna: Signum, 1998
- ✓ *Kaufmann, P.* (2000): Moderne Lernsysteme für KMU - Endbericht (New learning systems for SMEs – final report). Vienna: Austrian Institute for Small Business Research (IfGH)
- ✓ Roberts JM & Keough, EM (Eds), Why the Information Highway? Lessons from Open and Distance Learning. Trifolium Books Inc, Toronto, 1995.
- ✓ *Schlager, K. (1998): Computerunterstützte Bildungskonzepte – Wegweiser zu einer neuen Lernkultur (Computer Aided Education Concepts), Diplomarbeit, Vienna*
- ✓ *Schwieger, J.* (1996): Chancen und Gefahren von Telelearning in der betrieblichen Weiterbildung (Chances and Risks of Telelearning in vocational training), Diplomarbeit. Vienna
- ✓ Straka G & Stöckl M, New Learning Formats and Venues in the Context of Information and Communication Technologies, in CEDEFOP, Vocational Education and Training –The European Research Field, Background report, Thessaloniki, 1998

[36] This reflection has been taken from Straka G & Stöckl M, op. cit.

- Existing technical complications regarding the speed of communications
- Availability of appropriate infrastructures. Thus, and specially in the smaller enterprises, there is a limited availability of necessary hardware (perhaps just only one computer, just available for the owner and/or secretary).
- High costs related to the use of ICTs, not only in terms of necessary investments (PCs, software, skill acquisition), but also in terms of phone and communication services.

To end with this section, it is possible to conclude that the new technologies open up significant prospects in the world of lifelong learning and education, provided that as many people as possible have access to and are able to use them as well. However, and as the Study Group on Education and Training stresses[37], the European educational and training systems are being adapted to these new demands and technological innovations very slowly, specially as far as SMEs are concerned. Therefore, a higher impetus and effort is required in next years for Europe to catch up with the existing situation in other advanced geographical areas such as the USA or Japan.

1.6. METHODOLOGY USED FOR THE RESEARCH

This research has been carried out in five NUT-II regions located in five countries of the European Economic Area, this is, Austria, France, Norway, Spain and The Netherlands. These regions have been selected according to the presence within them of an important industrial SME population. The finally selected regions can be found in Table 1.1.

[37] Study group on Education and Training, 'Accomplishing Europe Through Education and Training', European Commission, Luxembourg, 1997.

Table 1.1. Surveyed regions

Survey regions	Countries these regions belong to	Nicknames (*)
Metropolitan are of Vienna	Austria	A
Ile-de-France	France	F
Counties of Vest Agder, Aust Agder, Telemark, Buskerud and Vestfold	Norway	No
Basque Country	Spain	E
Zuid-Holland	The Netherlands	NL

(*) These nicknames will be used throughout this report.
Source: Ikei & ENSR partners, Leonardo Survey 2000.

The work-team has covered these five European regions, and the participating partners have been the following ones:

- **Ikei**, Basque Institute for Studies and Research (Spain), general co-ordinator of the research project
- **Agder** Research Foundation (Norway)
- **APRODI**, Association for Industrial Promotion and Development (France)
- **EIM**, Small Business Research and Consultancy (Netherlands)
- **IfGH**, Austrian Institute for Small Business Research, (Austria),

All these five research institutions belong to the European Network for SME Research (ENSR), currently responsible of the production of the European Observatory for SMEs on behalf of the Directorate-General Enterprise of the European Communities.

The research has been established with a threefold methodological approach:

a.) A representative survey amongst a sample of manufacturing SMEs in each selected region.

b.) A qualitative analysis of the training supply based on the use of ICTs and from which SME managers and owners can benefit.

c.) A qualitative analysis of the organisation of public policy intended to support training activities for SME managers and owners and based on the use of ICTs.

a) Survey of small and medium-sized manufacturing companies

This survey has been directed to a sample of 100 manufacturing industrial SMEs per surveyed region, although in the Spanish case and due to the availability of additional funding coming from the Provincial Government[38], this sample has been enlarged to 259 SMEs. Partners were requested to select the concrete enterprises according to the following size breakdowns:

Table 1.2. Requested distribution by enterprise size, by surveyed region

Size Breakdown	Number of enterprises
<10 employees 10-49 employees 50-249 employees	40% of enterprises 35% of enterprises 25% of enterprises
Total	**100%**

Whereas the surveyed sectors were the following ones (NACE Section D):

- Food & Beverage (NACE Subsection DA)
- Textile, Clothing, Leather & Shoes (DB, DC)
- Wood & Furniture (DD, DN)
- Paper & Print (DE)
- Fuel, Chemical & Plastic (DF, DG, DH, DI)
- Metal Products, Machinery & Equipment (DJ, DK, DM)
- Electric & Electronics (DL)

In this case, partners were requested to select the number of enterprises per sector according to the existing sectorial distribution in their selected regions[39]. Having in mind this, the final distribution by enterprise size within each one of the surveyed countries was the following one:

[38] I.e. Diputación Foral de Gipuzkoa.

[39] In the Austrian case, the sector distribution was made through an equal share amongst the different sectors.

Table 1.3. Sample breakdown by size and region

ENTERPRISES' CHARACTERISTICS	NUMBER OF ENTERPRISES					
	A	E	F	NL	No	TOTAL
Size (Employment)						
1-9	40	103	42	36	40	261
10-49	36	91	35	36	35	233
50-249	25	65	25	28	25	168
TOTAL	**101**	**259**	**102**	**100**	**100**	**662**

Source: Leonardo Survey 2000

Whereas the final total distribution by sector and enterprise size was:

Table 1.4. Sample breakdown by size and sector

SECTOR	SIZE (Employment)			TOTAL
	1-9	10-49	50-249	
Food and beverage	33	28	15	76
Textile, clothing, leather and shoes	21	13	6	40
Woods and furniture	33	24	24	81
Paper and print	29	29	20	78
Fuel, chemical and plastic	26	22	14	62
Metal products, machinery and equipment	94	101	70	265
Electric and electronics	25	16	19	60
TOTAL	**261**	**233**	**168**	**662**

Source: Leonardo Survey, 2000.

As far as the questionnaire is concerned, it was fully structured and divided in six main parts, this is,

- Part I- Enterprise Identification (Questions 1 to 3): Enterprise's name, respondent's name, address, phone/fax, position in the company.
- Part II- Type of Enterprise (Questions 4 to 6): sector of activity, size, independent/subsidiary character of the surveyed enterprise
- Part III- Information Technologies in the Enterprise (Questions 7 to 11): availability within the enterprise of ICT facilities and specific personnel, use of specific computer programmes for management, use of ICT equipment by the surveyed SME managers and assessment of these managers' ability to use ICT equipments
- Part IV- Training Activities (Questions 12 to 14): activity/inactivity in training activities for the surveyed SMEs' personnel, availability of formal training plans, professional categories of the personnel attending the courses.

- Part V- Enterprises with Manager Training Activities (Questions 15 to 33): characteristics, subjects and suppliers of the courses attended by the SME managers and/or directors, assessment of these courses, barriers to training, use of ICTs for training purposes, barriers and advantages of ICTs for training purposes.
- Part VI- Enterprises without Manager Training Activities (Questions 34 to 44): Reasons for inactivity in training activities for manager/directors, assessment of the training supply, assessment of the ICTs as a training tool, barriers and incentives for the use of ICTs as training tools for managers/owners.

The questionnaire was conducted by telephone and fax during the time period March-May 2000, and it was directed to the owner or the general manager of the surveyed SMEs. However, in the case he/she was not available, the Human Resources or Personnel Director was requested to be interviewed or, if not, any available director within the enterprise. On the other hand, enterprises were requested to report on their training practices during 1999.

Finally, it is important to point out that survey regional results have been reweighted according to the existing size distribution within the different surveyed regions, whereas all surveyed regions were given the same weighting for obtaining the aggregated European results.

b) Analysis of the existing supply of training courses for SME managers and owners based on the use of ICTs

This part of the research is interested in looking into the existing national (and regional) supply of training courses based (totally or partially) on the use of ICTs and from which regional SME managers and owners can benefit from. Topics discussed in this section include, amongst others, the existence or not of these specific courses, their SME approach, the institutions responsible of providing these ICT-based courses, the fields and geographical scope of these courses, as well as an assessment of them. Finally, several recommendations for improved use of ICTs for training purposes amongst SME managers & owners are suggested.

For this purpose, a combination of desk research and experts interviews has been used for obtaining this information. These experts include three qualified economic agents involved in this domain within each one of the surveyed regions, this is,

- a public body responsible of the training policy design or policy implementation
- a representative of the regional SME employers' association (specially the responsible of the training area and
- a relevant training supplier/expert located in the region.

These actors have been specially requested on the more qualitative aspects[40].

c) Analysis of the organisation of public policy intended to support training activities for SME managers and owners and based on the use of ICTs

This part of the project is intended to review the existing public support structure aimed at favouring the access of managers-owners to training activities based on the use (total or partial) of ICTs, and from which the regional SMEs can effectively benefit. Topics dealt with in this part include the institution(s) in charge, the main objectives of the support measure(s) and the kind of support, the geographical/sector and enterprise size approach of the support measure(s), together with an assessment of the existing measure(s). For this purpose, the same combination of desk research and experts interviews has been used for obtaining this information.

[40] The concrete list of interviewed experts within each region can be found in the different country reports.

2. TRAINING PROCESSES FOR SME MANAGERS AND OWNERS

2. TRAINING PROCESSES FOR SME MANAGERS AND OWNERS

2.1. INTRODUCTION

Chapter 2 of this report is intended to provide an overview of the existing training processes in the European[41] SMEs, where special attention will be paid to the training practices held by SMEs focusing on their managerial staffs (both managers and/or owners).

In this sense, section 2.2. will look into the current development of training practices within the European SMEs in general and specifically as far as the professional category of managers/owners is concerned. Subsequently, a discussion will be held on the importance attributed by SMEs themselves to the training of the managers/owners category.

Meanwhile, section 2.3. will try to describe the main courses and suppliers of training for SMEs' managers and owners. Thus, special attention will be paid to the training contents and characteristics of followed courses, as well as the main training suppliers used by SMEs and the enterprises' perception on the suitability of this training supply for their needs and expectations.

In all cases, detailed information will be provided by enterprise size and by surveyed country.

2.2. TRAINING PRACTICES FOR SME MANAGERS AND OWNERS

2.2.1. Development of Training Activities

According to the available data, up to 44.8% of the surveyed European SMEs did carry out in 1999 a training activity directed to their employees, whatever their function may be within the enterprise (see Table 2.1). Interestingly enough, the

[41] European refers to the five countries covered by this survey, this is, Austria, France, Norway, Spain and The Netherlands.

obtained data also suggest a clear size effect, in the sense that the probability of an enterprise to provide any training to its employee(s) is directly related with the enterprise size. Thus, and whereas 37.6% of the surveyed very small enterprises[42] were involved in training activities, this share reached a 69.1% and 86.6% in the cases of small[43] and medium[44] enterprises, respectively.

Table 2.1. Training practices in SMEs during 1999, by enterprise size

Variables	Enterprise size			
	1-9	10-49	50-249	Total
Enterprises with training activities for personnel (1)	37.6	69.1	86.6	44.8
Enterprises with formal written training plans (1) (2)	23.9	33.6	66.8	29.8
Professional level trained (1) (2)				
➢ Manual workers	49.4	54.4	75.3	52.8
➢ Clerks, administrative personnel	47.7	77.8	92.0	58.9
➢ Middle management, foremen	24.9	60.1	76.2	37.9
➢ Technicians, engineers	25.1	45.4	69.5	33.8
➢ Directors, managers	55.0	61.8	59.8	57.1

(1) only positive replies
(2) Percentage referred to those enterprises active in training activities for their personnel
Source: Ikei & ENSR partners, Leonardo Survey, 2000

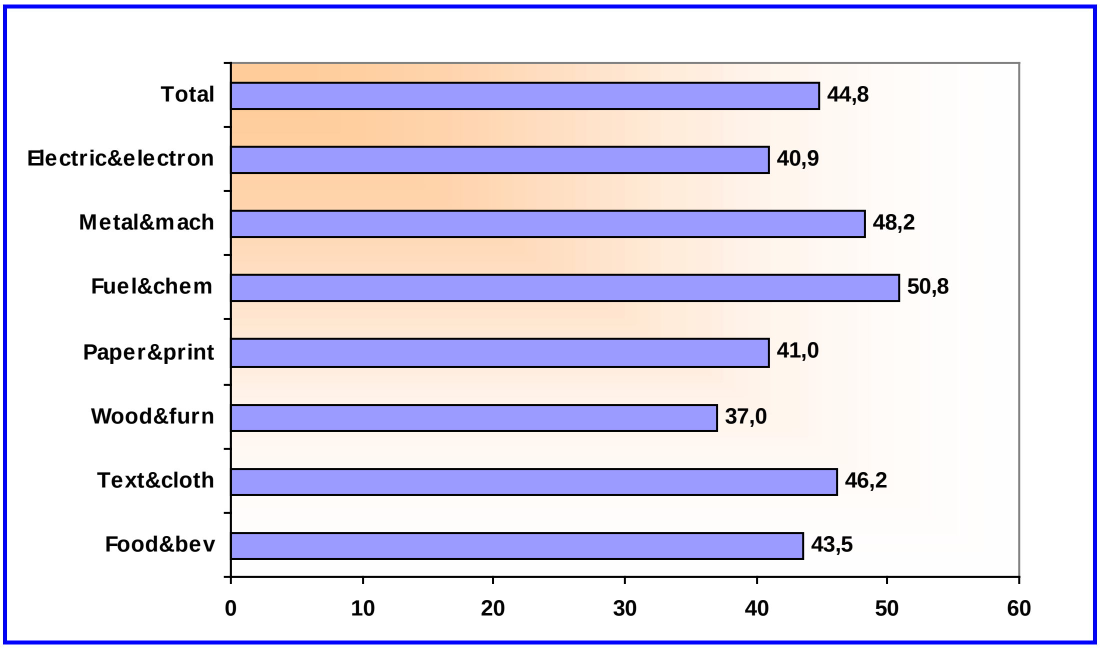
This enterprise size effect, confirmed by a large amount of literature both at national and at supra-national level, stresses the existence of specific size difficulties (both internal and external-to-the enterprise) that result in this more limited level of training[45].

According also to the available data, around 29.8% of those SMEs involved in training activities did develop these activities within the framework of a formal written training plan. For the remaining 70.2% of surveyed SMEs active in training, these activities were implemented without any formal plan (see Table 2.1). Once again, an enterprise size effect can be noticed, since whereas only 23.9% of the very small enterprises developed their training activities within a formal written plan, this percentage increased to a 66.8% in the case of medium enterprises.

[42] Enterprises with 1 to 9 people.
[43] Enterprises with 10 to 49 people
[44] Enterprises with 50 to 249 people.
[45] For an interesting discussion on these issues (including a revision of relevant literature and research on the topic, please have a look at European Communities, Sixth Report of the European Observatory for SMEs, Chapter 9 on Vocational Training and SMEs, Luxembourg, 2000

Concerning sectorial differences in training involvement, the available evidence suggests that these differences are not very important amongst the surveyed industrial sectors (see Graph 2.1). In any case, the industrial sectors more active in training activities include both Fuel & chemical and Metal & machinery sectors (50.8% and 48.2%, respectively) whereas, by way of contrast, the sectors less active include Wood & furniture and Electric-electronics (37% and 40.9%, also respectively).

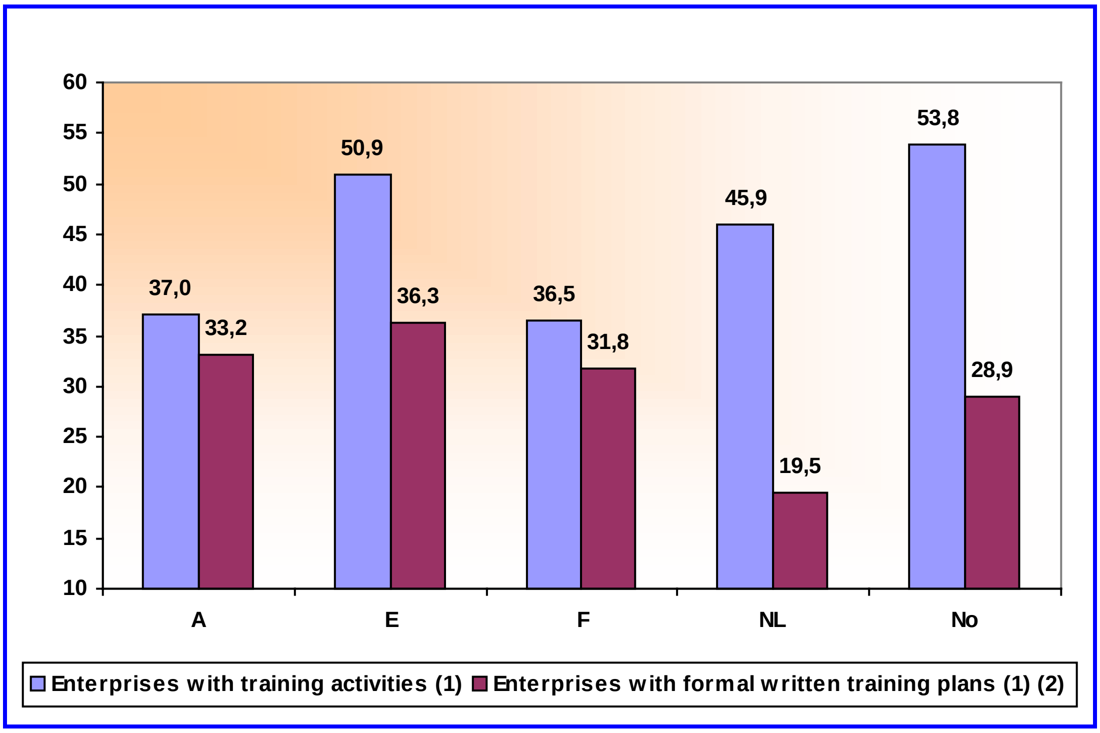
Graph 2.1. Enterprises with training activities for personnel, per surveyed industrial sectors



Source: Ikei & ENSR partners, Leonardo Survey, 2000.

However, the comparison by surveyed regions allows to underline important differences amongst them. Thus, and on the one hand, the share of SMEs involved in training activities ranges from a 36.5% and 37% in the cases of the French and Austrian regions to 50.9% and 53.8% in the Spanish and Norwegian cases, with the Dutch case study on an intermediate position, 45.9% (see Graph 2.2).

Graph 2.2. Percentage of SMEs involved in training activities for their personnel, by surveyed region



(1) only positive replies
(2) Percentage referred to those enterprises active in training activities for their personnel
Source: Ikei & ENSR partners, Leonardo Survey, 2000.

These important differences per regions can be also detected when analysing the training approach followed by SMEs (see Graph 2.2). Thus, and whereas up to 36.3% of the Spanish SMEs active in training have a formal written training plan, this percentage goes down to 19.5% in the case of the Dutch SMEs, although in the remaining countries this percentage seems to be closer to the Spanish average.

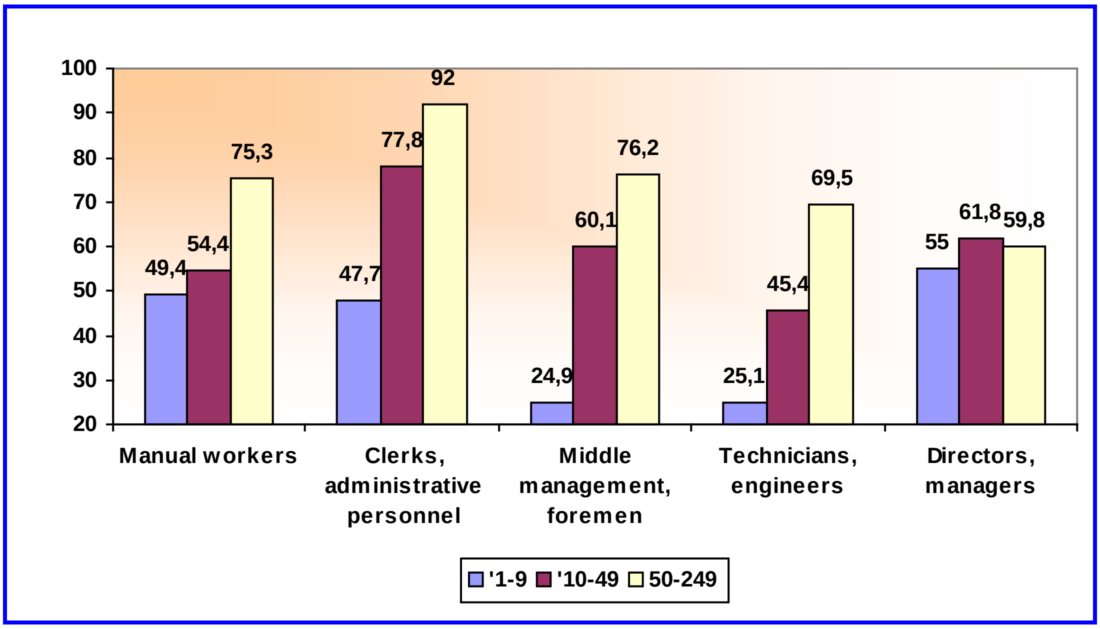
2.2.2. Professional Categories Trained by SMEs

Concerning the professional categories that receive more training within the surveyed SMEs, the available data suggest several interesting results concerning this report's main research focus, that is to say, training activities amongst SME managers and owners. These results can be summarised in the following points:

- Firstly, managers and owners are one of the professional categories that receive more training attention by SMEs (57.1% of training SMEs carry out activities for this category)[46], being only surpassed by the administrative personnel category (see Table 2.1). Interestingly, this result suggests that, in the end, around 1 out of 4 SMEs in Europe-5 train their managers/owners.

- Secondly, and contrarily to other job categories, the percentage of SMEs involved in training activities for their managers/owners seem to be quite stable irrespectively of the size of enterprise (see Graph 2.3).

Graph 2.3. Percentage of European SMEs involved in training activities for their personnel, per professional level trained and enterprise size



Source: Ikei & ENSR partners, Leonardo Survey, 2000

- The managers/owners job category receives an important degree of attention in all the surveyed regions, especially in the Norwegian region (see Table 2.2).

[46] This result might be affected by the fact that self-employers without employees are also included in this survey, where this group may have an effect on the results.

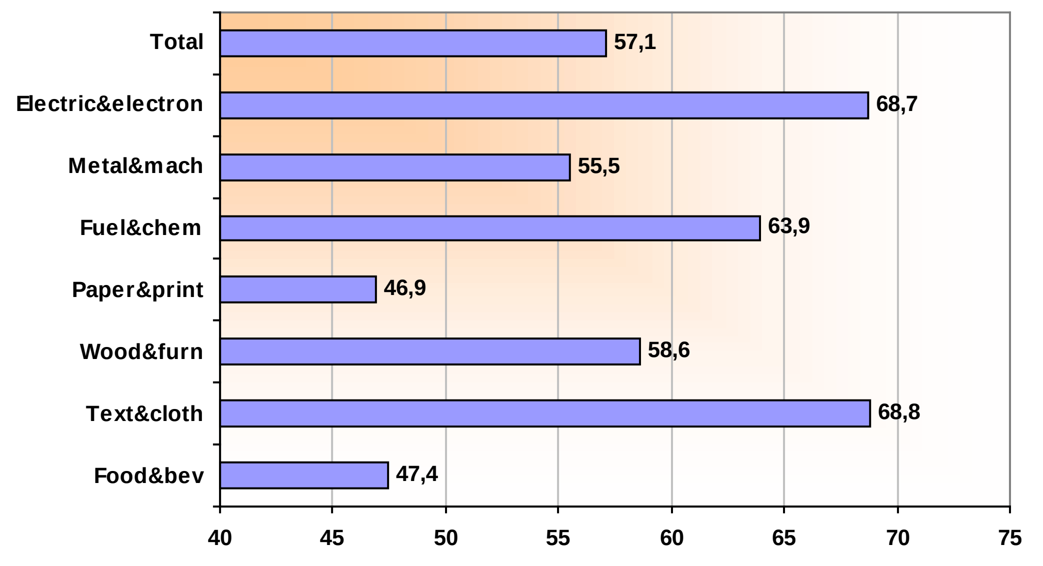
Table 2.2. Percentage of SMEs involved in training activities for their personnel, per professional level, by surveyed region (1) (2)

Professional level trained (1) (2)	Regions of					Total
	A	E	F	NL	No	
Manual workers	39.9	57.9	33.2	68.4	57.2	52.8
Clerks, administrative personnel	86.4	54.7	64.7	33.7	61.2	58.9
Middle management, foremen	47.5	34.2	38.5	26.0	44.5	37.9
Technicians, engineers	38.9	37.4	42.0	22.9	30.6	33.8
Directors, managers	51.5	51.3	55.1	56.7	68.2	57.1

(1): only positive replies
(2): Percentage referred to those enterprises active in training activities for their personnel
Source: Ikei & ENSR partners, Leonardo Survey, 2000

- Finally, the available data per economic sectors suggest important differences per surveyed industrial sectors as far as the training of managers/owners is concerned (see Graph 2.4). Thus, two sectors seem to be particularly active in this domain, that is to say, Textiles & clothing and Electric-electronics (68.8% and 68.7% of SMEs active in training), whereas the less active sectors correspond to paper & print and food & beverages (46.9% and 47.4%, respectively).

Graph 2.4. Percentage of SMEs involved in training activities for their managers/owners, per industrial sectors (1) (2)



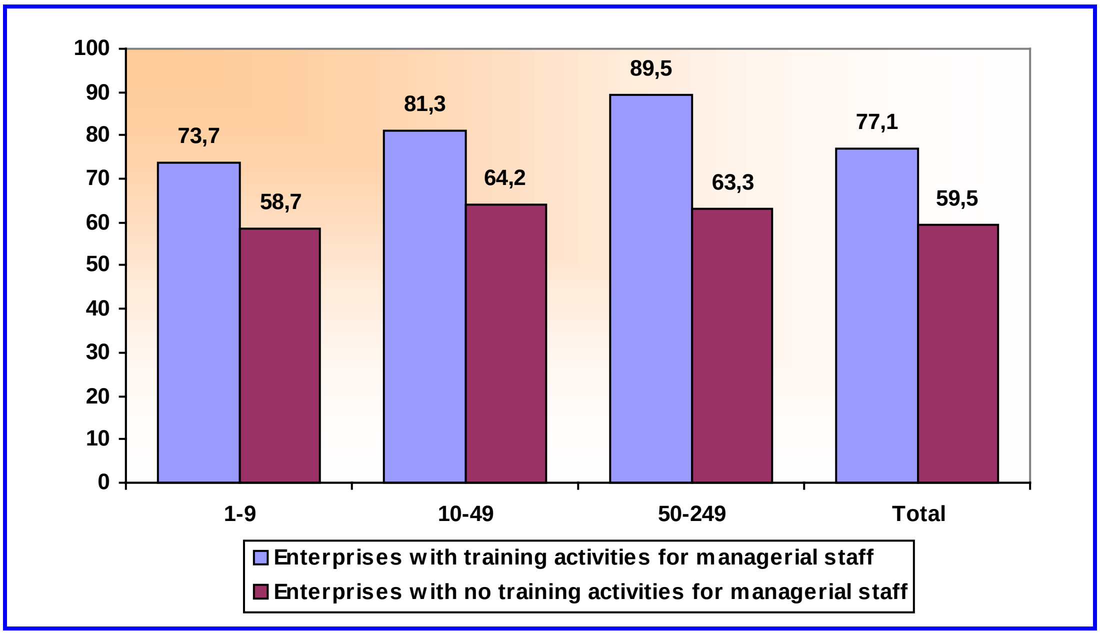
(1) only positive replies
(2) Percentage referred to those enterprises active in training activities for their personnel
Source: Ikei & ENSR partners, Leonardo Survey, 2000

2.2.3. Importance attributed by SMEs to the training of managers / owners category

Previous section has showed that the professional category of managers/owners receives an important attention by SMEs as far as training activities are concerned. In fact, one possible explanation to this could be given by the recognition amongst SMEs of the benefits derived from training their managers/owners.

The survey results seem to provide ground for this hypothesis, in the sense that training of managerial staff is regarded as highly important for the enterprise's future competitiveness. In fact, this seems to be especially true for those SMEs active in training their managers/owners, who rate this issue as 77.1 on an scale from 0 (not important) to 100 (very much important). Meanwhile, SMEs inactive in managerial training have got a more moderate perception of this importance (59.5 in the same scale). Interestingly also, a positive enterprise size effect can be noticed amongst SMEs active in training, in the sense that the importance attributed is directly dependant on the size of enterprises, whereas those SMEs inactive show a more stable perception amongst different sizes (see Graph 2.5).

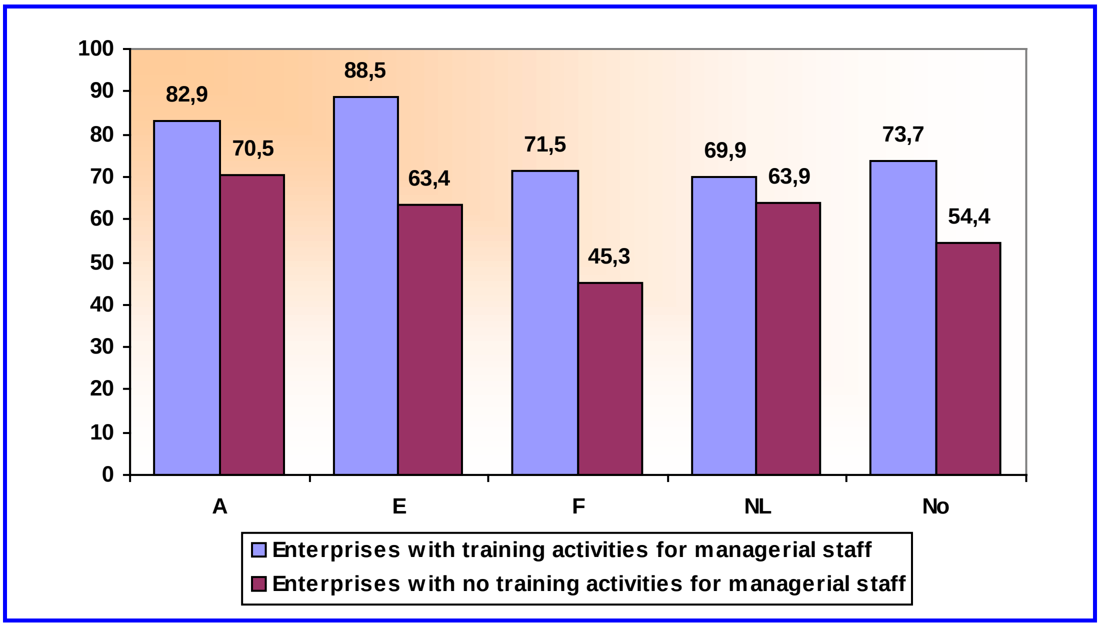
Graph 2.5. Importance attributed to the training of managerial staff to the enterprise's future competitiveness, by SMEs active /inactive in managerial training (1)



(1) Average data from 0 (not at all) to 100 (very much)
Data is referred to all enterprises
Source: Ikei & ENSR partners, Leonardo Survey, 2000

An in-depth analysis per surveyed regions suggests that, irrespectively of regions, SMEs active in managerial training attribute a much more relevant role to this issue in the competitiveness of enterprises in comparison to non training SMEs. However, data points out that, precisely, the Spanish SMEs attribute to this issue much more importance than their European counterparts, irrespectively of their activity/inactivity in this domain. By way of contrast, the French SMEs inactive in managerial training are the only example in Europe who undervalue the importance of training (see Graph 2.6).

Graph 2.6. Importance attributed to the training of managerial staff to the enterprise's future competitiveness, by surveyed regions and activity/inactivity in managerial training (1)



(1) Average data from 0 (not at all) to 100 (very much)
Data is referred to all enterprises
Source: Ikei & ENSR partners, Leonardo Survey, 2000

2.3. TYPE OF COURSES AND SUPPLIERS OF TRAINING FOR OWNERS/MANAGERS

2.3.1. Contents of training and type of followed courses

This section is intended to characterise both the courses attended in 1999 by the Europe-5 SME managers and owners as well as the training topics followed within the courses.

In this sense, and referring to the concrete training topics followed within courses, available data suggests that the European SME managers/owners devote special attention to two main topics, that is to say, Information technologies and Production/quality issues (46.0% and 45.4% of SMEs active in managerial training followed this type of courses) (see Table 2.3). Subsequently, it is possible to identify a second group of topics that attracts a lower level of attention, Finance/accounting, Strategy/general management and Marketing/sales, with 33.4, 30.4 and 29.4% of responding SMEs, respectively. Finally, it is worth mentioning the training in languages, followed by a 15.7% of SMEs active in managerial training.

Table 2.3. Contents of training followed by SME managers/owners

Contents of training (1)	Enterprise size			
	1-9	10-49	50-249	Total
➢ Strategy/General management	25.2	33.5	59.8	30.4
➢ Finance/Accounting	29.4	35.3	57.2	33.4
➢ Marketing/sales	27.0	29.3	48.6	29.4
➢ Production/Quality	45.3	41.8	58.2	45.4
➢ Information technologies	42.1	51.8	57.3	46.0
➢ Languages	12.0	18.2	35.5	15.7
➢ Other	16.0	20.1	22.3	17.7

(1) Only positive answers
Data is referred to enterprises with training activities for their managerial staff
Source: Ikei & ENSR partners, Leonardo Survey, 2000

An enterprise size perspective suggests several results. On the one hand, it is possible to identify once again a positive enterprise size effect, in the sense that the number of SMEs following managerial training courses increases with size, irrespectively of the topics pursued. On the other hand, a look into the topics followed by the different sizes indicates some differences, in the sense that whereas very small enterprises' managers/owners are primarily concerned with production/quality issues, medium enterprises' managerial staff pays primary attention to strategy/general management issues. Meanwhile, Information technologies are particularly important amongst the small enterprises' managers/owners.

The analysis by surveyed regions allows distinguishing interesting differences. Thus, production/quality issues seem to be a priority for Spanish and Dutch SMEs, whereas Austrian and Norwegian SMEs are more interested in marketing/sales and finance/accounting, respectively (see Table 2.4)[47]. Meanwhile, French SMEs' main

[47] In th Austrian case, this result has to be understood within the marketing and public support initiative of the Austrian Federal Economic Chamber, backed by the Austrian Federal Ministry of Economics and Labour. This strategy has pushed the questions of strategy and marketing for SMEs by several means during the last years, especially amongst the very small enterprises.

managerial training concern is related to Information technologies. Interestingly also, Austrian, Spanish and French SMEs seem to have a broader scope of relevant issues for training. Finally, Spanish, Austrian and French SME managers/owners pay a relevant attention to language training, whereas for Dutch and Norwegian managers this is not the case (probably because of their higher ability to speak English).

Table 2.4. Contents of training followed by SME managers/owners

Contents of training (1)	Regions of					Total
	A	E	F	NL	No	
➢ Strategy/General management	55.5	38.8	8.0	28.5	25.0	30.4
➢ Finance/Accounting	23.3	40.3	18.1	29.3	45.1	33.4
➢ Marketing/sales	58.0	26.2	10.0	32.4	25.6	29.4
➢ Production/Quality	28.6	73.2	24.5	51.7	41.7	45.4
➢ Information technologies	37.2	68.9	40.3	44.4	38.8	46.0
➢ Languages	22.1	36.7	19.8	7.1	1.2	15.7
➢ Other	24.9	7.9	26.3	20.7	13.8	17.7

(1) Only positive answers
Data is referred to enterprises with training activities for their managerial staff
Source: Ikei & ENSR partners, Leonardo Survey, 2000.

Concerning the characterisation of the courses, the average European SME manager/owner has followed in 1999 an standard course (51.5% of SMEs active in managerial training), mainly held outside the premises and during working time (61.6% and 43.7%, respectively) (see Table 2.5).

Table 2.5. Type of courses followed by SME managers/owners

Variables	Enterprise size			
	1-9	10-49	50-249	Total
Main type of course				
➢ Standard courses	58.5	38.2	41.4	51.5
➢ Custom made courses	31.1	39.2	34.9	33.7
➢ Both equal	10.4	19.7	21.7	13.9
➢ DK/NA	0.0	2.8	1.9	0.9
Location of course in place				
➢ On the company's premises	20.9	22.0	13.4	20.6
➢ Outside the premises	64.1	59.5	49.7	61.6
➢ Both equal	15.0	18.5	36.9	17.8
➢ DK/NA	0.0	0.0	0.0	0.0
Location of course in time				
➢ During work-time	45.4	36.6	53.9	43.7
➢ During off-time	20.5	20.8	7.6	19.5
➢ Both equal	34.1	41.1	38.5	36.3
➢ DK/NA	0.0	1.6	0.0	0.4

Data is referred to enterprises with training activities for their managerial staff
Source: Ikei & ENSR partners, Leonardo Survey, 2000

From an enterprise size perspective, several differences can be appreciated (see also Table 2.5). Thus, and to start with, custom made courses (or a combination between standard and custom made) are more frequent the larger the enterprises are, where this fact may reflect a higher ability of these companies to request and obtain training contents fully adapted to their needs. Secondly, courses held outside the company's premises are more frequent the smaller the enterprise is, which reflects obviously an added costs for these enterprises in terms of time, money, etc. Finally, courses held during work-time are more common amongst the larger SMEs, especially in comparison to the smaller ones. This result may be explained by the fact that very small and small enterprises' managers/owners have more difficulties for leaving their working positions, resulting in added efforts for attending any training initiatives after their usual working time.

From a regional point of view, (see Table 2.6), all the surveyed regions follow closely the previously explained training patterns. However, two interesting exceptions can be appreciated. Thus, and on the one hand, Austrian SME managers/owners follow more custom-made courses than their European counterparts. On the other hand, and contrarily to what happens in the remaining European countries (specially in the French case), Spanish SME managers/owners follow their training activities mainly outside their working time.

Table 2.6. Type of courses followed by SME managers/owners, by surveyed regions

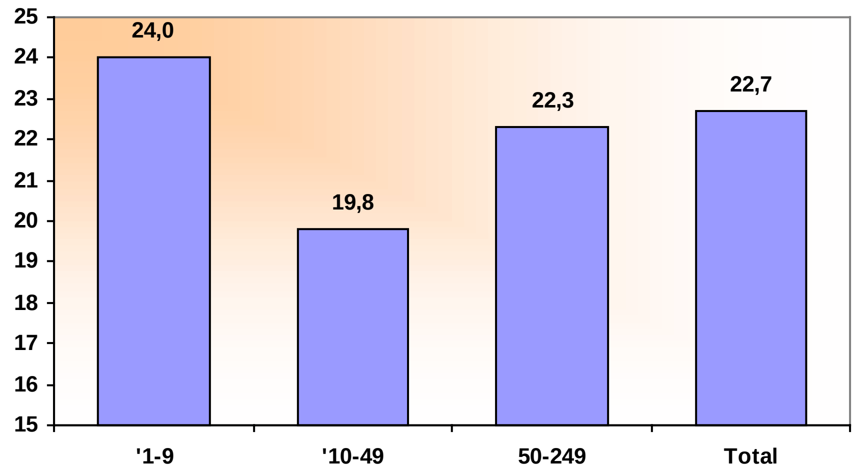
Variables	Regions of A	E	F	NL	No	Total
Main type of course						
➢ Standard courses	33.1	71.8	54.8	54.0	43.2	51.5
➢ Custom made courses	50.2	19.9	27.8	32.7	38.7	33.7
➢ Both equal	13.9	8.2	17.4	12.5	16.9	13.9
➢ DK/NA	2.9	0.0	0.0	0.8	1.2	0.9
Location of course in place						
➢ On the company's premises	9.8	23.3	28.5	14.7	24.0	20.6
➢ Outside the premises	66.9	66.6	57.5	81.2	43.7	61.6
➢ Both equal	23.3	10.1	14.0	4.0	32.3	17.8
➢ DK/NA	0.0	0.0	0.0	0.0	0.0	0.0
Location of course in time						
➢ During work-time	32.7	24.0	71.6	34.7	54.4	43.7
➢ During off-time	19.6	38.6	2.1	10.9	21.8	19.5
➢ Both equal	44.9	37.5	26.3	54.5	23.9	36.3
➢ DK/NA	2.9	0.0	0.0	0.0	0.0	0.4

Data is referred to enterprises with training activities for their managerial staff
Source: Ikei & ENSR partners, Leonardo Survey, 2000.

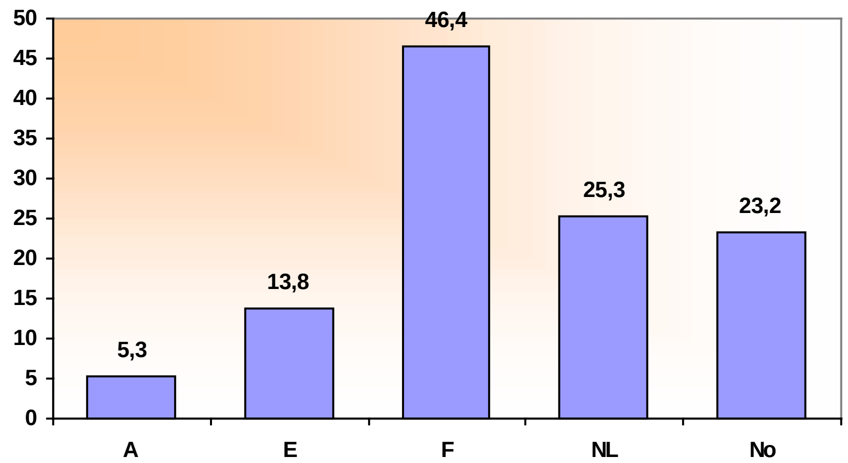
As far as the use of self-study courses for managerial training is concerned, available data provides support to the view that this type of training is scarcely disseminated amongst the European SMEs' managers/owners (see Graph 2.7). Thus, and according to the obtained results, self-study courses are used for managerial training purposes by around ¼ of the training active SMEs. Interestingly enough, differences by enterprise sizes are not very important, although very small enterprises seem to use these courses slightly more in comparison to their counterparts. Meanwhile, the analysis by surveyed regions allows to perceive a varied situation in Europe, in the sense that whereas the French SMEs seem to frequently resort to this type of training (46.4% of cases), much more moderate figures can be obtained for Spain and specially Austria (13.8% and 5.3%, respectively). Norwegian and Dutch regional SMEs are located on the European average (23.2% and 25.3%, respectively).

Graph 2.7. Percentage of SMEs using self-study courses for their managers/owners' training, by enterprise size and surveyed regions (1)

By enterprise size



By surveyed regions



(1) Only positive answers
Data is referred to enterprises with training activities for their managerial staff

Source: Ikei & ENSR partners, Leonardo Survey, 2000.

The previous analysis, concerned with the situation amongst those SMEs active in training activities for their managers/owners, can be complemented with the existing perceptions amongst those SMEs non active in this field. In this sense, and referring to the contents of training that are of interest for these enterprises, the available data suggests that SMEs have difficulties to identify their training needs (see Table 2.7). Thus, differences amongst topics are not very important, although only three topics seem to attract an above-the-average level of attention (marketing/sales, information technologies and production/quality issues, with a value of 54.0, 51.3 and 50.9, respectively, on an scale form 0 –not interesting- to 100 –very interesting-). Differences by enterprise sizes are not very important, although medium enterprises seem to be more interested in marketing/sales courses than their counterparts.

Table 2.7. Contents of training and suitability of self-study programmes for enterprises non active in training activities for their managerial staff

Variables	Enterprise size			
	1-9	10-49	50-249	Total
Contents of training (1)				
➢ Strategy/General management	45.6	47.2	47.7	45.9
➢ Finance/Accounting	40.8	47.8	39.4	41.7
➢ Marketing/sales	53.5	56.6	57.3	54.0
➢ Production/Quality	50.3	55.8	46.0	50.9
➢ Information technologies	50.8	55.0	50.5	51.3
➢ Languages	34.7	46.6	41.4	36.4
➢ Other	39.0	21.0	40.6	36.9
Suitability of self study programmes				
➢ Yes, in most cases	21.4	25.6	10.2	21.6
➢ Yes, in certain cases, for certain subjects	37.5	32.3	33.3	36.7
➢ Not at all	33.1	37.7	50.7	34.1
➢ DK/NA	8.0	4.4	5.9	7.5

(1) Data are referred to average values from 0 (not interesting) to 100 (very interesting)
Data is referred to enterprises with no training activities for their managerial staff
Source: Ikei & ENSR partners, Leonardo Survey, 2000

As far as the suitability of self-study programmes are concerned, those SME that do not carry out training activities for their managers/owners seem to have a general positive attitude to this type of training. Thus, up to 58.3% of SMEs suggest that self-study programmes are suitable, 21.6% of respondents in all cases and 36.7% only for certain cases, certain training subjects. By way of contrast, 34.1% of responding enterprises have a strong negative opinion against this type of training (see Table 2.7). Interestingly enough, enterprise size considerations suggest a more negative opinion amongst the medium enterprises in comparison to their counterparts (up to 50.7% of medium enterprises undervalue this type of training). This result, in line with the situation available amongst the SMEs active in managerial training, suggests that very small enterprises regard and use self-study programmes more than their counterparts.

Finally, and concerning differences per surveyed regions, available results suggest important differences amongst countries, at least as far as contents of training are concerned. In this sense, each surveyed region seems to suggest a different set of contents who might be more adapted to their needs, although it is worth mentioning the important role given to information technologies and production/quality issues in all regions (see Table 2.8)[48]. By way of contrast, and generally speaking, regional SMEs positively value the suitability of self-study programmes, either in most or in certain cases. In this sense, the best valuations are provided by the French and Norwegian SMEs (65.1% and 62.6% of SMEs inactive in managerial training suggests the suitability of this type of training), whereas the opposite is true for the Austrian and Dutch SMEs (52.9% in both cases).

Table 2.8 Contents of training and suitability of self-study programmes for enterprises non active in training activities for their managerial staff, by surveyed regions.

Variables	Regions of					Total
	A	E	F	NL	No	
Contents of training (1)						
➢ Strategy/General management	31.6	42.3	50.9	47.8	60.1	45.9
➢ Finance/Accounting	25.3	44.5	53.0	46.8	39.6	41.7
➢ Marketing/sales	52.8	52.8	56.9	50.1	57.6	54.0
➢ Production/Quality	36.4	58.1	52.7	56.3	53.1	50.9
➢ Information technologies	42.3	43.0	57.9	58.3	57.2	51.3
➢ Languages	30.1	33.9	60.1	28.0	24.0	36.4
➢ Other	20.7	50.0	63.1	91.6	33.3	36.9
Suitability of self study programmes						
➢ Yes, in most cases	22.4	9.6	10.6	40.1	27.3	21.6
➢ Yes, in certain cases, for certain subjects	30.5	49.2	54.5	12.8	35.3	36.7
➢ Not at all	43.9	37.3	34.7	31.2	20.6	34.1
➢ DK/NA	3.2	3.9	0.2	15.9	16.8	7.5

(1) Data are referred to average values from 0 (not interesting) to 100 (very interesting)
Data is referred to enterprises with no training activities for their managerial staff
Source: Ikei & ENSR partners, Leonardo Survey, 2000.

48 It is important to have in mind that training in health and safety regulations and procedures are compulsory for all Norwegian enterprises, and some of the respondents may have added this to the list of training carried out when answering the questions.

2.3.2. Suppliers of training for SME managers/owners

Concerning the main suppliers of training for SME managers/owners, the available data shows that these are, precisely, private training centres (64.5% of the responses), followed although at a larger distance by business/sector associations, suppliers/subcontractors and, finally, consultants (23.6%, 22.3% and 21.4% of responses, respectively) (see Table 2.9). Interestingly also, chambers of commerce play also a relevant role as training suppliers (19.6% of responses).

Table 2.9. Main suppliers of training for managers/owners, by enterprise size

Variables	Enterprise size			
	1-9	10-49	50-249	Total
Suppliers of training (1)				
➢ Private training centres	63.5	65.0	71.3	64.5
➢ Public training centres	14.3	21.0	15.8	16.3
➢ Chambers of Commerce	20.6	17.0	21.1	19.6
➢ Business/sector associations	21.1	25.6	37.0	23.6
➢ Public bodies, development agencies	13.5	6.0	5.6	10.8
➢ Consultants, consultancy firms	13.3	31.8	49.0	21.4
➢ Research or technical services centres	5.4	4.4	20.3	6.4
➢ Suppliers, Subcontractors	24.4	18.6	18.1	22.3
➢ Company's own personnel	10.4	14.1	41.1	14.0
➢ Other	0.0	4.5	5.6	1.7

(1) Only positive answers
Data is referred to enterprises with training activities for their managerial staff
Source: Ikei & ENSR partners, Leonardo Survey, 2000

An in-depth look into size considerations shows that, irrespectively of size, private training centres are the main suppliers of training for managerial staff. However, it is worth underlining the important role that consultants play amongst the small and medium sized enterprises' managerial staff, in the sense that these suppliers are used as the second most important training source (see Table 2.9). By way of contrast, suppliers/subcontractors are especially important for the very small enterprises' managers/owners. Other interesting results refer to the importance of the own personnel as training providers amongst the medium enterprises, as well as the decreasing role played by public bodies as the size of enterprises increases.

As far as geographical considerations are concerned, the available data provides distinctive results per surveyed regions (see Table 2.10), reflecting therefore the different supporting structures existing in the different countries. In any case, it is worth mentioning that, in all regions, private training centres are the main providers of training courses for the SME managers/owners, although this role is specially important in the Norwegian, French and Spanish regions. However, in the Norwegian and Dutch regions, consultants play also an important role, whereas in the Austrian and Spanish cases this role is assumed by the Chambers of Commerce. Meanwhile, the French SMEs seem to specially trust on their business/sector associations. Finally, it is also worth mentioning the important role played by the public training centres in the Austrian and, to a lesser degree, Dutch cases, whereas in Spain the same can be said for the public bodies/development agencies.

Table 2.10. Main suppliers of training for managers/owners, by surveyed regions

Suppliers of training (1)	Regions of					Total
	A	E	F	NL	No	
➢ Private training centres	59.6	69.6	72.8	43.3	73.9	64.5
➢ Public training centres	43.2	15.2	1.5	20.3	8.3	16.3
➢ Chambers of Commerce	48.6	28.9	11.1	15.6	5.5	19.6
➢ Business/sector associations	8.2	26.9	36.7	21.5	23.6	23.6
➢ Public bodies, development agen-cies	9.8	24.9	1.5	2.8	12.3	10.8
➢ Consultants, consultancy firms	12.3	8.3	24.5	25.4	30.9	21.4
➢ Research or technical services centres	1.2	3.6	14.7	10.9	3.4	6.4
➢ Suppliers, Subcontractors	8.6	26.6	33.3	19.4	22.4	22.3
➢ Company's own personnel	29.0	15.3	21.1	11.5	3.0	14.0
➢ Other	4.1	0.1	0.0	4.7	0.4	1.7

(1) Only positive answers
Data is referred to enterprises with training activities for their managerial staff
Source: Ikei & ENSR partners, Leonardo Survey, 2000

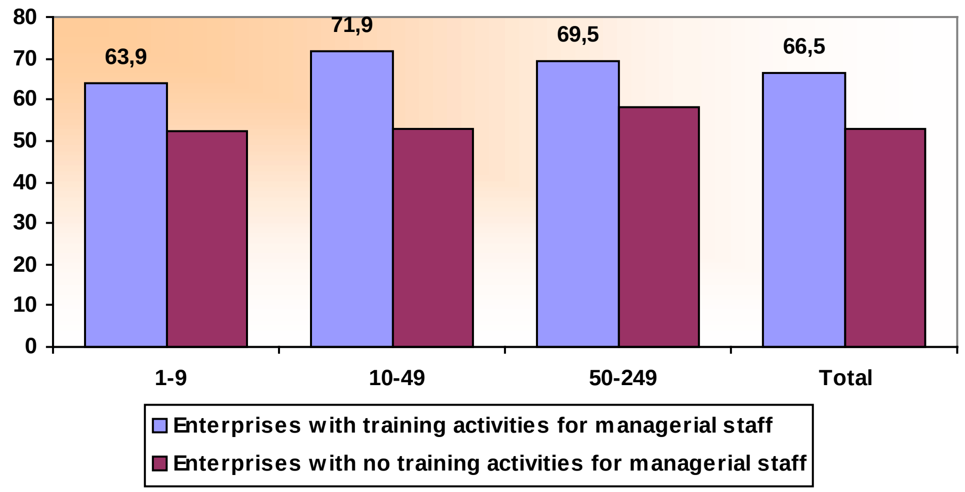
2.3.3. SMEs' perception on the suitability of existing training supply for SME managers/owners

This subsection is intended to briefly analyse the perceptions of SMEs as far as the suitability of the existing training supply for SME managers/owners is concerned.

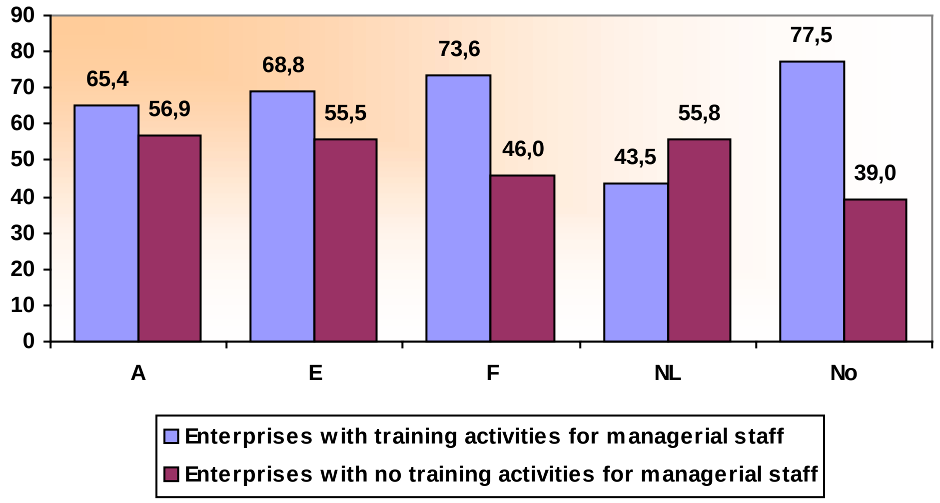
In this sense, the available data suggests that those enterprises that have carried out training activities for their managers/owners have a positive perception on the suitability of training supply. Meanwhile, SMEs non-active in training value on a more moderate basis this supply (66.5 and 52.7, respectively, on an scale form 0 –very low- to 100 –very good-) (see Graph 2.8).

Graph 2.8. Suitability of training supply for managers, by enterprise size and surveyed regions

By enterprise size



By surveyed regions



Data are referred to average values from 0 (very low) to 100 (very good)
All enterprises
Source: Ikei & ENSR partners, Leonardo Survey, 2000

The analysis per enterprise size allows concluding that smaller SMEs seem to have a less positive valuation of the existing training supply than their remaining counterparts, irrespectively of their activity/inactivity in training activities for managers/owners. In any case, differences per size are not very important.

Interestingly enough, an in-depth analysis per surveyed regions provides interesting differences. On the one hand, and in all cases with the only exception of The Netherlands, SMEs active in managerial training activities value more positively the existing supply than their non-active counterparts. In this sense, it is worth mentioning the Dutch case, where SMEs active actually poorly value the existing supply in comparison to a slightly better opinion amongst non active SMEs (43.5 and 55.8, respectively). On the other hand, the Austrian and Spanish cases are characterised by moderate valuation differences between active and non-active SMEs, whereas in the French and Norwegian cases, differences are very remarkable. In these two cases, non-active SMEs actually value below average the supply, in comparison to the excellent valuation attributed by active SMEs (see Graph 2.8).

3. INFORMATION AND COMMUNICATION TECHNOLOGIES IN SMEs FOR MANAGERS TRAINING PURPOSES

3. INFORMATION AND COMMUNICATION TECHNOLOGIES IN SMEs FOR MANAGERS TRAINING PURPOSES

3.1. INTRODUCTION

Chapter 3 of the current report is interested in analysing both the general availability of the new Information and Communication Technologies (ICTs) within the European SMEs and, subsequently, the role that these ICTs are playing within the managers/owners' training domain.

For this purpose, section 3.2 will try to describe the current availability of ICT facilities, personnel and specific computed programmes for managerial control within the European SMEs. Additionally, attention will be paid to the frequency and ability to use ICTs by the SME managers/owners, as well as to the expectations that these SME managers/owners have got about the impact of ICTs on their businesses.

Meanwhile, section 3.3 is intended to provide information on the use that SME managers/owners make of ICTs for their training activities. In this sense, attention will be concentrated around three main axes, that is to say, the real use of ICTs for SME managers/owners' training purposes, the effectiveness of this ICT based training and, finally, the evaluation that these managers/owners make of several concrete ICT based training modalities.

As usual, detailed information will be provided by enterprise size and by surveyed country.

3.2. INFORMATION AND COMMUNICATION TECHNOLOGIES (ICTs) IN SMEs

3.2.1. Availability of ICT facilities and personnel within the European SMEs

According to the available data obtained form the survey, the European SMEs have got a good access to the existing ICT facilities, although remarkable differences can be appreciated by type of ICT facility, enterprise size or surveyed region.

Thus, and referring to the availability of different types of ICT facilities, results suggest remarkable differences between some facilities particularly well diffused (i.e. PCs/Macintosh, CD-ROM readers, with over 80% of SMEs confirming to have them) and others less diffused (such as web pages, intranet or e-commerce facilities, with less than 40% of SMEs). Other ICT facilities such as Internet access, e-mail addresses or ISDN access are intermediately present within the European SMEs (see Table 3.1).

Table 3.1. Availability of ICT facilities (1), by enterprise size

ICT facilities	Enterprise size			
	1-9	10-49	50-249	Total
➢ PCs, MacIntosh	86.6	99.2	99.3	89.2
➢ CD-ROM reader	78.9	97.1	97.5	82.7
➢ Computer Network	46.2	84.0	96.8	54.5
➢ Intranet	16.2	33.2	63.5	21.0
➢ ISDN access	43.7	66.1	86.6	49.2
➢ E-mail address	57.4	85.0	95.4	63.5
➢ Internet access	59.4	88.6	97.2	65.7
➢ Web-page	33.9	50.1	77.0	38.4
➢ E-commerce facilities	7.4	13.2	21.9	8.9
➢ EDI facilities	4.6	16.0	22.8	7.2
➢ None of those	12.9	0.3	0.7	10.4

(1) only positive answers
(all enterprises)
Source: Ikei & ENSR partners, Leonardo Survey, 2000

Interestingly enough, and from an enterprise size perspective, this presence of ICT facilities is closely related to the size of enterprises, in the sense that, irrespectively of the ICT facility considered, the larger the enterprise is the higher the probability to find any facility is. Thus, and just to give some data, whereas up to

12.9% of the surveyed very small enterprises confess not to have any of the suggested facilities, this percentage goes down to 0.3% and 0.7% in the cases of the small and medium enterprises, respectively (see Table 3.1). In any case, it is worth mentioning that for some of the most common facilities (i.e. PCs and CD-ROMs), the differences per sizes are smaller than for other facilities such as Internet access, web pages or e-mail addresses.

Interestingly also, existing differences per surveyed regions can be labelled as relevant. According to the different degrees of ICT facilities availability, two groups of regions can be distinguished (see Table 3.2):

- On the one hand, regions with an important endowment of ICT facilities within the regional SMEs. These regions would correspond in this research to the Austrian and Dutch regions, while the Norwegian[49] one would occupy an intermediate position.
- On the other hand, regions characterised by a lower degree of ICT facilities within the regional SMEs. In this report's case, these two regions would correspond to the Spanish and French cases.

Table 3.2. Availability of ICT facilities, by surveyed regions

ICT facilities	Regions of				
	A	E	F	NL	No
PCs, MacIntosh	94.4	84.0	81.9	95.8	89.8
CD-ROM reader	90.7	72.7	74.0	88.2	87.8
Computer Network	63.0	41.1	55.4	55.9	56.9
Intranet	37.4	6.3	23.4	15.8	21.6
ISDN access	58.4	22.0	36.7	60.8	68.0
E-mail address	76.5	48.9	50.4	69.0	72.7
Internet access	77.9	57.5	51.8	69.5	72.2
Web-page	48.4	27.4	27.7	36.5	52.0
E-commerce facilities	14.8	10.8	0.3	9.7	9.1
EDI facilities	11.5	3.2	7.1	8.4	5.9
None of those	5.6	16.0	15.7	4.2	10.2

(1) only positive answers (all enterprises)
Source: Ikei & ENSR partners, Leonardo Survey, 2000

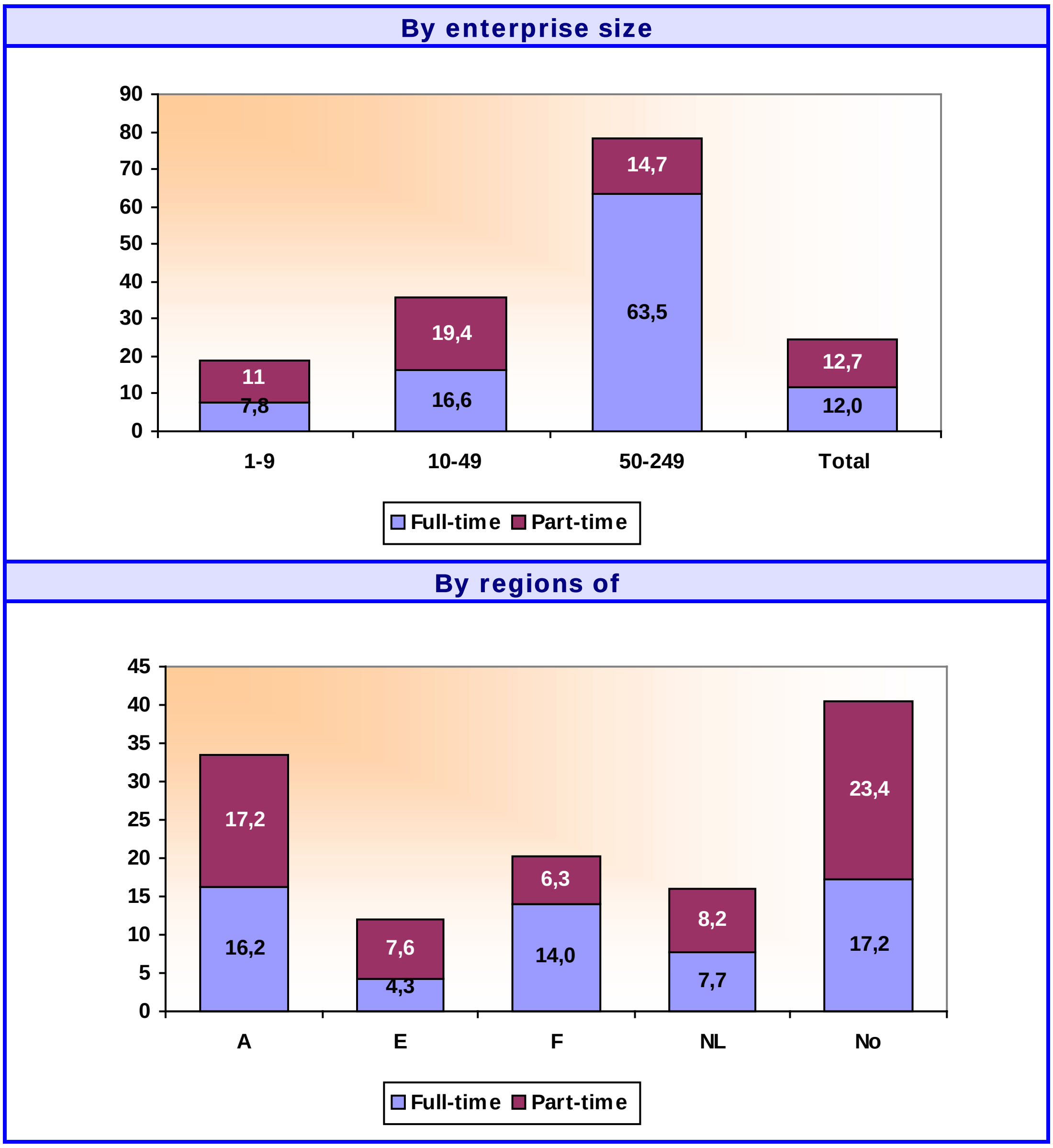
[49] In the Norwegian case, the low spatial density of Norwegian enterprises, due to large land areas and low population, may explain the important development of telecommunications in this country.

Several examples can be provided to illustrate this result. Thus:

- PCs/MacIntosh computers are available in more than 90% of SMEs belonging to the first group, whereas this percentage does not reach 85% in the second group
- Internet access is possible for around 70% or more of the first group of regional SMEs, whereas for the second group this percentage is around 55%.
- Web pages are present in around ¼ of the Spanish and French SMEs, whereas in the first group countries the proportion reaches more than 40%.
- E-mail addresses are present in around half of the second group SMEs, whereas this ratio reaches around 70% or more in the first group.

The previously explained differences in terms of availability of ICT facilities by enterprise size or surveyed regions are confirmed when looking into the availability of ICT personnel (see Graph 3.1). Thus, and referring firstly to the enterprise size perspective, the presence of specific ICT personnel (either on a full or part-time perspective) is directly related to the size of the surveyed enterprises. This is particularly the case as far as the presence of full-time specific ICT personnel is concerned, since up to 63.5% of medium enterprises with ICT facilities suggest to have this type of personnel in comparison to a 7.8% in the case of very small enterprises. By way of contrast, part-time personnel is more frequent within the small enterprises in comparison to the medium enterprises (19.4% and 14.7%, respectively).

Graph 3.1. Availability of specific ICT personnel, by enterprise size and surveyed region (1)



(1) Only positive replies. Data related to SMEs with ICT facilities
Source: Ikei & ENSR partners, Leonardo Survey, 2000

Interestingly also, and from a regional perspective, it is possible to suggest a positive relationship between the presence of ICT personnel and the availability of ICT facilities (see Graph 3.1), in the sense that both Austrian and Norwegian SMEs have the largest percentage of SMEs with this type of personnel. However, and contrarily to expected, Dutch SMEs have a moderate availability of ICT personnel, especially in comparison to the French SMEs. Spanish SMEs confirm their comparative backward availability of ICT facilities with a smaller presence of ICT personnel.

3.2.2. Availability of specific computed programmes for managerial control

Surveyed SMEs were requested about their availability of specific computer programmes for managerial control in different fields (see Table 3.3). According to the available responses, these specific programmes are specially used in two main fields, that is to say, sales and invoicing on the one hand and accounting on the other hand (65.2% and 63.2% of European SMEs that have ICT facilities have programmes in these fields). For the remaining requested fields, the share of SMEs with specific programmes is less important, with percentages not reaching half of the surveyed enterprises. Examples include bank-related procedures (45.9% of surveyed SMEs), purchases, stock control/logistics and, finally, wage administration (41.6%, 41.4% and 38.5%, respectively). These results imply that the European SMEs make an special use of the computed programmes mainly for repetitive administrative tasks or organisational monitoring.

Table 3.3. Availability of specific computed programmes for managerial control (1), by enterprise size

Fields	Enterprise size			
	1-9	10-49	50-249	Total
➢ Accounting	57.4	80.5	91.8	63.2
➢ Wage administration (pay-roll)	31.4	58.4	79.0	38.5
➢ Bank related procedures	40.4	61.2	77.2	45.9
➢ Sales and invoicing	60.1	80.8	87.9	65.2
➢ Purchases	36.0	56.5	77.1	41.6
➢ Stocks control, logistics	36.6	52.2	78.7	41.4
➢ Production control	25.1	43.6	75.7	30.8
➢ Other	15.0	15.3	34.3	16.0

(1) Only positive replies. Data related to SMEs with ICT facilities
Source: Ikei & ENSR partners, Leonardo Survey, 2000

An in-depth analysis per enterprise sizes suggests a direct size effect, in the sense that the presence of computer programmes is directly related with the size of the enterprise and irrespectively of the different fields. In any case, it is worth underlining that, even amongst the very small enterprises with ICT facilities, more than half of them have specific computer programmes in the two main fields previously suggested, that is to say, sales/invoicing and accounting (60.1% and 57.4%, respectively). In this sense, it is important to have in mind that the result obtained amongst the smallest enterprises is surely influenced by their higher use of external service providers (i.e. accountants, etc).

As far as regional differences are concerned, important differences can be noticed amongst the surveyed regions (see Table 3.4). In this sense, two extreme situations can be detected. Thus, and on the one hand, Norwegian SMEs seem to use computer programmes more than the European average. In this sense, more than half of surveyed SMEs with ICT facilities use these programmes in four fields, that is to say, sales/invoicing, bank related procedures, accounting and stock controls (72.0%, 61.7%. 59.1% and 51.4%, respectively). By way of contrast, and according to the data, Spanish SMEs do show the lowest degrees of use of computer programmes for managerial control. Thus, only in two fields the proportion of users is above 50%, that is to say, sales/invoicing and accounting (51.2% and 50.3%, respectively).

Table 3.4. Availability of specific computed programmes for managerial control (1), by surveyed regions

Fields	Regions of				
	A	E	F	NL	No
➢ Accounting	71.5	50.3	71.1	62.8	59.1
➢ Wage administration (pay-roll)	53.7	21.0	42.4	26.8	47.8
➢ Bank related procedures	45.0	27.9	23.3	67.9	61.7
➢ Sales and invoicing	74.6	51.2	63.8	62.8	72.0
➢ Purchases	43.0	37.5	39.7	39.3	48.4
➢ Stocks control, logistics	44.6	27.5	52.8	30.6	51.4
➢ Production control	28.8	27.2	40.5	22.9	35.5
➢ Other	27.4	7.4	4.6	24.6	13.5

(1) Only positive replies. Data related to SMEs with ICT facilities
Source: Ikei & ENSR partners, Leonardo Survey, 2000

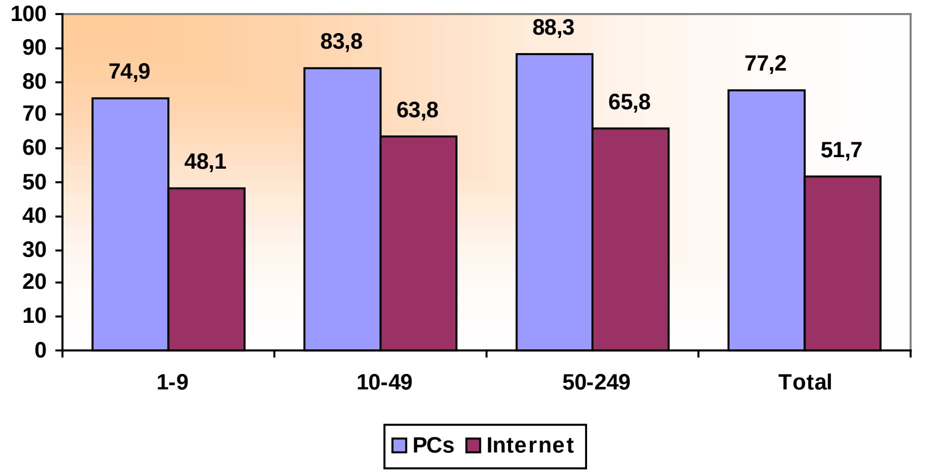
3.2.3. Frequency and ability to use ICTs by SME managerial staff

This section is interested in analysing both the frequency and ability to use ICT facilities by the European SME managers and owners, where attention will be concentrated around two main types of facilities, that is to say, PCs and Internet.

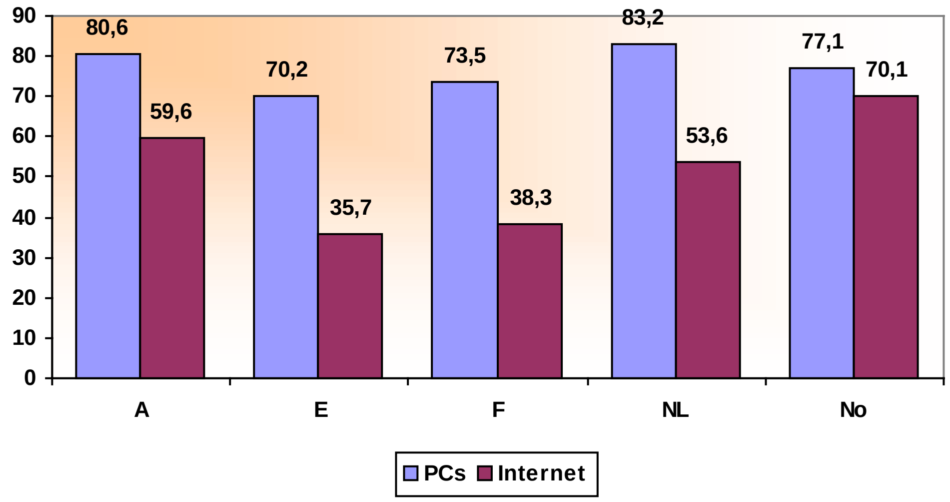
Thus, and as far as frequency of use is concerned (see Graph 3.2), the available data suggest an important use of PCs amongst the European SME managers/owners, in contrast with a lower use of Internet (grades of 77.2 and 51.7, respectively, on an scale from 0 –lowest possible use- to 100-very high use-). Interestingly, this frequency is directly related with the size of enterprises, in the sense that medium enterprises' managers/owners use more frequently PCs and Internet (88.3 and 65.8 on the same scale from 0 to 100, respectively) than their small (83.8 and 63.8, respectively) and very small enterprises' counterparts (74.9 and 48.1, also respectively). In this sense, it is worth mentioning the lower use of Internet suggested by the very small enterprises' managers/owners.

Graph 3.2. Frequency of use of ICTs by managerial staff (1)

By enterprise size



By regions of



(1) Average data from 0 (the lowest possible) to 100 (very high frequency)
Data related to SMEs with ICT facilities
Source: Ikei & ENSR partners, Leonardo Survey, 2000

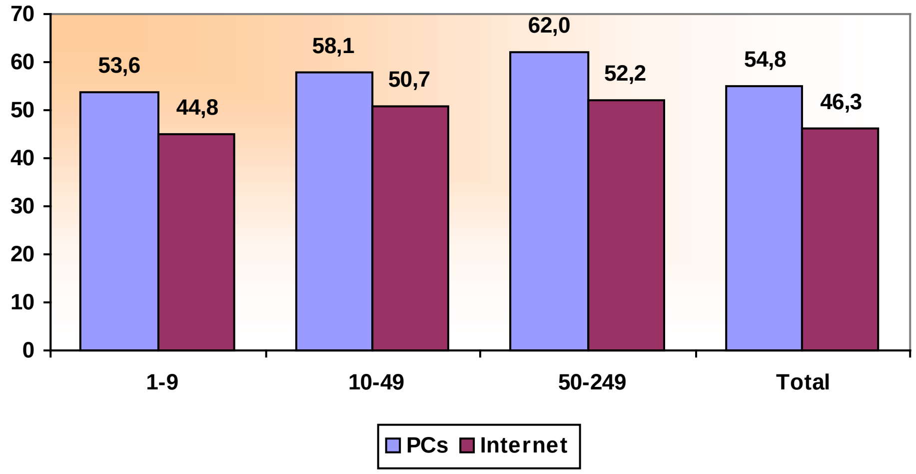
Interestingly also, important differences in use can be detected amongst the different surveyed regions, although in all cases the use of PCs is higher than the use of Internet (see Graph 3.2). Thus, the lowest degrees in use of both PCs and Internet can be detected amongst the Spanish and French surveyed regions, specially if compared with the use of PCs by the Dutch and Austrian SME managers/owners or the use of Internet by the Norwegian SME managers/owners.

Moreover, and for the Spanish and French cases, the use of Internet can be labeled as below average, with grades below 50 (35.7 and 38.3 for the Spanish and French managerial staffs, respectively).

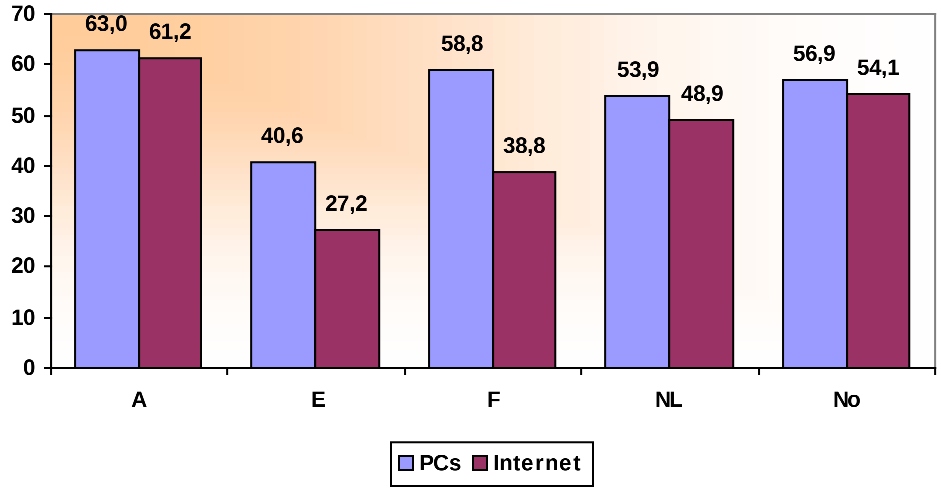
Meanwhile, and as far as the ability to use ICTs is concerned, the surveyed SME managers/owners provide results in line with the previous ones related to frequency of use (see Graph 3.3). In this sense, SME managers value their ability to use PCs as slightly above average (54.8 on an scale from 0 –the lowest possible- to 100 –very high-), whereas this perception is worse as far as Internet is concerned (46.3 on the same scale). Once again, a direct positive relationship between size and ability to use can be detected, both as far as PCs and Internet are concerned.

Graph 3.3. Ability to use ICTs by managerial staff (1)

By enterprise size



By regions of



(1) Average data from 0 (the lowest possible) to 100 (very high ability)
Data related to SMEs with ICT facilities
Source: Ikei & ENSR partners, Leonardo Survey, 2000

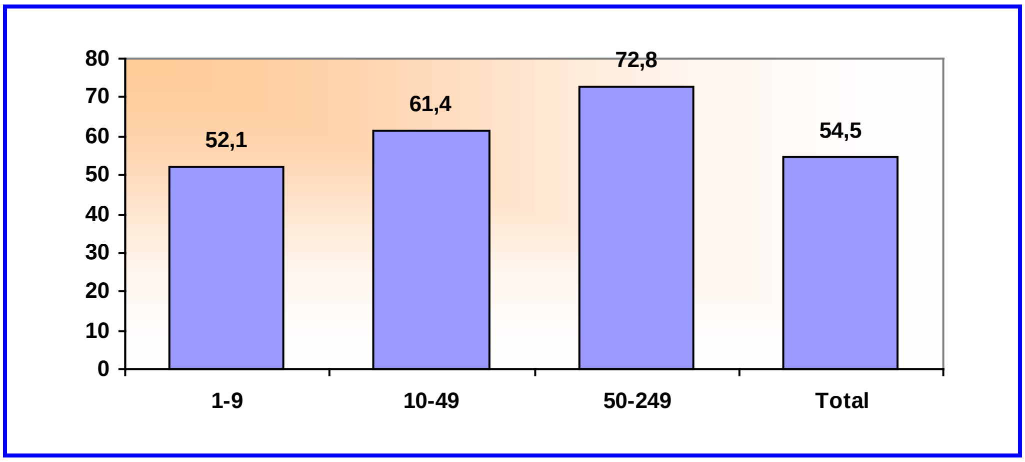
Meanwhile, the analysis per surveyed regions provides several interesting results (see Graph 3.3). Thus, Austrian SME managers/owners seem to have the better self-perception about their ability to use both PCs and Internet (63 and 61.2, respectively, on the scale from 0 to 100). By way of contrast, the Spanish SME managers/owners have the lowest self-perceptions, with grades of 40.6 and 27.2 as far as PCs and Internet are concerned, respectively). Interestingly also, the Spanish

SME managers/owners are precisely the only ones who fail to have an above-average ability (over 50) in their use of PCs and Internet, whereas for the French and Dutch managers, this lack of ability is only present as far as Internet use is concerned. Finally, Norwegian SME managers/owners seem to confess a good well-balanced ability in their use of both PCs and Internet.

3.2.4. Expectations of SME managers & owners about the impact of ICTs on the business

This section is intended to look into the expectations of surveyed SME managers/owners as far as the expected impact of ICTs on their businesses is concerned. For this purpose, managers were requested to rate this effect from 0 (not effect at all) to 100 (very much affected). The available results suggest that, generally speaking, the European surveyed SME managers/owners suggest a positive-but-moderate effect of these ICTs on their business (grade 54.5), although, interestingly enough, this perception varies widely amongst very small, small and medium enterprises (52.1, 61.4 and 72.8, respectively). As it can be seen, medium enterprises, precisely those that use more these ICTs, seem to be more concerned about the effects of these technologies on their businesses (see Graph 3.4).

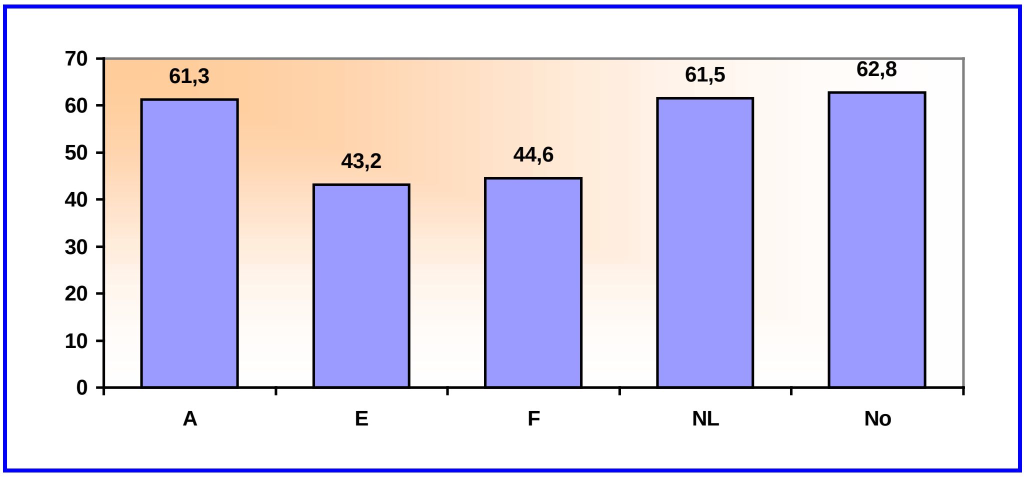
Graph 3.4. Effects of ICTs on the business by enterprise size (1)



(1) Average data from 0 (not at all) to 100 (very much)
Data is referred to both training and non-training enterprises
Source: Ikei & ENSR partners, Leonardo Survey, 2000

From a geographical perspective, the available results suggest similar results as those ones described in previous sub-sections of this chapter (see Graph 3.5). In this sense, the Spanish and French SME managers/owners seem to have a more 'relaxed' perspective on the effects derived from ICTs on businesses (grades of 43.2 and 44.6 on an scale from 0 -not effect at all- to 100 -very much affected-. By way of contrast, the Norwegian, Dutch and Austrian SME managers/owners are more concerned with these effects, where it is important to underline that these managers are precisely the ones who use more frequently and with better ability the ICTs.

Graph 3.5. Effects of ICTs on the business by surveyed regions(1)



(1) Average data from 100 (very much) to 0 (not at all)
Data is referred to both training and non-training enterprises
Source: Ikei & ENSR partners, Leonardo Survey, 2000

3.3. USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES FOR SME MANAGERS/OWNERS' TRAINING PURPOSES

3.3.1. Use of ICTs for SME managers/owners' training purposes

Section 3.3 is interested in analysing the role that ICTs are currently playing in the field of training for SME managers/owners.

Generally speaking, the available data suggest a low use of ICTs for SME managerial staff's training purposes (see Table 3.5). Thus, and referring to those SME who trained their managers/owners in 1999, up to 32.3% of them pointed out that the followed courses involved a substantial use of diskettes, whereas this percentage goes down to 31.8% and 26.5% in the CD-ROM and Internet cases, respectively[50]. Interestingly also, this use of ICT based courses seems to be more frequent amongst the small enterprises in comparison to the large and specially the very small enterprises, although differences can not be regarded as substantial amongst sizes.

Table 3.5. Use of ICTs for SME managers/owners' training purposes (1)

ICTs	Enterprise size			
	1-9	10-49	50-249	Total
➢ Diskettes	29.8	37.2	35.1	32.3
➢ CD ROM	27.4	42.0	33.3	31.8
➢ Internet	23.9	31.7	29.0	26.5

(1) Only positive answers
Data is referred to enterprises with training activities for their managerial staff
Source: Ikei & ENSR partners, Leonardo Survey, 2000

Interestingly also, the analysis per surveyed regions provides important differences amongst them (see Table 3.6). Thus, and surprisingly enough, the Spanish regional SME managers/owners who follow training activities are the ones who more intensively use ICTs for training purposes, irrespectively of the type of ICT suggested. Interestingly enough, a relevant position is also occupied by the French managers/owners, whereas the Dutch, Norwegian and Austrian SME manag-

[50] These results imply that, in Europe-5, only around 7% of the total population of SMEs use ICTs for training their managers/owners.

ers/owners use ICT on a more moderate and, to our opinion, 'realistic' basis. It is difficult to provide clear explanations for these 'strange' results, especially in the Spanish case. Thus, it could be argued that Northern European SME managers/owners have got a more clear and accurate idea of ICTs and ICT-based training than their Southern European counterparts. Additionally, it could be argued that Spanish SME managers/owners do usually follow more training courses on Information Technologies, where these contents are usually more transmitted via ICTs.

Table 3.6. Use of ICTs for SME managers/owners' training purposes (1)

ICTs	Regions of				
	A	E	F	NL	No
➢ Diskettes	16.7	54.7	38.9	30.0	22.3
➢ CD ROM	20.8	45.4	41.0	33.1	22.0
➢ Internet	19.6	42.3	23.0	16.4	27.9

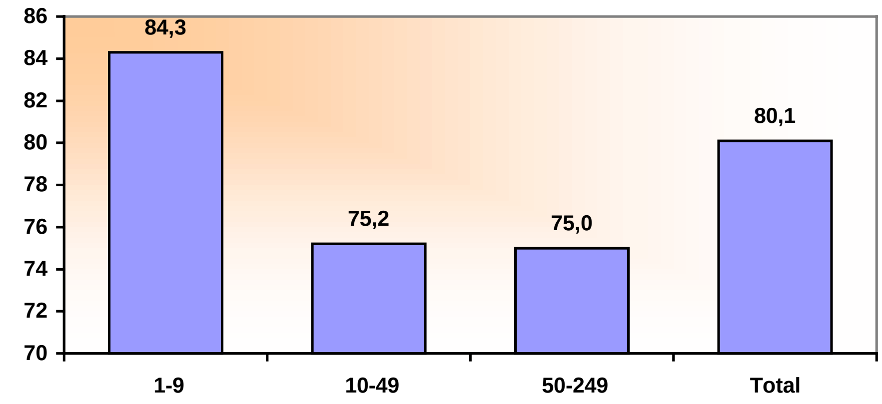
(1) Only positive answers
Data is referred to enterprises with training activities for their managerial staff
Source: Ikei & ENSR partners, Leonardo Survey, 2000

3.3.2. Effectiveness of ICTs for SME managers/owners' training purposes

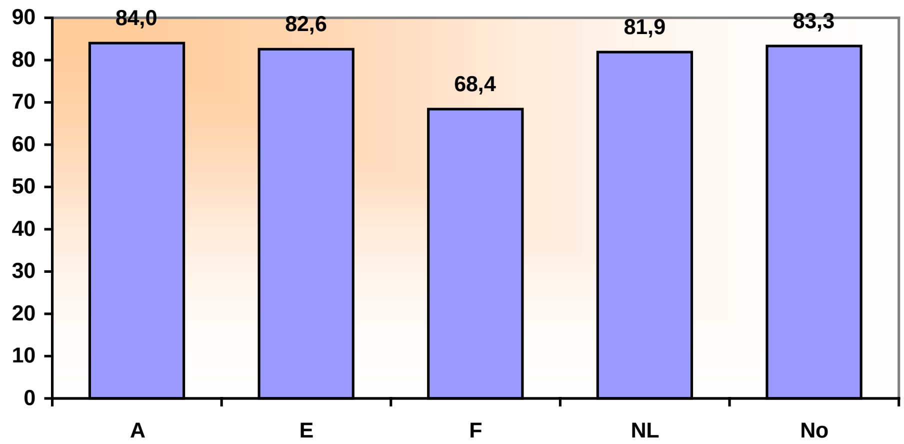
Concerning the effectiveness of ICTs as effective tools for learning purposes, the available data suggest that those SME managers/owners who have effectively used them for their training seem to have a positive valuation (see Graph 3.6). Thus, surveyed SME managers/owners rate the effectiveness of these training tools as 80.1 on a scale ranging from 0 –much less effective- to 100-very effective-. Interestingly also, differences in this rating by enterprise sizes are not particularly relevant, although perhaps it is worth underlining the slightly better existing perception amongst the very small enterprises (84.3 on the same scale from 0 to 100 in comparison to 75.2 and 75 for small and medium enterprises' managers/owners, respectively).

Graph 3.6. Effectiveness of ICT based training, by enterprise size and surveyed region

By enterprise size



By surveyed regions



(1) Average from 0 (much less effective) to 100 (very effective)
Data is referred to enterprises both with training activities for their managerial staff and who have followed ICT based courses
Source: Ikei & ENSR partners, Leonardo Survey, 2000

Meanwhile, and far as existing differences per surveyed regions are concerned, the existing results provide support to a general high rating on the effectiveness of ICT-based training, with rates over 80 on the 0 to 100 scale. The only partial exception to this general satisfaction is given by the French case, whose rating is slightly below 70 (68.4).

3.3.3. Evaluation of concrete ICT facilities for SME managers/owners' training purposes

Closely linked to the previous point, all surveyed SME managers/owners were requested about the suitability of CD-ROM and Internet based training as effective tools for covering the SME managers' training needs.

For the analysis of the enterprises' responses, enterprises have been grouped in three different categories according to their inactivity/activity in training activities for their managers/owners and, in the last case, according also to their use/not use of ICT based courses.

According to the available results[51] (see Table 3.7), those SMEs combining training activities for their managers/owners and using ICT based courses are precisely the ones who have the better perception about the helpfulness of CD-ROM and Internet based training (42.8% of SMEs suggest they are good instruments in most cases, whereas only 15.9% argue against them). By way of contrast, those SMEs inactive in training activities for their managers/owners seem to have the worst opinion about this type of training, since around 33.5% of them argue about the inconvenience of this training. Finally, those SMEs active in training but not using ICT based courses have an intermediate position, in the sense that they have the largest percentage suggesting that this type of training might be suitable just in certain cases, for certain subjects.

[51] These results have to be taken with care, due to the small size of sample in the case of those SMEs active in training activities for their managers/owners and using ICT based courses. Incidentally, this small size does not allow obtaining reliable data by enterprise size or regions.

Table 3.7. Evaluation of CD-ROM and Internet based trainings as good instruments to cover the training needs of SME managers, according to the characteristics of SMEs

	Training enterprises using ICT based courses	Training enterprises not using ICT based courses	Non training enterprises	Total
Yes, in most cases	42,8	19,7	23,9	25,4
Yes, in certain cases, for certain subjects	37,6	47,8	35,8	37,7
Not at all	15,9	17,4	33,5	29,3
DK/NA	3,7	15,1	6,7	7,6

All enterprises
Source: Ikei & ENSR partners, Leonardo Survey, 2000.

4. SUPPLY OF ICT BASED TRAINING FOR SME MANAGERS/OWNERS. ASSESSMENT

4. SUPPLY OF ICT BASED TRAINING FOR SME MANAGERS/OWNERS. ASSESSMENT

4.1. INTRODUCTION

Current chapter 4 is interested in looking into both the existing European supply of ICT based training aimed at SME managers/owners and the SMEs' perceptions on the barriers and advantages derived from the use of these ICTs for managerial training purposes.

Thus, the chapter will be divided in two main sections. Section 4.2 will intend to describe from a quantitative and qualitative point of view the existing ICT based training supply for SME managers/owners within the five surveyed countries/regions. Subsequently, attention will be paid to the main characteristics that define the existing pan-European supply.

Subsequently, section 4.3 will identify the perceptions that SME managers/owners have got about both the main barriers that render difficult their access to training activities and about the barriers and advantages derived from the use of ICTs for their training purposes.

4.2. DESCRIPTION OF THE EXISTING SUPPLY OF ICT BASED TRAINING FOR SME MANAGERS/OWNERS

This section is interested in describing the existing ICT based training supply for SME managers/owners within the five surveyed countries/regions, both from a quantitative and qualitative point of view. Subsequently, attention will be paid to the main characteristics that define the existing pan-European supply. Thus, the situation within these countries/regions can be outlined as follows:

a) Austria

To start with, it is important to stress that around 2/3 of the current Austrian training supply is provided by private agents, especially in the continuous vocational training domain. Notwithstanding this, funding for this training supply comes to a large extent from the public sector, either directly or indirectly (i.e. through sector associations). This result is true for the whole of Austria and including the Vienna region, where a substantial part of the Austrian training market concentrates.

Referring to this report's research topic (ICT-based training courses for SME manager/owners), it is possible to identify several relevant Austrian examples active in this domain, although no one of them is specifically targeted at SME managers/owners:

(i) *Economic Promotion Institute (WIFI)*

The Austrian Economic Promotion Institute (WIFI) is, with its federal subsidiaries, the most important supplier of vocational training in Austria. It is also one of the first providers of a tele-learning platform and benefits from its position as market leader.

Austrian Case study: "WIFI-Telelearning" (for Vienna: http://www.wifiwien.at/)
This platform, established in Autumn 1997 by WIFI, offers through the combination of tele-learning and physical presence a wide array of courses in different topics such as languages, web page design, accounting, electronics, communication techniques, logistics or mathematics. The courses are available in all 9 federal states of Austria and can be attended by anyone who is interested in them. In Vienna 11 different courses are currently offered. The costs range from ATS 1.900,- (€ 138,08) to ATS 30.000,- (€ 2.180,19).

The core of the programme is the "TeleWIFI.Book", an electronic script on the basis of HTML. The classes are organised through the "TeleWIFI.Exercise" where the provider is able to define exercises for interactive mediums. The classes alternate between traditional sessions where the trainee has to be at the training location and phases of self-instruction at home or in the office. The traditional sessions are reduced to about 50 % of the total duration of the training programme and are aimed at evaluating the learning progress of the trainees. This facilitates the training of SME employees. During the telelearning-phases the trainee is accompanied and supported by a qualified WIFI trainer called "TeleWIFI.Coach".

There exists also a special info-package for entrepreneurs/managers, which comprises self-tests, information on Benchmarking, start-up infos, public subsidies, special courses of all kind of management questions (most of them not online: like general management, finance, employee's protection, etc.) and also consultancy offered by the WIFI. Additionally, it is worth mentioning that two years ago, the WIFI developed the "Unternehmerlehrgang" (entrepreneur's course) out of the management and law parts of the preparation courses for the Master Craftsman diploma. This course is currently under reconstruction in order to become a telelearning course.

Source: Austrian contribution

(ii) *Coop.unlimited*

Coop.unlimited is a project of the WIFI in co-operation with the training centre Fohnsdorf and the research centre Seibersdorf. It was started in December 1996 and has been subsidised by the European Commission's SME-Initiative. The target group of these courses is employees of SMEs in five Austrian provinces (not Vienna), where the main goal is to combine different modes of learning (including ICT-based training) in an optimal way from the pedagogical point of view. The topics are so far restricted to computer software - knowledge. 23 % of the project participants have been SME managers, most of them from companies with less than 10 employees.

The ICT-based training programme is divided into two parts. The trainee is guided through the training programme by a computer voice, but he/she can make use of hypertext documents for further or repeated information. Furthermore, it is always possible to get help from the trainer (by using e-mail). Theoretical sessions are combined with examples from day-to-day business. At the end of the programme the trainee has to pass a final test giving him feedback about his personal efforts. The test can be made repeatedly, and the results are saved on the computer in order to being able to compare the progress over time. Carried out evaluations suggest that satisfaction amongst users is very high. Improvements for the future include a fixed "consultation hour" per week and the enlargement of the training range to include English, project management, commercial correspondence, time management, quality management and Internet.

(iii) *Cluster Network*

Cluster Network, supported by the European Commission, was initiated by the institute "Joanneum Research". Its main aim is the development of strategies for improving qualifications of SME employees (including managers) of the supply industry in the car cluster in the region of Upper-Austria. The contents of the courses include new technologies, management structures and/or production processes. The project develops (individual) training classes, not only taught by trainers, but also including an integrated concept of self-instruction via CD-ROM and Internet (3 hours a week) as well as personal contacts with the trainers / tutors (3 hours a week).

(iv) *Ibis acam*

The international training centre ibis acam offers ICT-based vocational training classes for Austrian SME employees (including managers) in the fields of web design, project planning, web programming and English. After an analysis of the required training the company presents an individual training concept for the target group. The training consists of a phase of self-instruction via ICTs, if wanted by the company, followed by either traditional training or ICT-based training in order to intensify the knowledge. Furthermore, ibis acam assists in the transformation of the learned information into day-to-day work.

From a qualitative point of view, it is important to stress again that none of the existing Austrian ICT-based training supply is specifically targeted at SME managers/owners, despite the fact that one example is under construction at present (see case study).

Additionally, it is possible to suggest that the role of ICTs in training is rather low in Austria, where the development of the market is lagging behind about 3 years to Germany. The small size of the Austrian training market is the main reason for this, although during the last 3 years several pilot projects have been started and put in the market, mainly subsided by public authorities. Therefore, most training programmes on the market are not very mature at present, but it is expected a rapid development in the coming years.

Most of the courses are offered to any enterprise irrespectively of its size but, in practice, the vast majority of participants are SMEs, due basically to the 'standarised' nature of these courses. In fact, one of the main future challenges for the sector is related to the development of "semi-tailor made" courses for SMEs in order to improve the training success. Software knowledge is still seen as the most important content for ICT-based training even for SME managers, but also languages and management know-how are supposed to be on the rise.

Finally, it is worth mentioning that ICT-based training is of interest to quite a substantial part of the Austrian SMEs, despite the fact that managers/owners are not seen as the main target group (due mainly to the low interest of the limited range of supplied training contents). However, the existing prospects for this category group are very optimistic.

b) France

Generally speaking, in France/Ile-de-France there is a wide supply of managerial courses aimed at enterprises' managers/owners. Thus, and according to Formatel (an association in charge of making a census of professional training courses), in France there are around 3,500 managerial training courses, covering a wide array of issues such as firm creation, management of human resources, business administration or strategic planning. The suppliers are of very different natures, ranging from private training organisations to business schools, Chambers of Commerce, professional organisations or, specifically, the CNAM (National centre for craft technologies), dedicated to deliver diplomas to professional adults. In addition, large enterprises organise and provide their own training courses to their staff. A large part of these training centres are centrally located in the Ile-de-France region.

Interestingly enough, most of these courses are targeted at large enterprises' managers or, at least in most cases, they do not pay specific attention to small firms.

As far as the ICT based training supply is concerned, it is possible to suggest that the use of ICTs in managerial training activities is very limited in France. Thus, and just to give some data, Formatel only detects 1 managerial course in France (out of 3,500, approximately) that uses ICTs for training provision. Meanwhile, CARIF Ile-de-France (Centre of information about vocational training in the Ile-de-France region) currently registers over 20,000 vocational training courses, where 13 of them use ICTs (only for paper-documentation exchange), and none of these courses is related to management issues. Finally, ORAVEP[52] suggests the existence of about 40 videos and CD-ROMs linked to management, although these materials are provided without any tutor assistance and they are not interactive. Thus, they are far better adapted to students than to SME managers. In this sense, they are more prepared as learning materials than as training materials.

As it can be seen, there is a practical non-existence of ICT based training experiences aiming specifically at SME managers/owners, apart from very few experiences (see French case study).

[52] ORAVEP is an organism under control of the French Ministry responsible for vocational training and devoted to observe the development of vocational training practices using ICTs

French Case study: French Building Federation: course with tutor trough internet

The French Building Federation ("Fédération française du bâtiment") organised in the 1999–2000 period an internet-tutored course, directed to SME managers and owners. The scope of the course was to improve marketing and commercial skills. The rationale for this course was clear. Thus, the Federation was conscious that most SME owners do not dedicate time to learning, even if they suffer gaps in their theoretic knowledge of management. The aim was to permit managers unfamiliar with learning sessions to improve their knowledge, saving time and travels. Another goal was to start a complete centre of knowledge, and to lower accordingly the cost of the professional learning system. The topics (marketing and relation to clients) were selected because of their importance for SME managers.

From a methodological point of view, the course was designed on the basis of classical learning sessions delivered by the local representations of the Federation, although new pedagogical and technical competencies were included in order to reshape the course (interactive exercises, CD-ROMs, etc). The course had 4 components:

- asynchronous exercises, the results of which were commented (not corrected) by the tutor,
- synchronous conferences, during which SME managers could ask questions,
- CD-ROM for self-learning, including video films and comments,
- possibility of inter-connection between managers.

Each manager could choose his methodology/timing/frequency to work. During the course, the tutor connected with learners twice a day at least. Tutors also contacted by mail, phone or letter those managers whose interest was failing.

Finally, and referring to the obtained results, the course was supposed to last 2 months, but in fact it was extended to two additional months. Most learners declared themselves satisfied with this method. Nonetheless, a complete and independent evaluation of the system was realised by means of face-to-face interviews with the trainees. Four major conclusions were drawn up:

- It is necessary to select people with a good internet ability;
- The contents must be mainly practical;
- The interpersonal communications must be the core of the method, and not an accessory.
- Most SME managers proved to be unfamiliar with this asynchronous working method.

The Federation is currently considering the possibility of building a second experimentation.

Elaborated by Aprodi.

c) Norway

Adult learning has increasingly gained importance in the Norwegian policy-making discussion and it is currently regarded as one of the main axis for the Norwegian economic development. In this sense, the introduction of the 'Competence Reform' in 1999 can be viewed as a turning point in this process, where this 'Competence Reform' is the basis for a co-ordinated effort to provide adults with better opportunities for training and competence building. Examples of reform measures include the recognition of non-formal training as a basis for entrance to colleges and universities, the granting of individual rights for study leave or the reorganisation of the public education system, so it is adapted to the needs of adult learning, e.g. flexible learning methods. Having in mind this context, Norwegian enterprises are seriously re-thinking their strategies regarding training and competence building.

Generally speaking, and despite this increasing importance of adult training, Norway can be characterised by a lack of formal or organised "Management Training System", although there are several training providers offering training programmes primarily aimed at managers. Interestingly also, no one of these providers run courses specifically aimed or suited for SME managers-owners.

As far as ICT-based training for managers is concerned, training courses in the field of management and based on the use of ITs are mainly provided by colleges and the semi-public institutions. In this sense, the available evidence suggests that suppliers do not define enterprises as an important target group in comparison to individuals, although it can be assumed that among the individual customers there is a substantial share that get their fees and other expenses covered by their enterprise.

Three main management-training providers can be identified in Norway, that is to say, the Norwegian School of Management, the Network University (NVU) and the NKI Internet College (see Table 4.1 for a full description of these institutes). All these three institutions provide courses and studies through the Internet and are – though to a varying degree- relevant suppliers of training to the SMEs. In any case, evidence seems to indicate that the Norwegian School of Management is the most important supplier.

Table 4.1. Description of main Norwegian suppliers of ICT based training for managers

Institution	Norwegian School of Management – Handelshøyskolen BI Distance Education Unit	The Network University	The NKI Internet College
Organisation	The unit is a part of Norway's largest business school. Its main function in the organisation is to deliver – or produce- courses and studies on the Internet. Other units (i.e. the institutes) at the NSM develop and maintain courses. The distance education unit has been in operation since 1990.	The Network University (NVU) in Norway is currently a partnership of 9 universities and colleges collaborating to provide university and college education on the Internet. The partnership is open to all 4 Norwegian universities and 32 university colleges.	NKI is one of the largest non-governmental educational institutions in Northern Europe. The NKI Group comprises among other units NKI Distance Education. NKI Distance Education has grouped its Internet-based courses and programmes under the name of the NKI Internet College. The Norwegian name is Nettskolen, which is a registered brand name. NKI started net-based education in 1987.
Target groups	Individuals, enterprises and public institutions. Most customers are individuals.	Adult (grown-up) students	Individuals, enterprises and public institutions. Most customers are individuals.
Pedagogical methods	➢ Voluntary face-to-face gatherings. ➢ Printed documentation (study guides and books). ➢ Internet-based documentation. ➢ Guidance through discussion forums and e-mail. ➢ Internet-based collaboration with other students. ➢ IRC (chat).	➢ Printed documentation (books). ➢ Internet-based documentation. ➢ Guidance through discussion forums and e-mail. ➢ Internet-based collaboration with other students. ➢ IRC (chat)	➢ Printed documentation (study guides and books). ➢ Internet-based documentation. ➢ Guidance through discussion forums and e-mail. ➢ Internet-based collaboration with other students.
Subjects offered	Management, Marketing, Organisation, Project Management, Human Resources, Economy, Finance and Accounting, Business Legislation, Logistics Approx. 40 courses and 8 studies (undergraduate) are offered.	Information and Communication Technology, Arts, Engineering, Languages, Natural Sciences, Social Sciences, Management, Organisation, Economics The majority of courses fall into the ICT-category.	Information and Communication Technology, Management, Marketing, Organisation, Human Resources, Economy, Finance and Accounting, Business Legislation
Internet address	Nettstudier.bi.no (for information in English: www.bi.edu)	www.nvu.no	www.nettskolen.com

Elaborated by Agder.

From a pedagogical point of view, these three organisations base primarily their methods on a combination of printed publications and face-to-face gatherings with new and advanced ICT-based tools such as Internet-based documentation, discussions groups, Internet-based collaboration with other students (often with special software), chats or e-mails. Some of the main fields covered by the courses include management, marketing, organisation, project management, human resources, finance-accounting, business legislation and, finally, logistics.

d) Spain

To start with, it is possible to argue that the existing Spanish/Basque continuing training system specifically aimed at managers and owners can be defined as extensive. Despite the fact that most of these initiatives are not intended specifically to SME managers, and due to the Spanish/Basque productive tissue results, SMEs make the largest use of them. From a methodological point of view, most of this Spanish and Basque training supply is based on traditional pedagogical methods, where the use of the new ICTs as training tools can be defined as very low.

Referring to the existing Spanish ICT-based training supply aimed at SME managers and owners, the development of ICT-based training initiatives can be defined as an incipient and still not much developed sector in Spain in general and the Basque Country in particular. However, and since late nineties onwards, the sector has begun to experience an important growth, which is well reflected in an increasing supply of institutions and organisations that provide this kind of training.

The current Spanish and Basque ICT-based training supply for managers/owners can be defined by the following characteristics:

- The existing Spanish ICT-based training supply includes a wide array of modalities, ranging from traditional self-training modalities (that include some forms of training based on, i.e. CD-ROMs or e-mails) to real virtual training suppliers (where internet facilities are extensively used). Additionally, it is worth stressing that, in Spain, there is a certain degree of confusion about the concept and characteristics of ICT-based training.
- Most (if not all) of the existing Spanish supply is not specifically aimed at SME managers and owners, in the sense that existing courses are aimed at trying to reach the largest possible population.

- The institutions responsible of providing these ICT-based courses can be grouped under two main categories, this is, and on the one hand, universities (mainly interested in providing medium-long term courses linked to the obtaining on an official degree) and, on the other hand, private training centres, much more interested in short term courses mainly aimed at people currently at work. However, it is worth underlining that some universities have developed special initiatives (basically through Foundations) in order to provide services aimed at this market share.
- It is currently possible to distinguish at least 18 training suppliers of ICT-based courses for enterprise managers/owners, although surveyed experts identify only three main experiences that can be regarded as best practices in Spain, that is to say, the 'Centro Virtual de Formación del Directivo', the 'Escuela Virtual de Empresa' and the 'Universitat Oberta de Catalunya'. These three experiences (see Table 4.2) can be labelled as very recent in time (the oldest one dates back to 1995, whereas the other two were set up in 1998/1999). Interestingly also, these training providers follow different training approaches. Thus, some institutions are involved with the provision of long-term management studies (i.e. Universitat Oberta de Catalunya). Meanwhile, other examples (i.e. Centro Virtual de Formación del Directivo, Escuela Virtual de Empresa) are mainly concerned with the provision of short-term courses specifically devoted to entrepreneurs and managers currently at work and who want to receive a complementary training while carrying out their daily working activities.

Table 4.2. Synopsis of the three main Spanish providers of on-line training for managers/owners

	Centro Virtual de Formación del Directivo'	Escuela Virtual de Empresa	Universitat Oberta de Catalunya
Running Organisations	APD[53] and IFO[54]	Deusto Formación and Les Heures-Universitat de Barcelona	Generalitat, Regional Government of Catalonia
Year of foundation	1998	1999	1995
Internet Address	www.ifo.es	www.evdn.com	www.uoc.es
Goals of the institution	Provide high-quality on-line training specifically aimed at enterprise managers and owners	Become a reference on-line training centre in Spain for enterprise managers and owners.	Offer high quality distance teaching through the application of innovative pedagogical systems and the use of interactive multimedia technologies
Methodology	Short (ranging from 10 to 30 presence equivalent hours), practical-oriented courses. Virtual classes based on a combination of different training tools such as written documentation and discussion fora, remarks from the trainer and chats through the use of e-mail facilities.	43 programmes of short-medium duration (between 6 and 80 hours), and 14 long-term courses, including several master and postgraduate courses to be carried out on-line.	Based on the concept of Virtual Campus, which is based on the use of ICTs. From home, students receive personalised attention, work with companies and their tutors and advisors, have access to the University's services and form virtual work-groups or debate groups. Students receive study materials
Training contents	➢ New Technologies ➢ Management ➢ Marketing ➢ Human Resources ➢ Economy, Finance and Accounting ➢ Legislation and Fiscal Law ➢ Quality-Logistics-Operations ➢ Leadership and Management Abilities	➢ Finance ➢ Management ➢ Human resources ➢ Production ➢ Marketing ➢ Legal and Tax environment for the enterprise	University studies on different issues in Business and Enterprise management

Source: Escuela Virtual de Negocios, Instituto de Formación Online & Universitat Oberta de Catalunya
Elaboration: Ikei

❒ The training fields covered by the existing ICT-based training supply for managers include a wide array of different managerial areas, such as finance,

[53] APD stands for 'Asociación para el Progreso de la Dirección' (Association for the Progress in Management). APD is a major association of Spanish enterprises, and its main activities are related with the development of training initiatives for its associates and the organisation of conferences and discussion fora.

[54] IFO stands for 'Instituto de Formación Online' (Institute for On-line Training). IFO was set up as a private initiative, basically with the aim of providing high-quality on-line continuing training. In this sense, IFO has collaborated in this respect with a large number of relevant Spanish institutions and sector associations, being APD one of them.

management, human resources, production, marketing, legal and fiscal provisions, etc.

- The Spanish supply of ICT-based training courses for managers/owners is particularly concentrated in two main areas, this is, the two most important Spanish urban areas of Madrid and Barcelona. These areas correspond, precisely, with the main on-line training demanders, as well as the Valencia and Basque Country regions. The high costs derived from developing on-line training courses imply a need for accessing to larger populations in order to make profitable the required investments. This trend towards spatial concentration of the ICT based supply is expected to continue in the future.
- Linked to the previous point, some of the existing supply providers are intended to operate within the regional boundaries. This fact is particularly abundant in Catalonia, where there is a relatively large supply of courses in Catalan (most courses provide tuition in both languages). Meanwhile, the supply located in Madrid is intended to supply services to the whole Spanish territory.
- The existing Basque supply of ICT based courses can be reduced to three main examples, that is to say, the courses run by CONFEBASK (the Basque Employers' Association), those courses run by SPRI, a public owned regional development agency and some initiatives conducted by the local Chambers of Commerce.

Case study: CONFEBASK's multimedia based training	
CONFEBAK has designed several continuing training tools for occupied personnel based on new multimedia technologies, where special attention is paid to top and intermediate managers. Operationally, the different courses are provided via CD-ROM, where each course is structured around increasingly complex levels, where it is required to pass the different levels to continue through the course. Each level consists of two parts:	
➢ A theoretical part, consisting in a set of didactic units, complemented with different examples that help to fully understand and integrate the theoretical contents.	
➢ A practical part, based on the resolution of different simulation cases and exercises suggested within the CD-ROM. Interestingly enough, the CD-ROM has got a self-correcting system that automatically checks the responses, where the trainee is not allowed to continue unless a correct reply is given.	
Currently, CONFEBASK has got the following available courses on multimedia basis:	
➢ Service to client ➢ Marketing ➢ Process Management ➢ Labour relations I, II ➢ Finance and analysis of balance sheets for managers ➢ Economic and financial analysis ➢ Quality	➢ Management of personnel ➢ Accounting ➢ Administration ➢ Management tools for managers ➢ Health and security at work ➢ Maintenance ➢ Business plan

Source: Confebask

❒ Looking at the future, the market of ICT based training services for the general public and for managers/owners in particular is going to experience an important growth, both in Spain and in the Basque Country. The fulfilment of these positive expectations requires, on the one hand, an upgrading of the Spanish managers/owners' ICT skills (currently very low in comparison to the existing ones in other European countries) and, on the other hand, a higher degree of maturation of the existing technology (since the current high obsolesce speed implies very short periods for paying-off the high costs derived from the development of any training product). In any case, experts suggest that future on-line training practices will complement rather than substitute traditional training practices based on presence and face-to-face contacts, due to their importance and interest amongst this professional category.

e) The Netherlands

To start with, it is possible to argue that The Netherlands has got a long tradition of training activities for SMEs in general and for SME managers/owners in particular. In this sense, it is worth underlining the central role played by the Royal Association MKB-Nederland, the largest employers' organisation in the Netherlands. All in all, MKB-Nederland promotes the interests of some 125,000 employers.

Within the training domain, MKB Nederland, in co-operation with the Erasmus University Rotterdam and a private training institution has launched the 'SME Growth manager', which combines entrepreneurial training, and personal advice. The service comprises several stages, such as evening course practical economic management, management training, tailor-made advice, personal coaching of the SME manager and, finally, the development of SME-networks. Courses are still provided in the form of classroom tuition, where the use of ICT-based training is non-existent.

Referring exclusively to the ICT-based training for SME managers/owners, the existing Dutch supply can be regarded as more developed than in other EU countries, although the existing supply is characterised by an early developmental stage. In addition, this course supply is primarily focused on general (enterprise) management and very seldom on SMEs, where the geographical scope is essentially nationally oriented. The major fields covered by the training supply are management (in different aspects), e-commerce, negotiating, motivation, presentation and coaching.

It is possible to identify a number of public and private suppliers active (although to varying degrees) in this domain. Examples include some of the following ones:

(i) *Regional Education Centres*

Regional Training Centres (ROCs) are public training institutions engaged in secondary vocational education. These ROCs currently operate in co-operation with the business sector (individual enterprises or groups of firms), offering them inter and intra-company training packages on a commercial basis. The major target group for these courses is SME employees. ROCs are currently developing several experiments based on the use of ICT-based training courses. One nationwide example is the so-called 'European Computer Driving License', i.e, a course through which participants become acquainted with the computer software.

(ii) *Open University*

The Open University of the Netherlands operates from 1984 onwards. It is an independent government-funded institution for open higher distance education, established by law. The Dutch government's purpose in founding the Open University was to make higher education accessible to anyone with the necessary aptitudes and interests, regardless of any formal qualifications. The Open University offers courses and programmes in law, economics, business and public administration, engineering, environmental science, cultural studies and social science. A degree awarded by the Open University of the Netherlands is the equivalent of a degree awarded by a regular university or other institution of higher education. Some of the available courses include audio on cassette or CD, computer programmes of various kinds, multimedia programmes on laser vision and CD-ROM, and communication by means of electronic networks.

(iii) *Private training institutions*

According to CEDEO[55], and up to now, private training institutions have been very reluctant to supply ICT-based courses, in the form of E-learning, despite several unsuccessful attempts for a number of reasons:

- Time to undertake workplace-based training is often scarce;
- Investments need to be made in order to create the appropriate learning environment;
- Following training courses is not necessarily judged in a positive way;
- The social aspect of classroom tuition is seen as important.

[55] CEDEO is an umbrella organisation, initiated by private training course suppliers. The organisation represents about 300 national and regional companies, half of which explicitly provide management training.

It is estimated that not more than five percent of the current training course supply can be defined as ICT-based. These courses are characterised by an early developmental stage, except in the language-training domain. Notwithstanding this, PAEBOM[56] expects a major shake out amongst the current (traditional) training suppliers as a result of the developments towards more serious forms of ICT-based learning.

To end with the Dutch situation, it is possible to conclude that the use of ICT-based courses in general will grow in the coming years, despite the current limited use. Several explanations can be provided to underpin this limited use such as the early development of ICTs, the higher costs derived from ICT-based training courses (whereas benefits are not always easy to observe), the existing technical shortages (e.g. not enough bandwith yet to make the Internet an appropriate medium) and, finally, the lack of ICT knowledge within companies, trainees and trainers. The central question remains if ICT-based training will lead to a better education compared to traditional training methods. As long as there will be no clarity on this matter a majority of Dutch enterprises (especially SMEs) will be inclined to be discouraged by high investment costs.

f) The Pan-European supply

The previous national/regional results can be complemented having in mind the conclusions obtained in the Teleman/SME Study, carried out in 1998 by a group of European research institutions within the framework of the Telematic Application Programme (sector Education and Training) of the European Commission.

According to this study, Europe can be currently characterised by an important degree of confusion on the concept of ICT based training and its characteristics. Thus, the study suggests that most of the existing supply of courses is in many cases only 'dressed up' with the use of Internet platforms. In these cases, Internet is only used as a tool for promoting training courses, providing general information or for subscribing online. In other cases, Internet is used just to communicate with

[56] PAEBOM acts as the national platform for national recognised private training suppliers.

tutors and other participants trough e-mails. Thus, ICTs are commonly applied only to 'modernise' current distance learning courses, and do not really add any additional value and/or advantage to the user.

Linked to the previous point, the study points out that, especially in comparison to the US-Canadian situation, the European ICT based training courses supply is limited and still at an early stage of development, not enabling therefore the consumer to compare and choose amongst courses[57]. Thus, it is not possible to talk about a real European market, but rather a multi-domestic market, in which the national dimension is by far prevailing (with the heavy consequences that this may have on suppliers of smaller countries). In any case, there is a growing trend towards import/export/international collaboration, especially in some specialised or highly qualified areas.

Additionally, most of these training projects can be defined as not very 'user-friendly applications', in the sense that they are very technology driven. Having in mind the average low ability to use ICTs, especially amongst SMEs, this situation becomes clearly a barrier.

From an SME point of view, European ICT based courses and training specifically focused on SMEs' employees and managers are rare or in an experimental development stage. In this sense, most of the ICT based courses in Europe are focused on University students or post graduates, with the aim to provide access to training subjects/areas which are not available in their faculties or in their regions.

Additionally, the European ICT-based training supply can be characterised by the following points:

- The most important share of ICT based training courses are based on the active initiative of the student, in the sense that the student studies by his/her own and the students has to take the initiative to contact the tutor. This tutor can be usually contacted on a limited basis at certain times, besides exercises or exams. Further contact to experts is generally not offered.

[57] However, it is important to underline that differences amongst the European countries are also very wide.

- The majority of the courses offer an asynchronous communication structure, preferably by e-mail, forums and virtual communities. These virtual communities offer platforms to subscribe, to find information on courses and to communicate with other students and tutors. The use of video conferencing is very scarce.
- Almost all ICT based courses can be labelled as very flexible in terms of time (courses can be followed at the student's convenience) and place (students are not required to attend physically).
- Courses are usually fully structured from the beginning to the end, following a didactical overall concept.
- Almost all courses do provide a certificate of the course, where the majority has intermediate exams and tests subject to the approval of a tutor.
- Distance learning courses based on the use of ICTs are usually more expensive than attendant courses.
- In very few occasions training material is downloadable, and in many cases when it is downloadable, the material consists of 'digital books'.
- The European ICT-based training supply is mainly focused on the national market, which results in the use of native language(s). On the one hand, this fact limits the potential markets (which is not the US case) although, on the other hand, and having in mind the SMEs' interest, courses have to be offered in their native languages.

However, and according to the MESO report[58], it is important to have in mind that this situation is rapidly evolving in time. Thus, a substantial progress in quantity and quality of supply of multimedia products and services for education and training has taken place in the last two-three years. The explosion of Internet use and the significant growth of CD-ROM market are the two basic conditions that support the market growth.

[58] MESO stands for Multimedia Educational Software Observatory. The MESO project was commissioned by the European Commission DG XXII. A final report was produced within this Observatory on "Technological, legal, economic and strategic watch on the supply of multimedia educational software".

In this sense, CD-ROM represents by far the largest part of the Education and Training multimedia market, whilst Internet/Intranet applications are growing more quickly but starting from a much more reduced base, at least in economic terms. Broadcasting and videoconference are still modest in economic terms, but growth is expected in some market segments. Integration of technological platforms is considered to be the natural trend of the present and coming years. The platforms that are considered as relevant are the CD-ROM and the Internet.

4.3. BARRIERS AND ADVANTAGES DERIVED FROM THE USE OF ICTS FOR SME MANAGERS/OWNERS TRAINING

4.3.1. General Barriers for training of SME managers/owners

This section is interested in looking into the current barriers that render difficult for SME managers/owners to attend to training activities for themselves. Thus, and to start with, a first distinction between those SMEs that train their managers/owners in comparison to those ones who do not do it shows that the most important barrier is, in both cases, problems derived from attending the courses (due to lack of time, spatial distances to courses, problems of delegation of responsibilities, etc). Interestingly also, this barrier is the only one that actually is regarded as above 50 on an scale from 0 (unimportant) to 100 (very important) (see Table 4.3).

Table 4.3. Barriers for training

Barriers	Training enterprises				Non training enterprises			
	1-9	10-49	50-249	Total	1-9	10-49	50-249	Total
➢ Lack of information about the available courses	37.3	24.0	26.8	32.2	22.0	18.5	13.8	21.3
➢ Bad quality/unsuitability of the available courses	43.2	42.3	45.9	43.2	30.6	30.3	24.9	30.4
➢ Difficulties to identify the training needs of the managers	47.7	35.7	37.8	43.3	29.2	36.3	34.0	30.3
➢ Problems for attending the courses	71.1	64.3	65.9	68.6	68.1	71.3	50.9	68.1
➢ High costs of the courses	49.3	50.2	43.6	49.0	44.4	40.7	28.6	43.4
➢ Scepticism about training benefits	26.4	35.3	34.1	29.7	33.7	39.1	40.0	34.6
➢ Company's fear of the managers being poached away after training	21.7	13.7	13.4	18.3	12.6	9.6	6.7	12.0
➢ Insufficient support by the government and public organisations	36.9	28.0	22.5	33.0	34.0	26.5	23.1	32.7
➢ The company has not training needs currently	--	--	--	--	44.2	40.2	32.3	43.4
➢ Other barriers	20.5	21.8	9.1	20.3	30.4	42.9	37.0	32.5

(1) Average from 0 (unimportant) to 100 (very important)
All enterprises
Source: Ikei & ENSR partners, Leonardo Survey, 2000

As far as the remaining barriers are concerned, those SMEs active in training point out also the relative importance of the high costs of courses, the difficulties to identify the managers' training needs and the bad quality/unsuitability of courses, although in all cases these barriers are valued below 50 (49.0, 43.3 and 43.2, respectively). Meanwhile, those SMEs inactive in training suggest as important barriers the non-existence of training needs and the problems derived from the high costs of courses (both barriers valued as 43.4 on the same scale from 0 to 100). It is worth mentioning that lack of support by public organisation is not seen as an important barrier for both groups of SMEs.

From an enterprise size perspective, data show that the problems derived from attending the courses are regarded as important (above 50) by all enterprise sizes, irrespectively of the fact that they train/do not train their managers/owners, although this problem is specially important the smallest the enterprise size is. By way of contrast, the remaining barriers are not regarded as important (above 50) by any enterprise size, although high costs of courses seems to be slightly critical for the very small and small enterprises active in training.

Interestingly also, most barriers are more strongly perceived by the smallest enterprises, irrespectively of the fact that they train/do not train their managers/owners. The only exception to this is given by the scepticism about training benefits, more important amongst larger enterprises, and the difficulties to identify the managers' training needs, more perceived by the larger enterprises inactive in training.

From a regional perspective, the distinction between those SMEs active/inactive in training suggests that, as far as the first ones are concerned (see Table 4.4), internal problems for attending the courses are specially perceived as the most important problem for the Spanish, French and Norwegian regional SMEs (90.5, 88.2 and 79.3 on the same scale from 0 to 100, respectively), whereas high costs of courses and bad quality of courses are suggested by the Austrian SMEs and Dutch training SMEs, respectively, although at a lower scale of importance (44.6 and 56.0),

Table 4.4. Most important barriers to training amongst SMEs active in training activities for their managers/owners, by surveyed regions

Barriers	Regions of				
	A	E	F	NL	No
➢ Lack of information about the available courses	32.8	35.7	31.8	24.2	36.2
➢ Bad quality/unsuitability of the available courses	30.9	36.9	45.3	56.0	43.4
➢ Difficulties to identify the training needs of the managers	35.2	44.8	49.7	29.7	52.7
➢ Problems for attending the courses	31.3	90.5	88.2	44.6	79.3
➢ High costs of the courses	44.6	49.2	64.4	41.0	47.5
➢ Scepticism about training benefits	25.5	30.7	34.8	30.1	26.9
➢ Company's fear of the managers being poached away after training	6.0	27.1	29.5	15.5	9.1
➢ Insufficient support by the government and public organisations	16.5	44.9	49.7	20.7	31.0
➢ The company has not training needs currently	--	--	--	--	--
➢ Other barriers	15.0	0.0	0.0	0	50.0

(1) Average from 0 (unimportant) to 100 (very important)
Source: Ikei & ENSR partners, Leonardo Survey, 2000

Meanwhile, and referring to the SMEs inactive in training activities for their managers/owners, the available data (see Table 4.5) suggest that, again, the problems for attending the courses are regarded as of primary importance by all regions. Interestingly also, it is worth mentioning the importance over 50 on the 0 to 100 scale attributed by the French SMEs to the high costs of the courses and the insufficient support by the public organisations. This results could lead to suggest that French SMEs inactive in training would appreciate more financial aid or more information to spot their needs, the kind of courses or even their suppliers.

Table 4.5. Most important barriers to training amongst SMEs inactive in training activities for their managers/owners, by surveyed regions

Barriers	Regions of				
	A	E	F	NL	No
➢ Lack of information about the available courses	15.5	34.7	27.4	14.1	11.2
➢ Bad quality/unsuitability of the available courses	14.1	37.8	34.8	32.4	33.3
➢ Difficulties to identify the training needs of the managers	31.7	37.2	35.4	15.4	27.8
➢ Problems for attending the courses	67.6	76.2	75.4	61.9	54.9
➢ High costs of the courses	35.3	44.9	59.7	40.2	32.6
➢ Scepticism about training benefits	36.6	32.6	44.9	27.8	27.1
➢ Company's fear of the managers being poached away after training	5.3	21.4	19.2	5.3	4.0
➢ Insufficient support by the government and public organisations	18.3	39.9	58.9	18.2	20.3
➢ The company has not training needs currently	33.8	57.2	48.5	n.a.	29.8
➢ Other barriers	25.6	100.0	33.3	98.1	5.1

(1) Average from 0 (unimportant) to 100 (very important)
Source: Ikei & ENSR partners, Leonardo Survey, 2000

4.3.2. Barriers and Advantages derived from the use of ICTs for SME Managers/owners Training

a) Barriers

This section is looking into the main barriers and advantages derived from the use of ICTs for the training of SME managers/owners. For this purpose, and following the analysis approach already adopted in a previous section of this report, the enterprises will be grouped in three different categories according to their inactivity/activity in training activities for their managers/owners and, in the last case, according also to their use/not use of ICT based courses.

According to the available results[59], and starting with the main perceived barriers (see Table 4.6), all enterprises suggest that the main perceived barrier for the use of ICT for managers' training purposes is related to the existing difficulties in differentiating good providers and products. Thus, this barrier is ranked slightly above 50 on a scale from 0 –unimportant- to 100 –very important- by all enterprises, irrespectively of their ICT based training approach. This result may suggest a certain lack of transparency of the European ICT based training supply.

Interestingly also, those SMEs active in ICT based training activities for their managers/owners do not regard any other barrier as important (above 50 on the same scale), where this fact is similar amongst those SMEs inactive in training activities. Meanwhile, SMEs active in training for their managers/owners but not using ICT based courses suggest two additional barriers as important (ranked above 50), that is to say, the frequent changes in technology and the unsuitability of this kind of ICT based training for certain contents (55.1 and 53.5, respectively).

Table 4.6. Main barriers derived from the use of ICTs for the training of SME managerial staff, by SMEs' training approach (1)

Barriers	Training enterprises using ICT based courses	Training enterprises not using ICT based courses	Non training enterprises	Total
Limited skills for the use of ICTs	41,6	49,6	40,5	42,0
Limited availability of the required hardware/software	33,8	37,5	33,0	33,7
High costs of ICTs	43,6	37,4	37,1	37,9
Lack of personal contact with other students and scarce possibilities for ex-change of ideas	44,5	44,8	41,3	42,1
Unsuitability for certain training contents (social and practical abilities, etc.)	46,1	53,5	40,9	43,2
Difficulties in differentiating good providers and products	51,9	59,4	51,8	52,9
Frequent changes in technology	43,6	55,1	49,9	49,9
Technical limits regarding the present low speed of the Internet	46,7	34,2	36,9	37,6
Others	6,7	46,4	44,5	40,9

(1): Average from 0 (unimportant) to 100 (very important)
All enterprises
Source: Ikei & ENSR partners, Leonardo Survey, 2000

[59] These results have to be taken with care, due to the small size of sample in the case of those SMEs active in training activities for their managers/owners and using ICT based courses. Incidentally, this small size does not allow obtaining reliable data by enterprise size or regions.

b) Advantages

Referring to the advantages derived from the use of ICT based training for managers/owners, and contrarily to the barriers, surveyed SMEs have got a highly valued opinion about the different possible advantages (see Table 4.7). Thus, SMEs specially value the possibilities derived from the access to large amounts of information world-wide, as well as the easy access to training, irrespectively of time and speed (both valued as 65 on an scale from 0 –unimportant- to 100-very important-).

Table 4.7. Main advantages derived from the use of ICTs for the training of SME managerial staff, by SMEs' training approach (1)

Advantages	Training enterprises using ICT based courses	Training enterprises not using ICT based courses	Non training enterprises	Total
➢ Access to large amounts of/and high quality information world-wide	68,1	68,7	64,0	65,2
➢ Possibility to collaborate and interact with other people world-wide	55,6	57,3	56,4	56,5
➢ Easy access to training, irrespectively of time and place	70,4	69,0	63,4	65,1
➢ Savings in training related costs	64,4	62,3	63,0	63,1
➢ Customisation, flexibility to adapt train-ing contents to own needs and learning speed	64,7	65,1	64,2	64,4
➢ Pedagogical potential of multimedia	54,3	49,8	49,4	50,0
➢ Others	30,0	26,1	38,4	35,8

(1) Average from 0 (unimportant) to 100 (very important)
All enterprises
Source: Ikei & ENSR partners, Leonardo Survey, 2000

Other advantages equally positively valued include the customisation and flexibility to adapt training contents to own needs and learning speed and savings in training related costs (i.e. travel costs). In both cases, the ranking varies from 64.4 to 63.1, respectively. Interestingly also, those SMEs active in training activities for their managers/owners have got vis-à-vis the inactive enterprises a more positive opinion about the different advantages derived, although no important differences can be generally appreciated amongst the different groups of SMEs.

5. PUBLIC POLICIES INTENDED TO SUPPORT ICT BASED TRAINING FOR SME MANAGERS/OWNERS

5. PUBLIC POLICIES INTENDED TO SUPPORT ICT BASED TRAINING FOR SME MANAGERS/OWNERS

5.1. INTRODUCTION

Chapter 5 is interested in analysing the existing public support intended to foster the use of ICT based training. For this purpose, information will be provided on relevant experiences within the different surveyed European countries/regions. Subsequently, a brief discussion will be held on the use that SME managers/owners in the surveyed regions make of the existing public supports intended to foster training activities in general and ICT based training in particular.

5.2. EXISTING ICT BASED TRAINING PUBLIC SUPPORT SUPPLY

An in-depth analysis of the public policy support measures existing in the different surveyed countries shows that in most of them, there is an important range of public policy measures intended to support continuing vocational training (CVT) activities for SMEs. By way of contrast, this supply becomes much more restricted if the target is narrowed to SME managers/owners, and specially, if the policy measures are intended to promote ICT-based continuing training activities for SME managers.

In this sense, this research has found that in the surveyed countries there are no specific policy measures for promoting ICT-based continuing training activities for SME managers, neither at national or regional level. By way of contrast, it is possible to identify a set of public policy schemes intended to support ICT-based training activities in enterprises in general or in SMEs in particular. However, these schemes do not generally distinguish by employment categories.

The existing ICT-based training supply per surveyed country can be summarised as follows:

a) Austria

In Austria there is no policy scheme intended to support ICT-based training for SME managers/owners. However, it is possible to identify a number of policy schemes that support ICT-based training, although not specifically aimed at SMEs or at SME managers/owners. Examples include some of the following ones:

- The Austrian Federal Ministry for Economic Affairs and Labour has undertaken between 1988 and 2000 the initiative "Multimedia Business Austria", intended to support the set-up of the Austrian multimedia market. This initiative has stimulated and supported private initiatives by different means such as information, inter-firm co-operation agreements, internationalisation, etc. It has been recently decided to continue this initiative, although with some minor changes. The extent of the financial support is tailored according to the applicants' specific needs. This initiative is not targeted specifically to ICT-based training, but it can be supported if it is applied for.
- The Wiener Wirtschaftsförderungsfonds (Vienna Business Agency) supports vocational training of micro enterprises' managers and their employees within the programme 'Nahversorgungsförderung' (promotion of short distance supply) as well as 'Unternehmensgründungsaktion' (support action for business start-ups), always in the Vienna region. Thus, the promotion of short distance supply is restricted only to micro businesses (up to 10 employees) in Vienna which are active in certain sectors. They get 20 % of the vocational training (and consultancy) costs (up to 20,000 Euro), as well as their investments in software or new machines (at least 7,500 Euro). Meanwhile, and within the support action for business start-ups, the enterprises get 15 % of the vocational training (and consultancy) costs (up to 20,000 Euro), as well as their investments in software or new machines (at least 15,000 Euro). Therefore, ICT-based training activities can be supported if somebody applies for it.

Looking at the future, and within the framework of the eEurope Initiative (Lisbon Summit), the Austrian Federal Ministry for Economic Affairs and Labour is intended to financially support the tele-learning concept. For this purpose, the Ministry has envisaged to put into practice several measures such as:

- The Ministry wants to establish an Internet portal called "IT-Marktplatz-Ausbildung" (IT marketplace training), which will provide an overview of all available ICT based training supply. The portal will link private and public training suppliers and governmental institutions in Austria and aims at offering – amongst other things - solutions referring to the technical implementation, marketing and financing of e-learning models.
- In the course of "e-business in a new economy", SMEs and start-ups will be targeted by 5 telelearning courses, which will be developed with the support of the Ministry. The contents will cover the protection of companies against computer viruses, e-security, e-signature, data-protection, marketing in the Internet, privacy statement and copyright.
- With the portal "e-biz for SMEs" small and medium-sized companies will get the support for general information, individual consultancy as well as continuing support for the implementation of ICT into the company. The concrete design of the programme is still to be designed.

Finally, it is worth mentioning that in the Austrian case, national institutions concentrate mainly on establishing infrastructure, consultancy or supporting projects (i.e. Federal Ministry of Education, Science and Culture). By way of contrast, regional institutions concentrate more on assisting individuals (i.e. the Vienna Business Agency for individual companies or the Vienna Employment Promotion Fund for individual persons).

b) France

In France, and equally to the other surveyed countries, there is no national or regional scheme aiming specifically at the development of ICT-based training activities for SME managers/owners.

In any case, it is possible to identify the following relevant policy schemes intended to support ICT-based training activities:

- The French Ministry of Employment has recently launched in September 2000 a call for proposals[60] intended to encourage ICT-based training activities for very small and small enterprises[61], always from an experimentation and testing perspective. This call for tenders has included a number of selection criteria, such as time length not exceeding 2 years long, partnership of a minimum of 3 enterprises, reasonable chances to transfer results to other enterprises/partners, etc). The Ministry's financial aid covers up to 50 % of the cost of the projects. Interestingly enough, this call of proposals does not specifically aim at SME managers/owners.
- Some OPCA[62] offer training courses dedicated to SME managers, and some of them are envisaging the possibility of offering ICT-based training for SMEs (either for employers/managers or for employees).

Therefore, and as it can be seen, French national and regional authorities are analysing the relevance and interest of ICT based training initiatives for enterprises, although not necessarily focused on SMEs or on SME managers/owners). For this purpose several initiatives are currently being developed in order to test and develop best practices in this domain. Unfortunately, and since these initiatives are very recent in time, no evaluations are available yet.

[60] 'Appel à projets restreint dans le cadre du programme FORE en vue d'une Recherche-action pour le développement des formations ouvertes et à distance dans les très petites et moyennes enterprises'

[61] Less than 150 employees

[62] OPCA ('Organisme Public Collecteur Agréé' or Public Fund Raiser Organism) is one of the existing French bodies in charge of collecting the 'le 1% formation' ('1% for vocational training') fund to promote vocational training. This fund aims at encouraging the promotion of vocational training within French enterprises. Thus, every French enterprise with more than 9 employees must pay a sum equal to 1.5% of the wages, diminished by the sum the firm spends for the training of its employees (thus the firms with important training budget have nothing to pay). OPCA uses budget surplus to finance by itself training operations, some of them being of a collective nature and aimed at SME owners.

c) Norway

To start with, it is worth mentioning that in Norway there is no specific public support exclusively aimed at fostering the SMEs' access to training activities, irrespectively if these training activities are ICT-based or not. Notwithstanding this, the Norwegian public sector is primarily engaged with the financial coverage (full or partial) of the supplied training:

- In the case of primary, secondary and higher education supplied for adults by public institutions, the State covers 100% of costs. This is not the case for private institutions.
- By way of contrast, and as far as continuing education for adults is concerned, students have to pay fees even if training is provided at public universities or colleges. Interestingly enough, and before year 2000, the rule was that a student could only be charged for courses that rate ten credits or less. However, and since January 2000, the public universities and colleges have been given extended possibilities of charging fees. This change, part of the competence reform, is intended to give the state-owned universities/colleges an incentive to bring forward into the market new products suited for the needs of enterprises.
- Interestingly enough, the Adult Education Act contains provisions concerning state grants to enterprise-based training organised in co-operation with public institutions, study associations and distance education institutions. These institutions (and other accredited institutions) may receive a contribution from the state covering 80% of the cost factor decided upon.
- It is also worth mentioning the new regulation on Tax Exemption for Employer Financed Education. This exemption is applicable to the employers' coverage of education, examination fees, schoolbooks and other material needed to follow a course (either for him/herself of for his/her employees). Under certain conditions travelling costs are also covered by this new regulation.
- A possible source of additional financial support is the Norwegian Industrial and Regional Development Fund (SND). SND may cover up to 50% of costs of training and continuing education, provided that such a project is part of the

enterprise's competence plan or strategy. In the national budget of 2000, SNDs capability in this field has been improved.

Finally, one of the main current issues in adult education and training in Norway is related to the so-called 'right to study leave', where the Government is preparing new legislation intended to guarantee individual rights to study leave. The Government is including the social partners' representatives in the work with the statutory provisions. Obviously enough, this legislation is likely to have a very minor impact on the training of SME employers-owners.

d) Spain

To start with, it is important to stress that, as far as the Spanish Government is concerned, there are not specific policy schemes solely intended to foster ICT based training activities amongst SME managers/owners, irrespectively of enterprise size considerations.

Notwithstanding this, it is worth underlining the important role played up to now by the Spanish Foundation for Continuing Vocational Training (FORCEM) and by its counterpart in the Basque Country (HOBETUZ). FORCEM and HOBETUZ specifically aim at fostering continuing vocational training activities amongst the Spanish/Basque workers, irrespectively of their professional category.

Referring specifically to FORCEM, the Foundation manages the existing continuing vocational training funds, regulated by the Second National Agreement for Continuing Vocational Training[63]. FORCEM was established in 1992 under the three-party agreement for continuing Vocational training of employed workers and signed by the main Spanish trade unions, the main Spanish employers' organisation and, finally, the Spanish government. FORCEM/HOBETUZ have supported several train-

[63] In fact, last 19th December 2000 the Third National Continuing Vocational Training Agreement has been signed between the Spanish social agents. This Agreement is expected to be valid for the time period 2001-2004, and one of its main developments is related to the substitution of Forcem by the 'Fundación Tripartita para la Formación y el Empleo' (Tri-party Foundation for Training and Employment), formed up by the Spanish Government and the main Spanish Employers' Organisations and Trade Unions.

ing initiatives based, directly or indirectly, on the use of ICTs as a supportive mean for training activities, irrespectively of the job categories or enterprise size considerations. However, and as mentioned before, FORCEM/HOBETUZ' scope is wider than merely supporting ICT based training for the employed.

In addition to FORCEM/HOBETUZ's activities, it is worth mentioning the so-called PROFIT Programme (Programme for the Support to Technical Research or 'Programa de Fomento de la Investigación Técnica' in Spanish). This Programme is launched by the Spanish Ministry of Science and Technology and is intended to last for the time period 2000-2003. This Programme pays special attention to projects intended to support ICTs, including obviously ICT based training initiatives (due to its short time life, there are no evaluations on this programme yet.

Additionally, and from a Basque regional perspective, it is worth mentioning the activities carried out by the SPRI (Sociedad para la Promoción y Reconversión Industrial, S.A or Society for the Industrial Promotion and Reconversion). SPRI currently runs a policy scheme intended to foster training activities amongst the Basque managers/owners, irrespectively of their enterprises' size. This policy scheme is called 'Programa de Innovación Empresarial: Desarrollo Directivo' (Policy Scheme on Business Innovation: Management Development), and it includes indirectly the support to ICT based training activities.

The 'Policy Scheme on Business Innovation: Management Development' is based on a combination of individual learning (self-study) and group learning through practical case workshops with model companies who recount their experiences at special workshops. In any case, the courses are mainly designed as not-attendance, self-study courses. SPRI is responsible of the organisation and management of the courses, imparted by private external consultants hired by SPRI. Attendant fees are partially subsidised by SPRI. As far as the use of ICT tools is concerned, the course materials also include several diskettes or CDs containing analysis models that allow the students to practise the subjects studied or make an interactive assessment.

e) The Netherlands

To start with, it is important to underline that in The Netherlands no specific public policy has been formulated with respect to Information Technologies and training practices amongst SME managers and company owners.

Having said this, the Dutch Government perceives that the organisation and provision of continuing training is a prime responsibility of the business community i.e. the social partners (employers and employee representatives). Meanwhile, the role of the Government is limited to formulating general objectives, quality control, and the goal-oriented disbursal of funds and generally setting preconditions (Education and Vocational Training Act (WEB, 1997).

Meanwhile, and referring to social partners, they have become stronger involved in vocational education, basically through negotiations about agreements on training for employees and the unemployed, which have been laid down in the Collective Labour Agreements (CAO's). Many CAO's contain clauses that relate to employee training. In this way, agreements are set down in many CAO's about the establishment of training funds[64]. The CAO partners administrate these funds, and the financial resources are derived from subtracting a standard percentage from gross wages of all employees.

As far as the use of ICTs within Dutch SMEs is concerned, the public authorities' approach is very similar in its liberal attitude, in the sense that government intervention is secondary to private initiatives. Notwithstanding this, the government supports the provision of information on the developments and potential applications of ICTs to the SME sector.

Linked to the previous point, and referring to the ICT-based training domain, the main public action in this domain has been the appointment of the 'IT Shortages Task Force', intended to unite the various actors in ICT education for the purpose of drafting a collective approach. This Task Force submitted a report to the Lower House in 1999, where several lines of actions were suggested. Examples include

[64] Approximately 70% of the number of employees in the market sector are subject to a CAO, which provides for the establishment of an O&O fund.

the improvement of the image of ICT professions or the required adaptations in education, in particular forms of 'dual learning' and the introduction of ICT training packages in non-ICT courses.

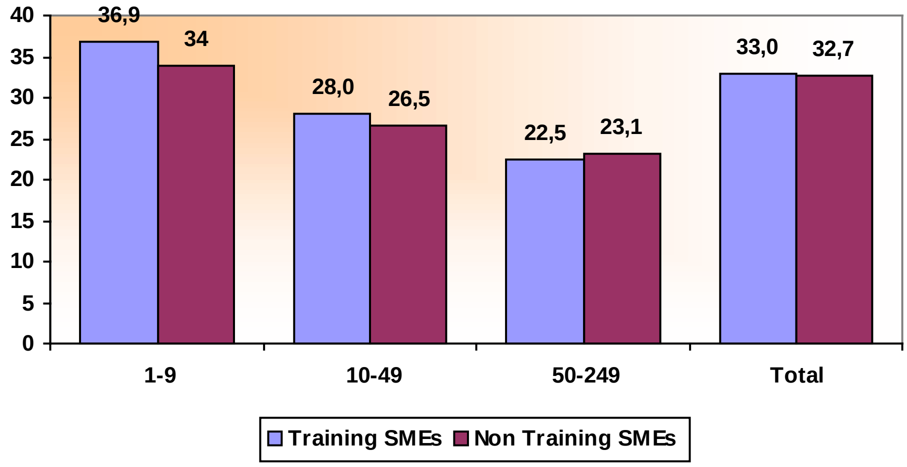
5.3. USE OF PUBLIC SUPPORT FOR TRAINING ACTIVITIES AMONGST SME MANAGERS

Having in mind the existing ICT based training public support supply, this section is interested in analysing the use that SMEs make of the existing public schemes intended to support training activities for SME managers/owners and/or the use of ICTs for this purpose.

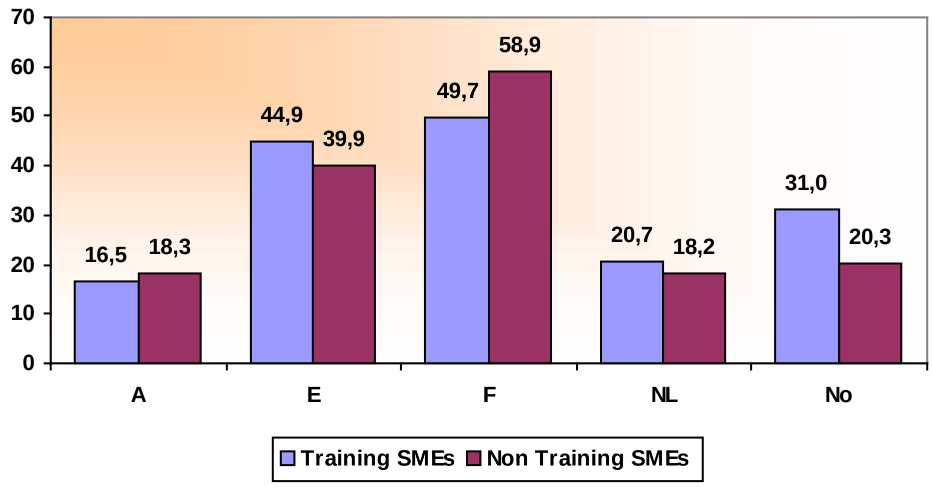
To start with, it is interesting to refer to the fact that, as it was already mentioned in a previous section, the unavailability of public support is not regarded by the surveyed SMEs as a main barrier that renders difficult the development of training activities for the managerial staff (see Graph 5.1). Thus, surveyed SMEs value the insufficient public support as 33 on a scale from 0 -unimportant- to 100 -very important-, irrespectively of the fact that they do/do not train their managers/owners.

Graph 5.1. Importance of insufficient support by government as a barrier to SME managers/owners' training, by enterprise size and surveyed region.

By enterprise size



By surveyed regions



Only positive answers
All enterprises
Average from 0 (unimportant) to 100 (very important)
Source: Ikei & ENSR partners, Leonardo Survey, 2000

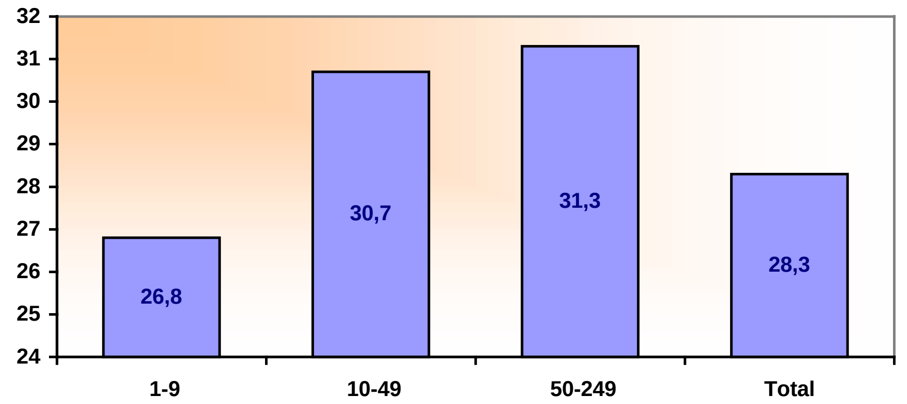
For an enterprise size perspective, the available data suggests that this barrier is not regarded as important (above 50) by any size, irrespectively of SMEs' activity/inactivity in managerial training, although smallest enterprises seem to be more concerned about this barrier than their size counterparts (see Graph 5.1).

However, and from a geographical perspective, it is possible to identify three different perceptions according to the geographical origin of SMEs. Thus, French SMEs seem to be particularly concerned with the role of public support for encouraging training activities whereas, by way of contrast, Norwegian, Dutch and specially Austrian SMEs seem to be not particularly concerned. Meanwhile, Spanish SMEs seem to have a more intermediate position between these two extreme groups.

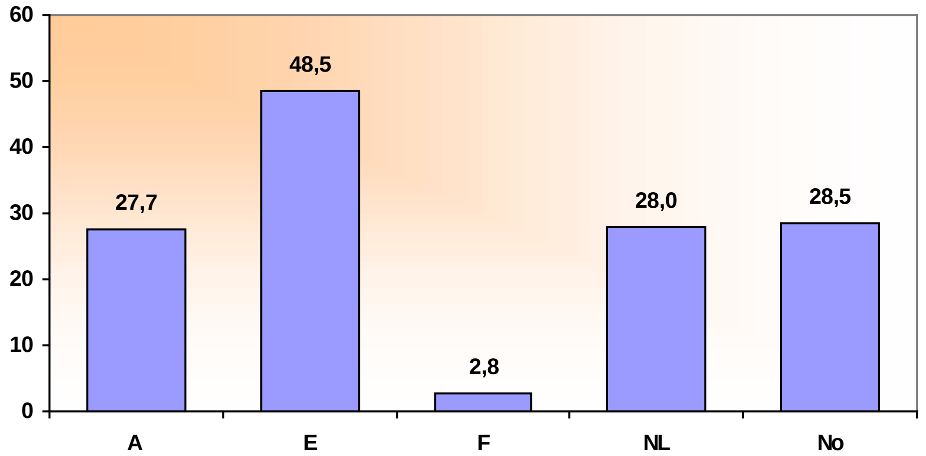
As far as the real use of public support schemes by SMEs, the available data provides several interesting results (see Graph 5.2). Thus, and on the one hand, around 28.3% of the SMEs active in managerial training activities have been benefited from any direct or indirect public support for managerial training, where this percentage slightly increases from 26.8% amongst the very small enterprises to 31.3% amongst the medium-sized enterprises.

Graph 5.2. Use of public support for training activities amongst SME managers, by enterprise size and surveyed region (1)

By enterprise size



By surveyed regions



(1) Only positive answers
Data is referred to enterprises with training activities for their managerial staff
Source: Ikei & ENSR partners, Leonardo Survey, 2000

Meanwhile, a comparison by surveyed regions suggest that the share of benefiting SMEs ranges from the two extremes composed of French and Spanish SMEs (2.8% and 48.5%, respectively). Meanwhile, Norwegian, Dutch and Austrian SMEs occupy an intermediate position, where around 28% of SMEs active in managerial training received any form of direct or indirect public support. In this sense, it is worth mentioning the Norwegian case study, where only firms in the small size category had received specific support for managerial training. The explanation to this is given by the existence of a governmental training program called FRAM, which has companies of this size category as its target group.

6. CONCLUSIONS, SUGGESTIONS AND PROPOSALS FOR FUTURE ACTION

6. CONCLUSIONS, SUGGESTIONS AND PROPOSALS FOR FUTURE ACTION

6.1. INTRODUCTION

This final chapter is intended to provide a general overview of the main results included within this report, together with a brief set of suggestions and proposals for future action that can be proposed to the different involved agents.

For this purpose, the chapter will be divided in two main sections. Thus, section 6.2 will give a brief review of the main training practices followed by the SME managers/owners, together with an analysis of the development of ICTs within SMEs and the subsequent use of these ICTs for managerial training purposes. Additionally, a summary of the existing supply of ICT based courses for SME managers/owners will be provided, together with a categorisation of the existing public support structure in this domain.

Meanwhile, section 6.3 will try to suggest several guidelines and proposals of future action for the different social agents involved in ICT based training activities for the SME managers/owners.

6.2. MAIN RESULTS OF THE RESEARCH

1.) Approximately half of the European SMEs (specifically 44.8% of the surveyed SMEs) have carried out training activities during 1999. However, important differences can be appreciated by enterprise size, in the sense that whereas 38% of the surveyed very small enterprises[65] are involved in training activities, this percentage goes up to 69% and 87% in the cases of small[66] and medium[67] enterprises, respectively. Only 3 out of 10 SMEs involved in training activities have developed a formal written training plan.

[65] Enterprises with 1 to 9 people.
[66] Enterprises with 10 to 49 people
[67] Enterprises with 50 to 249 people.

2.) The involvement of SMEs in training activities varies significantly amongst the different surveyed European regions. Thus, French and Austrian regions have the SMEs less involved (approximately 37% in both cases), whereas Norwegian and Spanish SMEs have the highest percentages of involvement, slightly above half of them. Meanwhile, Dutch SMEs occupy an intermediate position (46%).

3.) Managers and owners receive a significant training attention by SMEs (57% of training SMEs active in training carry out activities for this category), where this percentage is very similar amongst the different surveyed regions. This result suggests that, in the end, around 1 out of 4 SMEs in Europe train their managers/owners. Interestingly enough, and contrarily to other job categories, the percentage of SMEs involved in training activities for their managers/owners seem to be quite stable irrespectively of the enterprise size.

4.) SMEs fully recognise the importance of training activities for their managers/owners for securing the enterprise's future competitiveness. This seems to be especially true for those SMEs active in training their managers/owners, who rate this issue as 77 on a scale from 0 (not important) to 100 (very much important). Moreover, this attributed importance is directly depending on the enterprise size. By way of contrast, SMEs inactive in managerial training have got a more moderate perception of this importance (60 in the same scale). French SMEs inactive in managerial training are the only example in Europe who undervalues (less than 50) the importance of training.

5.) The European SME managers/owners are particularly interested in two main training issues, that is to say, information technologies and production/quality issues. Subsequently, a second group of topics attracting a lower level of attention is concerned with finance/accounting, strategy/general management and marketing/sales. Very small enterprises' managers/owners are primarily concerned with production/quality issues, whereas medium enterprises' managerial staff pays primary attention to strategy/general management issues. Information technologies are particularly important amongst the small enterprises' managers/owners.

6.) The average European SME manager/owner has followed in 1999 a standard course (half of SMEs active in managerial training), mainly held outside the premises and during working time (62% and 44%, respectively). Custom made courses (or a combination between standard and custom made) and courses held during work-time are more frequent amongst the larger enterprises. Meanwhile, courses held outside the company's premises are more typical amongst the smallest enterprises, which reflects obviously an added costs for these enterprises in terms of time, money, etc. Austrian SME managers/owners follow more custom-made courses than their European counterparts, whereas Spanish SME managers/owners follow their training activities mainly outside their working time.

7.) Self-study courses are scarcely disseminated amongst the European SMEs' managers/owners, since they are only used by around ¼ of the SMEs active in managerial training. Differences by enterprise sizes are not very important, although very small enterprises seem to use these courses more in comparison to their counterparts. French SMEs seem to frequently resort to this type of training, especially in comparison to the Spanish and Austrian SMEs.

8.) SMEs inactive in training activities for their managers/owners suggest three main topics of interest, that is to say, marketing/sales, information technologies and production/quality issues. Meanwhile, these type of SMEs have got a general positive attitude to self-study programmes, although enterprise size considerations suggest a more negative opinion amongst the medium enterprises in comparison to their counterparts.

9.) Private training centres, followed although at a larger distance by business/sector associations, suppliers/subcontractors and, finally, consultants are the main suppliers of training courses for SME managers/owners. Suppliers/subcontractors are especially important for the very small enterprises, whereas public bodies play a decreasing role as the size of enterprises increases. Strong differences in main suppliers can be appreciated amongst the different surveyed regions, reflecting therefore the existing different supporting structures.

10.) SMEs that have carried out training activities for their managers/owners have a positive perception on the suitability of training supply, whereas SMEs non-active have a more moderate one (67 and 53, respectively, on an scale form 0 –very low- to 100 –very good-). Smaller SMEs seem to provide a less positive valuation of the existing training supply than their remaining counterparts, irrespectively of their activity/inactivity in training activities for managers/owners. In any case, differences per sizes are not very important.

11.) There are important differences concerning the availability of different types of ICT facilities within the European SMEs. Thus, some facilities are particularly well diffused (i.e. PCs/Macintosh, CD-ROM readers, with over 80% of SMEs confirming to have them) whereas other facilities are less diffused (such as web pages, intranet or e-commerce facilities, with less than 40% of SMEs). Several ICT facilities such as Internet access, e-mail addresses or ISDN access are intermediately present within the European SMEs.

12.) From an enterprise size perspective, the presence of ICT facilities is closely related to the size of enterprises, in the sense that, irrespectively of the considered ICT facility, the larger the enterprise is the higher the probability to find any facility is. However, these differences per sizes are smaller for some of the most common facilities (i.e. PCs and CD-ROMs). Interestingly also, differences per surveyed regions can be labelled as relevant, where two groups of regions can be distinguished, highly ICT endowed regions (Austrian, Dutch and Norwegian ones) and poorly ICT endowed regions (Spanish and French cases).

13.) The presence of specific ICT personnel (either on a full or part-time perspective) is directly related to the size of the surveyed enterprises. This is particularly the case as far as the presence of full-time specific ICT personnel is concerned, since up to 64% of medium enterprises with ICT facilities suggest to have this type of personnel in comparison to a 8% in the case of very small enterprises.

14.) SMEs make special use of specific computer programmes for managerial control in two main fields, that is to say, sales and invoicing on the one hand and accounting on the other hand (65.2% and 63.2% of European SMEs that have ICT facilities have programmes in these fields). For the remaining requested fields (i.e. bank-related procedures, purchases, stock control/logistics or wage administration), the percentages do not reach half of the surveyed enterprises. These results suggest that the European SMEs mainly use computed programmes for repetitive administrative tasks or organisational monitoring. The presence of computer programmes is directly related with the size of the enterprise irrespectively of the different fields.

15.) PCs are particularly used by the European SME managers/owners, in contrast with a lower use of Internet (grades of 77 and 52, respectively, on an scale from 0 –lowest possible use- to 100-very high use-). This frequency is directly related with the enterprise size and with the surveyed regions. Thus, the lowest degrees in use of both PCs and Internet can be detected amongst the Spanish and French surveyed regions, specially if compared with the use of PCs by the Dutch and Austrian SME managers/owners or the use of Internet by the Norwegian SME managers/owners.

16.) SME managers/owners value their ability to use PCs as slightly above average (55 on an scale from 0 –the lowest possible- to 100 –very high-), whereas this perception is worse as far as Internet is concerned (46.3 on the same scale). Once again, a direct positive relationship between size and ability to use can be detected, both as far as PCs and Internet are concerned. Austrian SME managers/owners seem to have the better self-perception about their ability to use both PCs and Internet, whereas the worst self-perceptions can be found amongst the Spanish SME managers/owners.

17.) The European surveyed SME managers/owners suggest a positive-but-moderate effect of the ICTs on their businesses (grade 54.5 on an scale from 0 -not effect at all- to 100 -very much affected-). This perception is directly related with the size of enterprises. From a geographical perspective, the Spanish and French SME managers/owners seem to be less affected than their Norwegian, Dutch and Austrian colleagues. Therefore, those enterprise sizes and regions that use more these ICTs, precisely those ones better informed, seem to be more concerned about the effects of these technologies on their businesses.

18.) ICTs are scarcely used for SME managerial staff's training purposes. Thus, up to 32% of those SME who trained their managers/owners in 1999 pointed out that the followed courses involved a substantial use of diskettes or CD-ROMs, whereas this percentage goes down to 27% in the Internet case. These results imply that only around 7% of the total population of SMEs use ICTs for training their managers/owners. Interestingly also, this use of ICT based courses seems to be more frequent amongst the small enterprises in comparison to the large and specially the very small enterprises, although differences can not be regarded as substantial amongst sizes.

19.) Those SME managers/owners who have effectively used ICTs for their training seem to have a positive valuation on the effectiveness of these ICTs as effective tools for learning purposes (grade 80 on a scale ranging from 0 –much less effective- to 100-very effective-. Differences in this rating by enterprise sizes are not particularly relevant.

20.) SMEs combining training activities for their managers/owners and using ICT based courses have got the better perception about the helpfulness of CD-ROM and Internet based training as effective tools for covering the SME managers' training needs (43% of these SMEs value them as good instruments in most cases in comparison to a 16% that strongly disapprove them). By way of contrast, those SMEs inactive in training activities for their managers/owners seem to have the worst opinion about this type of training. Finally, those SMEs active in training but not using ICT based courses have an intermediate position.

21.) The most important barrier rendering difficult for SME managers/owners to attend to training activities for themselves is related to the general problems derived from attending the courses (due to lack of time, spatial distances to courses, problems of delegation of responsibilities, etc). Those managers both active and inactive in training activities suggest this barrier, and it is the only one valued above 50 on an scale form 0 (not important) to 100 (very important). This barrier is important for all enterprise sizes, irrespectively of the fact that they train/do not train their managers/owners, although this problem is especially important the smallest the enterprise size is.

22.) Remaining barriers are ranked as less important (below 50). In any case, it is worth mentioning the relative importance given to high costs of courses (specially by the smallest enterprises), difficulties to identify the managers' training needs and the bad quality/unsuitability of courses by those SMEs active in training suggest, whereas SMEs inactive in training point out the non-existence of training needs and the problems derived from the high costs of courses. Finally, lack of support by public organisation is not seen as an important barrier for any of the two SME groups.

23.) The main perceived barrier for the use of ICT for managers' training purposes is related to the existing difficulties in differentiating good providers and products. This barrier is ranked slightly above 50 on a scale from 0 –unimportant- to 100 –very important- by all enterprises, irrespectively of their ICT based training approach. Interestingly also, those SMEs active in ICT based training activities for their managers/owners and those SMEs inactive in training activities do not regard any other barrier as important (above 50 on the same scale). Meanwhile, SMEs active in training for their managers/owners but not using ICT based courses suggest two additional barriers as important (ranked above 50), that is to say, the frequent changes in technology and the unsuitability of this kind of ICT based training for certain contents.

24.) SMEs have got a highly valued opinion about the different possible advantages derived from the use of ICT based training for managers/owners. Thus, SMEs specially value the possibilities derived from the access to large amounts of information world-wide, as well as the easy access to training, irrespectively of time and speed. Other advantages equally positively valued include the customisation and flexibility to adapt training contents to own needs and learning speed and savings in training related costs (i.e. travel costs).

25.) The available information on the ICT-based training supply for the European SME managers/owners shows that, generally speaking, this supply is limited and still at an early stage of development, not enabling therefore the consumer to compare and choose amongst courses. Thus, it is not possible to talk about a real European market, but rather a multi-domestic market, in which the national dimension is by far prevailing (due partly to the different national languages). In any case, this situation is rapidly evolving and changing in time, in the sense that there is a substantial progress in quantity and quality of supply of ICT-based training products and services for education and training. In addition, there is a growing trend towards import/export/international collaboration, especially in some specialised or highly qualified areas.

26.) CD-ROM represents by far the largest part of the Education and Training multimedia market, whilst Internet/Intranet applications are growing more quickly but starting from a much more reduced base, at least in economic terms. Integration of technological platforms is considered to be the natural trend of the present and coming years. Additionally, most of the existing ICT based training supply can be defined as not very 'user-friendly applications', in the sense that it is either very technology driven or just 'dressed up' with the use of ICT platforms (Internet is only used as a tool for promoting training courses, providing general information or for subscribing online). Having in mind the average low ability to use ICTs, especially amongst SMEs, this situation becomes clearly a barrier.

27.) The available ICT base training supply specifically aimed at enterprise managers/owners can be defined as scarce, whereas it becomes practically non-existent when the SME managers/owners group is concerned. Looking at the future, the market of ICT based training services for the general public and for managers/owners in particular is going to experience an important growth. The fulfilment of these positive expectations requires, on the one hand, an upgrading of the SME managers/owners' ICT skills and, on the other hand, a higher degree of maturation of the existing technology. In any case, experts suggest that future on-line training practices will complement rather than substitute traditional training practices based on presence and face-to-face contacts, due to their importance and interest amongst this professional category.

28.) According to the information collected in the different surveyed European countries, there is an important range of public policy measures intended to support continuing vocational training activities for SMEs. By way of contrast, this supply becomes much more restricted if the target is narrowed to SME managers/owners, and specially, if the policy measures are intended to promote ICT-based continuing training activities for SME managers. In this sense, this research has found that in the surveyed countries there are no specific policy measures for promoting ICT-based continuing training activities for SME managers, neither at national or regional level. By way of contrast, it is possible to identify a set of public policy schemes intended to support ICT-based training activities in enterprises in general or in SMEs in particular. However, these schemes do not generally distinguish by employment categories.

29.) This public support to ICT-based training activities includes a number of different possibilities. Thus, in some countries such as Austria and Spain, public authorities are actively engaged in the support of these activities, basically through the provision of information, promotion of inter-firm co-operation agreements, financial support to partially cover eligible costs in software and hardware, training and consultancy activities, etc. Meanwhile, in other countries such as France, national and regional public authorities are developing several initiatives in order to test and develop best practices in this domain that can be subsequently be applied in the general economic and productive tissue. Finally, in the remaining surveyed countries (Norway and The Netherlands), the public sector is primarily engaged with the financial support of training initiatives developed by public/private training suppliers and the social agents, who are regarded as the main responsible actors in this field (i.e. through collective labour agreements). In this sense, the government intervention is secondary to private initiatives.

30.) Around 28% of the SMEs active in managerial training activities have been benefited from any direct or indirect public support for managerial training, where this percentage slightly increases with the size of enterprises. From a geographical point of view, the share of benefiting SMEs ranges from the two extremes composed of French and Spanish SMEs (3% and 49%, respectively), whereas Norwegian, Dutch and Austrian SMEs occupy an intermediate position.

6.3. SUGGESTIONS AND PROPOSAL FOR FUTURE ACTION

Having in mind the existing European training practices amongst the SME managers/owners, the development of ICTs amongst SMEs, the subsequent use that SME managers/owners make of these ICTs for their training activities and, finally, the existing training supply in this domain, this section 6.3. is intended to suggest several lines of action for the full development of ICT based training activities amongst the European SME managers/owners. In this sense, several proposals will be provided to the different social agents involved in this field, that is to say, the own SME managers/owners, the training suppliers and, finally, the policy makers.

In any case, it is worth underlining that these suggestions and proposals have a very general nature, in the sense that they are aimed at a 'Pan-European' scale and not at solving any concrete situation within the different European member states and regions.

a) Suggestions to the SME managers/owners

1.) European SMEs, specially the smallest ones, need to make an added effort for improving their training effort, in the sense that investments in training activities for managers/owners are still an exception rather than a rule in the smallest European enterprises. However, one of the most important routes for keeping up with the latest business and technological developments is linked with the active involvement in training activities. This fact is specially relevant for the smallest enterprises since, according to this survey's results, this group reveals to have both the lower involvement in general training activities and the lower ability to successfully use ICTs at their most.

2.) This report has showed that the European SME managers/owners are particularly concerned with the effects of ICTs on the future competitiveness of their businesses. This perception seems to be right, since the correct use of ICTs within business processes is expected to become one of the key success factors for the future of European companies in the increasingly competitive global markets. However, it is important to underline the need for an added effort of conscience- raising amongst the smallest SME managers/owners, precisely those who represent the largest share of enterprises but who manifest the lowest level of concern on this issue.

3.) SMEs very often lack both the resources and capabilities to engage themselves in training investments. Co-operation with other enterprises facing the same difficulties could be an appropriate tool for overcoming these obstacles, where this co-operation could be established either on an ad-hoc or a permanent basis.

b) Suggestions to managerial training providers

4.) Surveyed European SME managers/owners, despite pointing out an acceptable degree of suitability of the existing general training supply, also suggest that the main barrier impeding the use of ICT based training for themselves is linked with their difficulties in differentiating good providers and products. Clearly enough, this result is expected to be less important in the next years, as the existing supply may become mature and therefore better known for the potential consumers. Notwithstanding this, this result suggests an important barrier for the existing ICT based training suppliers that has to be taken into account by the sector.

5.) This survey's results suggest that despite the current positive expectations about the new possibilities opened up by the ICTs (i.e. Internet and the 'information highways) in the training domain, these ICTs are still scarcely used by SMEs themselves in this field. Therefore, ICT-based training suppliers really need to make an additional effort to become more 'attractive' and 'closer' to the SME community in general and the SME managers/owners in particular.

6.) The discussion on the European ICT based training supply has showed that, in many cases, the supply does not match with the specific SMEs' demands, in the sense that most current tele-training activities only apply new ICTs using still conventional distance learning methodologies. However, if ICTs are applied without innovating the training methodologies, it is expected that the possibilities of these technologies will not be fully used and therefore may fall once they are no longer trendy and 'new'.

7.) In this sense, and linked to the previous point, it is important to have in mind that future on-line training practices for SME managers/owners will necessarily have to be complemented rather than substituted by traditional training practices based on personal presence and face-to-face contacts. In fact, these contacts are specially appreciated by this professional category, due to the added possibilities for exchanging experiences and opinions.

8.) Linked to the previous point, the need of SME managers/owners for social-communicative and management qualifications and their usual tight time schedules suggest a possibility for training providers to develop more target-group specific courses. The inter-action between trainees and the trainer(s) should be mostly linked with the exchange of experiences rather than with just the transfer of know-how. In addition to this, and if it wants to be fully effective, the training supply for SME managers/owners has to be fully adapted to the different needs of different profiles of SME managers/owners (according to a wide array of factors such as level of education, sector the firm belongs to, firm size, etc).

9.) It is important not to forget the existing link between training and continuous consultancy (including training), especially for SMEs. Thus, SMEs do not need training for itself, but rather they need to solve their problems, always focusing on the short term. A combination of tele-consultancy and tele-training is expected to provide a potential opportunity to offer training services to SMEs. Training should in this case be focused on short-term courses solving a specific problem identified by a previous (short) consultant intake.

c) Suggestions to policy makers

10.) The available survey data shows that there is still a remarkable large share of SMEs (especially amongst the smallest ones) that are not engaged in training initiatives, neither for employers nor for employees. In this sense, and referring specifically to the employers, policy makers need to foster the accessibility of them to training initiatives, since the survey data also confirm that, generally speaking, SME employers are well aware on the importance of these activities for the competitiveness and future development of their enterprises.

11.) The survey has also showed that public bodies, despite playing a minor role as training providers in the European context, are particularly used by the smallest enterprises in comparison to the largest ones. This result has policy implications, since it results in an added argument for public involvement in the support of training amongst the very small enterprises.

12.) Public authorities should make an added effort to foster a demand-led training supply, in the sense that the training contents should be fully adapted to the concrete needs of concrete groups of SME managers/owners. In addition to this, public authorities also need to make an added effort for facilitating the SMEs' access to ICTs. Thus, the results provided by the survey show that, especially the smallest SMEs in some regions, have both a small availability of certain key ICT facilities (i.e Internet) and a low ability to use efficiently these facilities. In this sense, public authorities should pay a special attention to fostering the general SMEs' ICT skills as a pre-requisite for assuring their access to these technologies. Examples of possible public initiatives include the setting up of financial support funds, incentives to develop infrastructures or programmes to lower the costs of ICT equipment for schools and enterprises.

13.) ICT-based training for managers/owners is positively regarded by those European SMEs active in training activities for their managers/owners, and especially by those SMEs who have made use of this type of training. This result provides ground for a further public support in this field. Notwithstanding this, it is important to have in mind that surveyed SME managers/owners suggest that the main perceived barrier hampering the use of ICT for managers' training purposes is precisely related to the existing difficulties in differentiating good providers and products. This result implies a lack of transparency of the European ICT based training supply that has to be solved by public authorities for assuring the full development of the sector.

14.) Linked to the previous point, public authorities should pay special efforts in upgrading the market transparency on training solutions in general and ICT-based training solutions for managers/owners in particular. Examples of public action include the development of evaluation criteria and/or quality marks and the subsequent communication of them to the general public or the creation of comprehensive databanks with standardized information on courses and linked to relevant SME actors such as trade associations, etc.

15.) Public authorities should not forget the need to upgrade the technical and pedagogical skills of the ICT-based trainers/tutors as a pre-requisite for fully exploiting the advantages linked to ICT-based training practices.